

GRANDMASTER PREPARATION

THINKING INSIDE THE BOX

JACOB AAGAARD



QUALITY CHESS



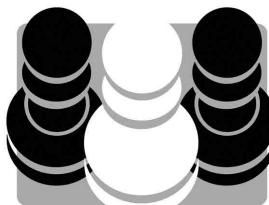
Grandmaster Preparation

Thinking Inside the Box

By

Jacob Aagaard

In memory of Mark Dvoretsky



Quality Chess
www.qualitychess.co.uk

First edition 2017 by Quality Chess UK Ltd

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GRANDMASTER PREPARATION – THINKING INSIDE THE BOX

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Paperback ISBN 978-1-907982-34-7
Hardcover ISBN 978-1-907982-35-4

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Distributed in North America by National Book Network

Distributed in Rest of the World by Quality Chess UK Ltd through
Sunrise Handicrafts, ul. Poligonowa 35A, 20-817 Lublin, Poland

Typeset by Jacob Aagaard
Proofreading by Colin McNab & John Shaw
Edited by Andrew Greet, John Shaw & Colin McNab
Appendix by Nikolaos Ntirlis, edited by Ian Kingston

Cover design by Jason Mathis
Back cover photo by John Saunders
Printed in Estonia by Tallinna Raamatutüükikoja LLC

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Acknowledgements

Any serious work is influenced heavily by the work of others, both directly and indirectly. I would like to take the chance to thank some people who helped me over the years to develop the ideas presented in this book, and who supported me with friendship and advice during the writing of it.

I have learned a lot from Mark Dvoretsky, Artur Yusupov, Henrik Danielsen, Henrik Mortensen, Sune Berg Hansen and Boris Gelfand.

Colin McNab, John Shaw, Andrew Greet, Ian Kingston, Semko Semkov and Sam Shankland all helped with the completion of the book.

Shai Dolinsky read the psychology chapter and confirmed that it is not complete bunk.

Nikos Ntirlis wrote an appendix on the technical aspects of computers, which I am no expert in, but which I am sure some people will find very helpful. I am grateful to him for doing this.

My students have inspired me a lot – perhaps more, I fear, than I have them. I want to thank Sabino Brunello, Marina Brunello, Felipe El Debs, Sam Collins, Sabina Foisor and Surya Ganguly especially. I have worked with many others over the years and greatly appreciate your confidence in me and the discussions we have had about chess and life.

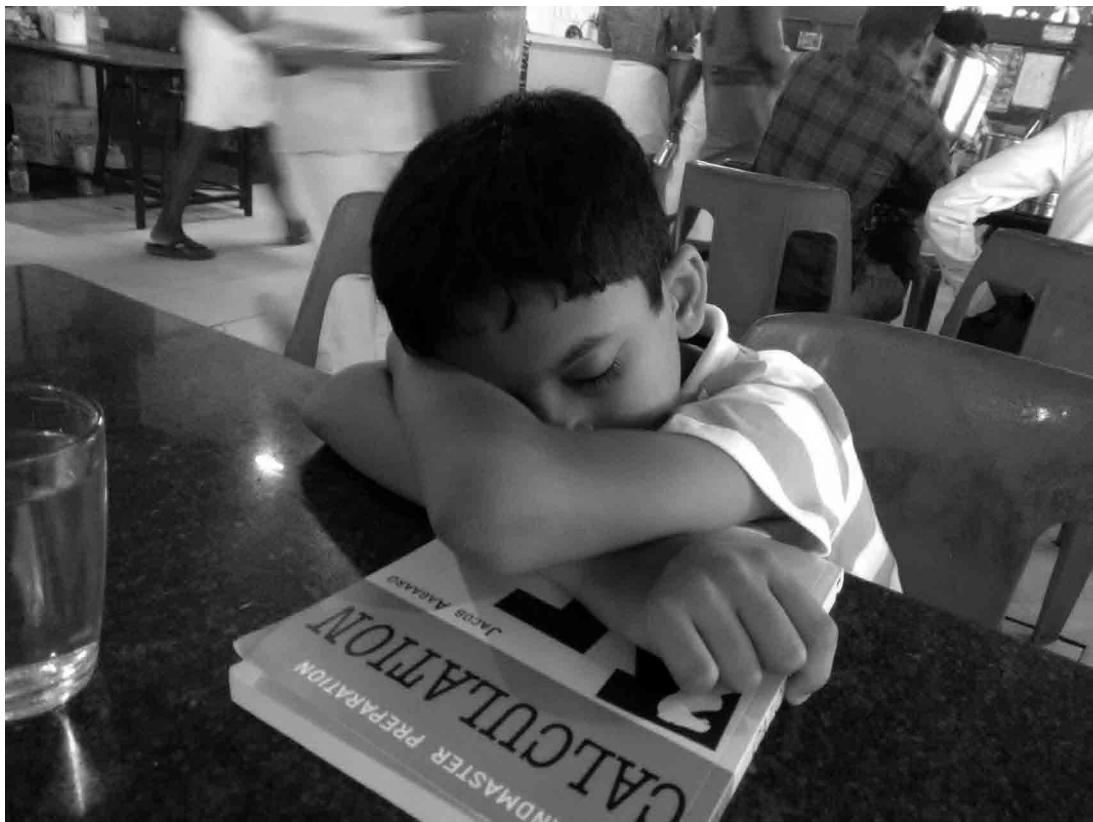
There are mentors in other areas of life who have inspired me to be better and to do better. Louise Berry, Fiona Kennedy, Lisa Murphy and Danny Curtis are the first few names that come to mind. I will squeeze in Gary Smith for good measure...

Then there are the friends whose conversations are a constant inspiration for me to aspire to higher standards. Søren Dalsberg, Lars Møller Larsen, Allan Schjeflo, Lars Schandorff, Baran Sharif, Peter Heine Nielsen and Tim O’Neil immediately spring to mind, though this list is far from exhaustive.

Peter Long and I have planned for years a book tour accompanying the release of this book. Sagar Shah joined in with the organization once it was crunch time, with the never-wavering support of his beautiful wife Amruta Mokal. Together we have formed a winning team that hopefully will last for decades.

Finally, I want to give a big thanks to everyone who has been supportive about this series and my work in general. I write my books to inspire and help people. To me there is no greater joy than to know that this has been successful. Many people have sent me kind messages over the years. I am especially grateful to Karsten Müller and David Navara for their many suggestions on improvements to previous books.

Thank you to all of you,
Jacob



Nihal Sarin, pictured, has fallen asleep with *Grandmaster Preparation – Calculation* in his hand. Quite recently Nihal achieved the title of International Master at the age of 12 years and eight months, and only days before we went to print, he added his first grandmaster norm to his list of achievements.

Although this sort of success is not available to many, I hope that the reader will find success, on his own terms.

Key to symbols used

| | | | |
|----|--------------------------------|----|--------------------------|
| ± | White is slightly better | ? | a weak move |
| ¤ | Black is slightly better | ?? | a blunder |
| + | White is better | ! | a good move |
| + | Black is better | !! | an excellent move |
| +— | White has a decisive advantage | !? | a move worth considering |
| —+ | Black has a decisive advantage | ?! | a move of doubtful value |
| = | equality | # | mate |
| ≡ | with compensation | | |
| ⇄ | with counterplay | | |
| ? | unclear | | |

Photos...

The majority of the photos in this book are from the Asian book tour I planned in order to force me to finish the book. It worked, to some extent. The typesetting of the book was done in airports and hotels all across the region. I slept a five-hour average for a month in order to commit myself fully to the people who showed me the honour of coming to hear me talk about chess improvement and to be able to finish the book as well.

I held training seminars and lectured in Mumbai, Ahmedabad, New Delhi, Kolkata, Chennai, Kuala Lumpur, Hong Kong, Hua Hin (at the Thailand Open), Manila, Singapore, Jakarta and Tehran. With the exception of the last stop, Sagar Shah and Amruta Mokal were my trusty travel management team, founding bonds that can never be broken. Their photos from the tour can be found throughout the book, documenting the best month of my life.

A few other people assisted with photos. The cover photo is shot by John Saunders, the photo on page 5 by Priyadarshan Banjan and the photo on page 36 by Lennart Ootes. Thank you everyone!



Author Preface

What is the purpose of education? Action! – Carlos Alomar

Thinking outside the box has become one of those trite phrases that once seemed edgy and cool, but now sounds as hollow as any other cliché. To me it was always ghastly, because of what it implied. It reminds me of another phrase that I love to hate, *pull yourself together*, the illusion that simply by an act of will, you can change your brain patterns in such a way that you will behave entirely differently.

I am not contesting that originality and mental focus are important, but I am suggesting that the place those phrases come from is rarely where originality and mental focus is cultivated.

I also have a troubled relationship with the concept of talent. Not because talent does not exist or is not important, but because talent is innate and has not required effort. And frankly, because too much talent often leads to a systematic lack of effort later on and what is often referred to as a *wasted talent*. In our culture the idea of effortless achievement is celebrated. Capablanca was supposed to not have a chess set in his house, which, as far as I know, is a straight-out lie. Magnus Carlsen is portrayed as lazy in a *60 Minutes* episode where the interviewer is struggling to catch his attention, because the future World Champion is totally occupied with the next day's game.

It was only when I read Dr Carol S. Dweck's book *Mindset* that it all fell into place for me. In this book, she describes two possible mindsets, the *growth mindset* and the *fixed mindset*. Where the growth mindset is realistic about its own effort and achievements, always willing to learn, the fixed mindset sees everything as a test with a potentially damaging result. It is in this context that we see the danger of effort. If you try and fail, it is a clear damnation of your ability. The fixed mindset is not looking for ways to improve, for things to learn from its failures. It is too preoccupied with what everything means. More about this in Chapter 2.

Thinking inside the box has a number of meanings to me. It comes from a basic philosophy that there are so many things to learn that we should not preoccupy ourselves with finding exceptions or wildly original perspectives, but rather learn what there is to be learned first.

The box is both metaphorical and a metaphorical tool box. In chess, there are many ways to look at a position and many ways to deal with the problems we get the chance to solve during the game. There will never be complete agreement as to which way a position should be approached, which is part of the beauty of chess. It can be played in many different ways, none of which can be said to be inherently superior.

But it is my firm belief that lasting improvement in chess includes thinking in a different way. If your endgame technique is questionable and you spend a lot of time learning the basics of endgame play, you will look at technical positions in a completely different way afterwards. You will see concepts and structures in the positions that you were previously unaware of and these will guide your thinking in an entirely different direction.

The *Grandmaster Preparation* series consists of five exercise books: *Calculation*, *Positional Play*, *Strategic Play*, *Attack & Defence* and *Endgame Play*. All of these books deal with specific ways of looking at various types of positions and offer a lot of exercises that will help the aspiring player develop a sense of where the various concepts are applicable and how to use them.

This book, the final in the series, is meant to be a conversational piece, touching upon most of the topics dealt with in depth in the other books.

The five previous books are exercise books, intended to make the reader learn the simple concepts, like for example *comparison*, and then practise it until a full understanding of the concept and how to use it has been formed. In this book, I have wanted to discuss various topics relating to improvement in chess, focusing on what I think might be most important for most readers.

I am a firm believer in simplicity. It has always been my goal to present my ideas in a way that makes them easily understandable and easy to follow. Outside-the-box thinking may seem impressive, but very rarely does it actually lead to improved results. Simple steps, easily repeatable by anyone, is what I am looking for. In 2003 I recorded two videos for ChessBase on attacking chess. They contained the core principles of *Attacking Manual 1*, my attempt to present a coherent theory of dynamics, something that had not been done previously. I received exactly one review, which focused on a mistake in the analysis of one game, ending with the conclusion: "From Jacob Aagaard, one would expect more."

The theory of dynamics I have presented (see Chapter 11 for a quick run-through) is so simple and easily understandable that you can easily believe that you know all of this already. You do, but also you don't. One world-class player told me he found the book rather general. I took this as a big compliment.

My goal with this book is not to impress you, but to present you with ideas that will help you improve in perpetuity. Ideally you will read it and feel there was nothing in it you did not already know, even though there are plenty of new ideas within. Mixed with established methods of improvement, they should give you a strong foundation for progress in chess. It may all seem natural and deceive you into thinking you knew this already. The important thing is that you take ideas from this book and put them into practice. A musician will spend time learning a new piece of music until he can play all the right notes, at the right time, for the right duration. Then he can start to practise it. The same applies in chess. Learn the techniques; then practise them.

To make the book user-friendly, I have included a "cheat-sheet" at the end of the book, summarizing the most important points from each chapter. My hope is that the challenge with this book will not be connected to accessibility, but with execution. Improvement in chess is hard; knowing how it can be done should be easy.

This book also celebrates the end of my career as a serious chess player. I have retired a few times, each time with greater effect. I do play the occasional league game but, as my last tournament game was almost two years ago, I think I finally managed to stop scratching the itch.

I was never a great player; but briefly I was not too bad either. My peak was in 2007-2008, where I made some 2700 performances, became a grandmaster, won the British Championship and defeated two 2600+ players on consecutive days. I am certain that I could still have improved

a lot, and made it from my peak of 2542 to 2600, had my hunger not been dulled by the ugly sides of chess politics (I seriously hope you will not have this experience, but sadly many people still do) and the most beautiful side of life: the swift arrival of my children.

Bent Larsen used to answer the question of *which is your best game*, with: "I have not played it yet." I have played my best games, and knowing this does not diminish my relationship with chess; but it does give me the chance to include them in this book and in that way share them with a lot of great chess players, present and future.

This book is the end of the *Grandmaster Preparation* series, but also the bridge to the coming series of workbooks called *Grandmaster Training*, which I have worked on for a few years, as well as a planned series of textbooks called *Grandmaster Knowledge*, yet to be written. My hunger for proving myself competitively might have waned, but my passion for chess and the teaching of it burns on unrestricted.

I hope the simple approach in this book will be helpful to you in your path.

Jacob Aagaard



Chennai, April 2017

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Foreword

— *By Grandmaster Sam Shankland*

My working relation with Jacob Aagaard began in the summer of 2013. I was already a seasoned grandmaster rated around 2600 FIDE, but I had stopped improving and was stuck around the same rating for a year. All throughout my life, I had consistently improved my chess, and it was very disheartening to hit my first major roadblock. This frustration plus a generous fellowship was what provoked me into approaching Jacob.

When I first arrived at his home in Glasgow for a week of training, I was initially sceptical. After all, I was a much stronger player than him, and stronger than he had ever been. Could I really learn that much from him? What new things could he teach me that I did not already know?

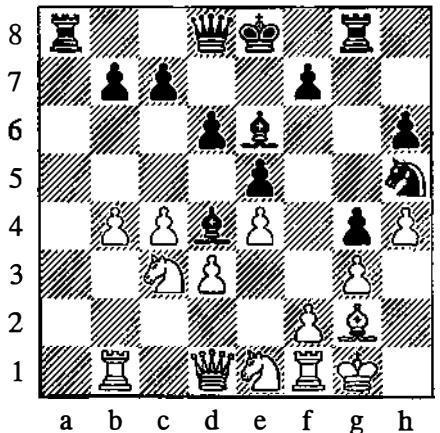
Now three and a half years later, I can appreciate some of the new things Jacob has taught me. He has provided some opening ideas that I have used, and when I don't know what to do I hear his voice in the back of my head telling me to ask myself the three questions, but these are not the most important aspect of my training with him.

What made, and continues to make, my working relation with Jacob the best career decision I have taken in recent years is that he has made me improve the things I already know in ways I never could have imagined. I believe this is where the concept of thinking inside the box comes into play. Much of our work has been focused on calculation, but the theory behind it is very simple. Search for candidate moves; overcome resistance when faced with it; quickly evaluate how much time a position is likely to require; identifying the weakness in a position; not moving too quickly, slowing down calculating to make sure not to miss any moves early on – all of these are basic thought processes that I was certainly aware of. But the clarity with which he explains them helped make me consciously aware of the things I was doing subconsciously, and consistent work on the puzzles he has made for me continues to reinforce the ideas and keep me sharp.

I'll digress for a moment to show a couple of examples of the kinds of shortcomings I was facing before working with Jacob. Keep in mind that at this point I was already a solid grandmaster.

Larry Christiansen – Sam Shankland

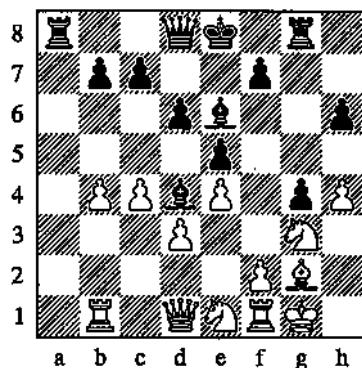
Saint Louis 2013

**18.Qe2**

I had played the game very aggressively thus far and clearly was in no mood to mess around. Here I immediately was drawn to ...Qxg3, but ultimately did not pull the trigger since I could not make it work. Looking for more candidate moves and trying to overcome resistance could have dramatically changed the course of the game.

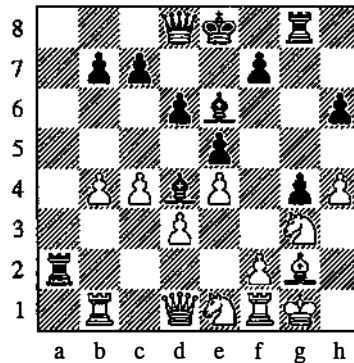
18...Rb6?

18...Qxg3! 19.Qxg3 (19.Qxd4 did not concern me. Following 19...Qxf1 20.Qxe6 fxe6 21.Qxf1 Qxh4 Black is much better. His king is safer, his pawns are good, and most importantly his rooks are active while White's two minor pieces fail to impress.)



19...Qxh4? I naturally assumed this was the consistent continuation of Black's attack. The g3-knight is attacked, it cannot be defended, and once it moves, Black crashes through with ...g3. It looks totally winning, but then I spotted my opponent's idea: 20.Qc2! Instead of defending the knight, the pinning bishop is undermined. Black is forced backwards and his attack falls short. 20...Rb6 21.c5! dxc5 22.bxc5 Qxc5 23.d4! White keeps the diagonal closed at all costs, and with tempo every time. 23...exd4 24.Qxb7 And here White is totally safe, is material up, and now it is Black's king who might get slaughtered. The game is over.

Instead, the correct continuation is: 19...Ra2!!

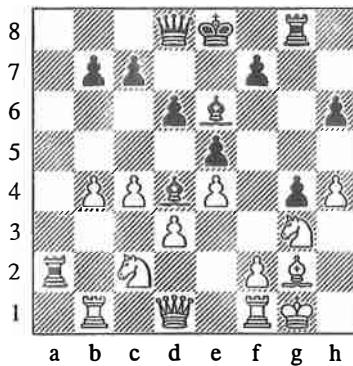


I completely missed this move, instead focusing all of my energies on ...Qxh4. Once I realized ...Qxh4 failed, the proper thought process was to try to overcome the resistance and look for more candidate moves. Indeed, here White is absolutely lost. He cannot dislodge the d4-bishop, and ...Qxh4 will be very painful. For example:

a) 20.Qb3 This move must be carefully checked, since if the rook has to leave the second rank, Qc2 will come. But after 20...Rd2! it is not hard to see that White is unable to expel the rook. 21.Qd1 (21.Qc2 transposes to line 'c' below) 21...Rb2! 22.Qa3 Qxh4 And Black wins.

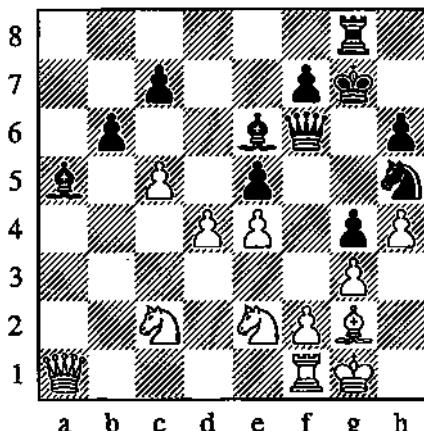
b) 20. $\mathbb{Q}e2$ $\mathbb{B}xe2!$ 21. $\mathbb{W}xe2$ $\mathbb{W}xh4$ And White cannot stop ...g3.

c) 20. $\mathbb{Q}c2$ I guess you could call this White's best try, but it just illustrates Black's idea.



20... $\mathbb{B}xc2!$ 21. $\mathbb{W}xc2$ $\mathbb{W}xh4$ Here the g3-knight cannot be defended, but the d4-bishop also cannot be attacked. White is dead lost. The game might continue 22. $\mathbb{W}d2$ $\mathbb{W}xg3$ 23. $\mathbb{W}xh6$ $\mathbb{W}xd3$ when material is nominally equal but Black's bishops are much better than White's rooks, and ...g3 is coming.

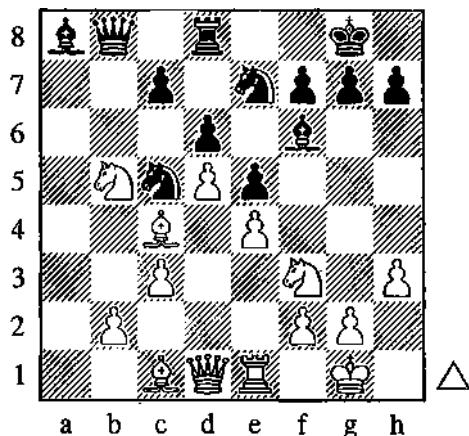
19. $\mathbb{W}d2$ $\mathbb{B}f6$ 20. $\mathbb{B}c1$ $\mathbb{Q}f8$ 21. $c5$ $dxc5$ 22. $bxcc5$ $\mathbb{B}a2$ 23. $\mathbb{B}c2$ $\mathbb{Q}a5$ 24. $\mathbb{W}c1$ $\mathbb{B}xc2$ 25. $\mathbb{Q}xc2$ $\mathbb{Q}g7$ 26. $\mathbb{W}a1$ $b6$ 27. $d4$



White had taken command and won after a further 40 moves.

Sam Shankland – Jaan Ehlvest

New York 2013



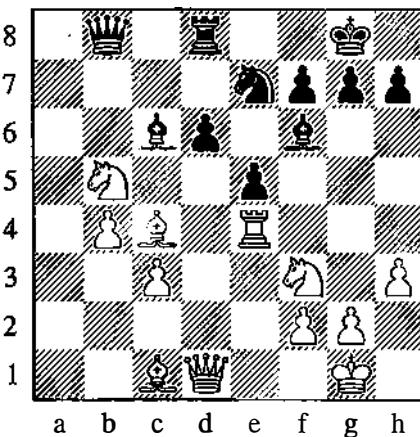
White has an extra pawn here, and if he can consolidate he should be winning easily. But Black has some threats in the centre connected with ... $\mathbb{Q}xe4$ and ...c6. My play here left a lot to be desired:

18.b4?

Played after 20 minutes thought. I had seen ... $\mathbb{Q}xe4$ and thought that it was not working – if this had been correct, then b2-b4 would indeed be best, expelling the active knight.

18. $\mathbb{Q}a3!$ was solid and strong. I considered the move but was worried about my centre coming under siege with 18...c6. But I had overestimated Black's dynamic chances. Following 19. $dxc6!$ $\mathbb{Q}xc6$ 20. $\mathbb{Q}g5!$ Black should lose. 20... $d5$ 21. $exd5$ $\mathbb{Q}xd5$ 22. $\mathbb{W}c2$ There's not much counterplay, and White is a solid pawn up. In addition, he has two connected passers.

18... $\mathbb{Q}xe4!$ 19. $\mathbb{B}xe4$ $c6$ 20. $dxc6$ $\mathbb{Q}xc6$



I had seen all of this and realized Black has a lot of threats here – ... $\mathbb{Q}xe4$, ... $\mathbb{Q}xb5$, ...d5, etc. I am definitely going to lose some material back. Still, my thought was that I am just winning after:

21. $\mathbb{Q}g5!$ d5!

21... $\mathbb{Q}xg5$ 22. $\mathbb{Q}xg5$ and Black cannot stop $\mathbb{Q}xe7$.

21... $\mathbb{Q}xb5$ 22. $\mathbb{Q}xf7\#$ $\mathbb{Q}f8$ 23. $\mathbb{W}h5$ and White's attack is winning.

22. $\mathbb{W}h5!$

I had seen this far when I played 18.b4 and assessed the position to be completely winning. My opponent spent 35 minutes here. I half expected him to resign! $\mathbb{W}xf7\#$ and $\mathbb{W}xh7\#$ are massive threats.

22... $\mathbb{Q}xg5$!

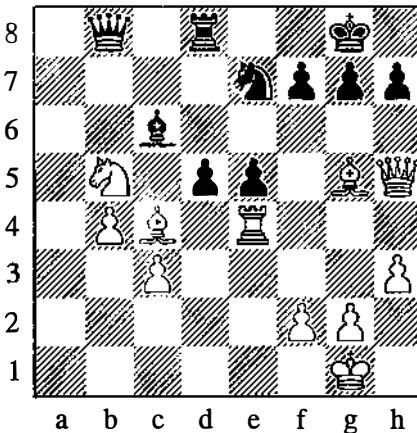
22... $\mathbb{Q}g6$ 23. $\mathbb{W}xh7\#$ $\mathbb{Q}f8$ 24. $\mathbb{Q}e3!$ and Black's king will perish after a coming $\mathbb{Q}c5\#$.

22... $\mathbb{Q}xb5$ 23. $\mathbb{W}xf7\#$ $\mathbb{Q}h8$ 24. $\mathbb{E}h4$ $\mathbb{Q}xg5$ 25. $\mathbb{Q}xg5$ $\mathbb{Q}xc4$ 26. $\mathbb{Q}xe7$ (or 26. $\mathbb{Q}f6$) and White wins.

23. $\mathbb{Q}xg5$

At this point, I had noticed that ..f6 was failing, and otherwise there was no way to

stop $\mathbb{Q}xe7$. But I had overlooked a candidate move, and a move I should not have missed – checks and captures, people!



23...dxc4!

Even when the position after 23. $\mathbb{Q}xg5$ was on the board, I still did not see this move until it was played. Very quickly I began kicking myself for overlooking it as it dawned on me that I had squandered my advantage.

I was expecting 23...g6, although Black is obviously lost after 24. $\mathbb{W}e2$ dxc4 (24...dxe4 25. $\mathbb{Q}xe7$ $\mathbb{E}d7$ 26. $\mathbb{Q}c5$) 25. $\mathbb{Q}xe5$ $\mathbb{Q}xb5$ 26. $\mathbb{Q}xe7$.

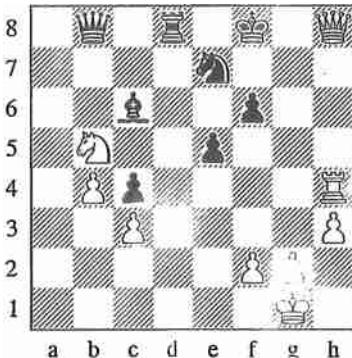
23...f6 24. $\mathbb{Q}xf6$ This much I had seen. The line is not hard to calculate: 24...gxf6 25. $\mathbb{E}g4\#$ $\mathbb{Q}g6$ (25... $\mathbb{Q}h8$ 26. $\mathbb{W}h6$ with mate on g7 or f6 to follow; 25... $\mathbb{Q}f8$ 26. $\mathbb{W}xh7\#$ dxc4 27. $\mathbb{E}g7$ and Black is mated) 26. $\mathbb{Q}xg6\#$ hgx6 27. $\mathbb{W}xg6\#$ $\mathbb{Q}h8$ 28. $\mathbb{W}xf6\#$ $\mathbb{Q}g8$ 29. $\mathbb{W}xc6$ dxc4 30. $\mathbb{W}xc4\#$ and White wins.

23...dxe4 24. $\mathbb{W}xf7\#$ $\mathbb{Q}h8$ 25. $\mathbb{Q}xe7$ also wins for White.

24. $\mathbb{Q}xe7$

An implicit draw offer. I spent a long time trying to make $\mathbb{E}h4$ work, but to no avail. As it turns out White still had some chances, but it was not a clear position at all.

24.♕h4 f6 25.♕xf6 gxf6 26.♗xh7† ♔f8
27.♗h8†



The engine finds some nasty moves for White, but this is very hard to do over the board.

27...♔f7

27...♕g8?! is also quite tough: 28.♗g4 ♔e7! (28...♔f7? 29.♕c7! ♔e7 30.♕a6) 29.♗g7† (29.♗g7† ♔e6 or 29.♕c7 ♔d6 allow Black to survive) 29...♔e6 30.♕c7† ♔d6 I thought I should be better here, but I could not find anything concrete. The computer points out my only move is the quiet 31.♗h5! when apparently I still have winning chances.

28.♗h7† ♔e6 29.♗g7 ♕xb5! 30.♗xe7† ♔f5

I was unsure about this position. Black is definitely not getting mated and if his king is driven forward it could even become well placed on the queenside. It certainly is not risk free, and eventually the computer claims Black is only slightly worse. I should have tried this instead of just making a draw, but the real mistake was 18.b4?.

24...♗xe4 25.♗xd8 ♕xb5

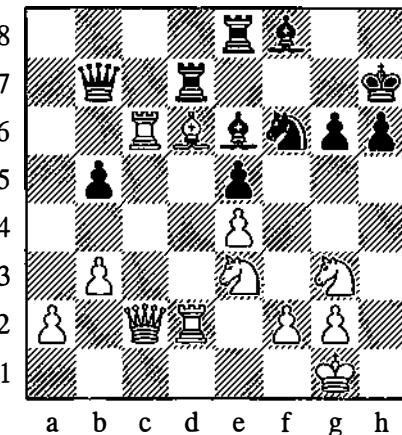
½-½

These games showed several problems I was facing, but the most notable ones were miscalculation, missing candidate moves, and failing to ask myself the three questions. These were issues that Jacob helped me deal with, and will surely be addressed well in this book.

The training itself was very hard work, and it continues to be. One example that I remember vividly came one evening before dinner during that first week in Glasgow. I failed over and over again, missing one idea after another. But Jacob would not tell me the answer, and kept making me go back until I figured it out. When I finally did, the basic noodles with tomato sauce I ate with his young daughters might as well have been omakase at the finest sushi restaurant in the world. I felt that satisfied.

Gata Kamsky – Veselin Topalov

Sofia (4) 2009



42...♔f7

White has an excellent position here, and the move Kamsky played was good enough to win. But Black still was able to offer some resistance, and there was a better option.

43.♗b4

I quickly suggested this move to Jacob. I knew roughly how the game went, and it looked like a convincing solution. But I was surprised when he shook his head and told me to keep looking.

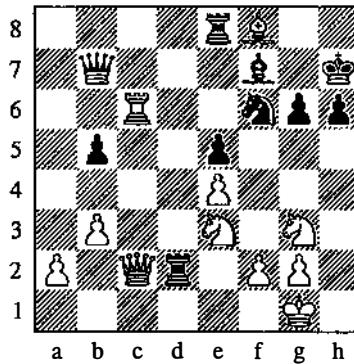
I considered 43.♗c7 as well but quickly decided that it was worse than ♗b4.

After 43... $\mathbb{B}xc7$ 44. $\mathbb{W}xc7$ (44. $\mathbb{Q}xc7?$ $\mathbb{B}c8$) 44... $\mathbb{W}xc7$ 45. $\mathbb{Q}xc7$ $\mathbb{A}c5$ Black has more drawing chances than in the game.

43. $\mathbb{Q}xf8!$

This is a brutal move. I saw it and calculated a bunch of lines very fast, but failed to slow down and see a candidate move early on.

43... $\mathbb{B}xd2$



44. $\mathbb{W}c1!!$

Silent but absolutely devastating. White is not even threatening to take the rook on d2 due to the hanging rook on c6, but he has other ideas in mind. For starters, $\mathbb{B}c7$ is a serious threat.

a) 44. $\mathbb{W}xd2?$ looks tempting as White's queen is menacingly eyeing h6, but it fails.

44... $\mathbb{W}xc6$ and now:

a1) 45. $\mathbb{Q}ef5$ looks crushing, but only for a moment. White is down material, has a lot of hanging pieces, and only one idea – to deliver mate with $\mathbb{W}xh6$. This is repelled by 45... $\mathbb{Q}g8!$ when White is absolutely lost.

a2) I also tried to make 45. $\mathbb{W}xh6$ work, but quickly realized that while the bishop is immune on h6, White actually does not even have a threat! After the strong response 45... $\mathbb{W}d7!$ White must acquiesce to an exchange of queens, as he cannot keep the queen on the c1-h6 diagonal to keep the bishop immune. 46. $\mathbb{W}c1$ $\mathbb{B}c8!$ 47. $\mathbb{Q}c2$ $\mathbb{W}d3$ Black wins.

b) I tried making 44. $\mathbb{W}c3$ work too and even offered it as a solution, but Jacob once again had to send me back to the board for missing 44... $\mathbb{Q}d3!$.

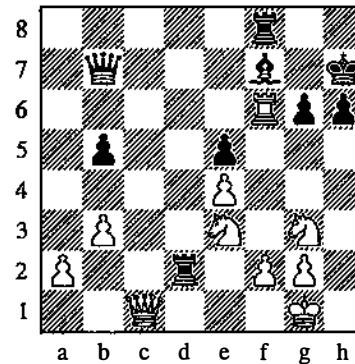
44... $\mathbb{B}xf8$

44... $\mathbb{B}d7$ 45. $\mathbb{B}xf6$ $\mathbb{B}xf8$ and White wins with either 46. $\mathbb{Q}ef5$ or 46. $\mathbb{Q}g4$.

44... $\mathbb{Q}d7$ 45. $\mathbb{W}xd2!$ Only now this move is good. The knight has left its post on f6, which is exploited by: 45... $\mathbb{W}xc6$ 46. $\mathbb{Q}g4!$ $\mathbb{B}xf8$ (46... $\mathbb{B}xf8$ changes nothing: 47. $\mathbb{W}xh6\#$ $\mathbb{Q}g8$ 48. $\mathbb{Q}f5$ and wins) 47. $\mathbb{W}xh6\#$ $\mathbb{Q}g8$ 48. $\mathbb{Q}f5!$ Black's queen is lost.

45. $\mathbb{B}xf6!$

And now we see Black's dilemma. The rook is hanging on d2, but if it moves, $\mathbb{Q}f5$ is coming – in a weird way, the rook is pinned to the h6-pawn.



45... $\mathbb{B}fd8$

45... $\mathbb{B}xa2$ 46. $\mathbb{Q}ef5$ with mate on the way.

46. $\mathbb{Q}gf1!$

Another strong move. The rook has to move, and then $\mathbb{Q}f5$ comes.

46... $\mathbb{B}2d6$

46... $\mathbb{B}2d7$ 47. $\mathbb{Q}f5$ $\mathbb{Q}xf5$ and now:

a) 48. $\mathbb{B}xh6\#$ $\mathbb{Q}g8$ 49. $\mathbb{W}g5\#$ and White wins.
b) 48. $\mathbb{W}xh6\#$ $\mathbb{Q}g8$ 49. $\mathbb{W}g5\#$ $\mathbb{Q}f8$ 50. $\mathbb{B}h6$ also wins, but Black can offer some resistance with 50... $\mathbb{Q}g8$ 51. $\mathbb{B}h8$ $\mathbb{Q}f7$ 52. $\mathbb{W}xf5\#$ $\mathbb{Q}e7$ 53. $\mathbb{W}xe5\#$ when White will need to find a bunch of good moves to bring the point home: 53... $\mathbb{Q}f7$ 54. $\mathbb{W}f4\#$ $\mathbb{Q}e7$ 55. $\mathbb{W}g5\#$! $\mathbb{Q}f7$

(55... $\mathbb{Q}d6$ 56. $\mathbb{Q}h6\uparrow$ $\mathbb{Q}c7$ [56... $\mathbb{Q}e6$ 57. $\mathbb{W}f6\uparrow$ $\mathbb{Q}c5$ 58. $\mathbb{Q}xe6\uparrow$ 57... $\mathbb{W}c5\uparrow$ $\mathbb{Q}b8$ 58. $\mathbb{B}b6$)
56. $\mathbb{Q}h6\uparrow$ $\mathbb{Q}d6$ 57. $\mathbb{W}f4\uparrow$ $\mathbb{Q}e7$ 58. $\mathbb{W}e5\uparrow$ White wins.



47. $\mathbb{Q}f5!$ $gxsf5$ 48. $\mathbb{W}xh6\uparrow$ $\mathbb{Q}g8$ 49. $\mathbb{Q}xd6$
White wins.

43... $\mathbb{Q}xb4$ 44. $\mathbb{Q}xd7$ $\mathbb{W}xd7$ 45. $\mathbb{Q}xf6$

Kamsky went on to win a fine game, but I doubt he realized at the time what he had overlooked.

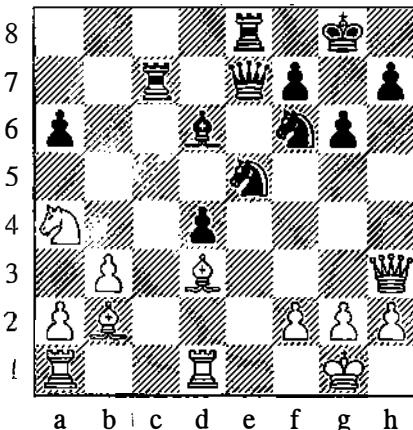
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The struggles I faced while solving this exercise felt almost exactly the same as the ones I had been encountering over the board. Ultimately solving the puzzle was very useful for me in two ways. First, it gave me the confidence that whatever problems I was facing in my development could ultimately be solved. But more importantly, I realized the kind of elbow grease I would have to put into calculation to reach higher levels.

As our work continued, I slowly but surely got better at solving the positions. Another example I vividly remember came from a later session in Glasgow, where I was able to save a position that proved too difficult for the current world Number 2.

Wesley So – Arkadij Naiditsch

Dortmund 2015



23... $\mathbb{Q}d5$ 24. $\mathbb{Q}xa6!$

In my training game with Jacob, I bravely grabbed this pawn, gaining a material advantage and stopping the threat of ... $\mathbb{Q}f4xd3$. It looked absolutely terrifying, but my defence was spot-on and I refused to reject $\mathbb{Q}xa6$ as a candidate move on general grounds. I did not see a win for Black, and indeed, one does not exist.

24. $\mathbb{Q}f1$ was also possible, but I like my move more. For instance: 24... $\mathbb{Q}f4$ 25. $\mathbb{W}g3$ $\mathbb{Q}ed3!$ 26. $\mathbb{W}f3$ $\mathbb{Q}xb2$ 27. $\mathbb{Q}xb2$ $\mathbb{E}c3$ 28. $\mathbb{Q}d3$ (28. $\mathbb{Q}d3$ $\mathbb{Q}a3!-\rightarrow$) 28... $h5$ Something like this is still a little unpleasant for White. Black's pieces are much more active.

24. $\mathbb{Q}xd4?$

When under pressure, even very strong players crack. Here Wesley goes down without much of a fight.

24... $\mathbb{Q}xd3?!$

Black is still much better after this, but the game goes on.

24... $\mathbb{Q}f4$ was even more convincing, and the reason I rejected $\mathbb{Q}xd4$. After 25. $\mathbb{W}h6$ it looks like White has pulled a fast one – the d3-bishop cannot be taken twice due to

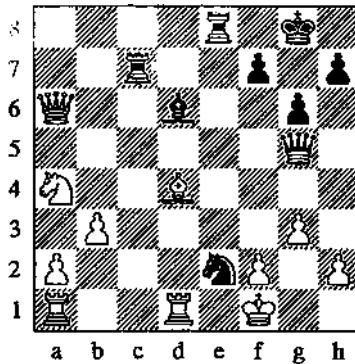
the mate on g7. But after 25... $\mathbb{W}f6!$ White has absolutely nothing to say about ... $\mathbb{A}f8$ coming next, trapping his queen. 26.h4 $\mathbb{A}f8$ The simplest win. 27. $\mathbb{W}g5$ $\mathbb{W}xg5$ 28.hxg5 $\mathbb{Q}exd3$

25. $\mathbb{W}xd3$ $\mathbb{Q}f4$ 26. $\mathbb{W}xa6?$

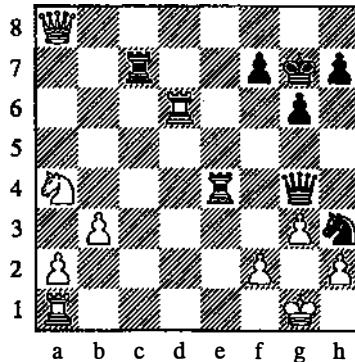
Now it's over.

26. $\mathbb{W}f3!$ $\mathbb{Q}e2\#$ 27. $\mathbb{Q}f1$ $\mathbb{Q}xd4$ 28. $\mathbb{B}xd4$ $\mathbb{Q}e5$ 29. $\mathbb{A}e4!$ $\mathbb{Q}xal$ 30. $\mathbb{B}xe7$ $\mathbb{Q}c1\#$ 31. $\mathbb{Q}e2$ $\mathbb{B}xe7\#$ 32. $\mathbb{Q}u2$ $\mathbb{B}ec7$ White is much worse but he can struggle for a bit.

26... $\mathbb{W}g5$ 27.g3 $\mathbb{Q}e2\#$ 28. $\mathbb{Q}f1$



28... $\mathbb{W}g4!$ 29. $\mathbb{Q}e3$ $\mathbb{B}xe3$ 30. $\mathbb{W}a8\#$ $\mathbb{Q}g7$ 31. $\mathbb{B}xd6$ $\mathbb{B}e4$ 32. $\mathbb{Q}g2$ $\mathbb{Q}f4\#$ 33. $\mathbb{Q}g1$ $\mathbb{Q}h3\#$



34. $\mathbb{Q}g2$ $\mathbb{B}c2$ 35. $\mathbb{B}f1$ $\mathbb{Q}f4\#$ 36. $\mathbb{Q}g1$ $\mathbb{W}f3$ 0-1

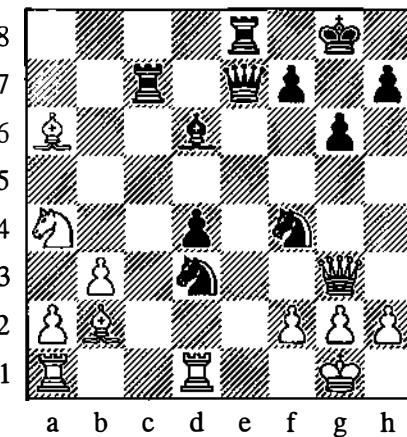
24... $\mathbb{Q}f4$ 25. $\mathbb{W}g3$

As terrifying as this looks, Black has no crusher. I had to check all kinds of knight discoveries.

25... $\mathbb{Q}ed3$

25...d3? 26. $\mathbb{W}xf4!$ For a moment I forgot about this obvious move. But it does exist!

25... $\mathbb{Q}c4$ 26. $\mathbb{W}f3!$ Again this move is strong. 26... $\mathbb{Q}xb2$ 27. $\mathbb{Q}xb2$ $\mathbb{B}c2$ 28. $\mathbb{Q}d3$ $\mathbb{Q}e2\#$ 29. $\mathbb{Q}h1$ And White lives.



26. $\mathbb{W}f3!$

A very tough move to play, but I was able to find the narrow path toward holding on. This was no doubt aided by looking for more candidate moves and trying to overcome resistance when positions down the line initially looked resignable.

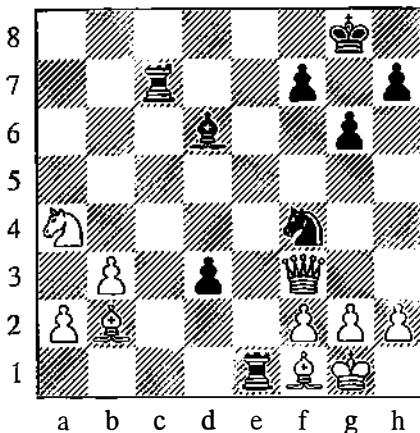
26. $\mathbb{Q}xd3$ This was my first inclination, hoping that after 26... $\mathbb{Q}e2\#$ 27. $\mathbb{Q}xe2$ $\mathbb{Q}xg3$ 28.hxg3 $\mathbb{W}xe2$ 29. $\mathbb{Q}xd4$ I could set up some kind of fortress. But this is unlikely to work, and the text is much stronger.

26... $\mathbb{Q}e1$

This looks devastating – ... $\mathbb{Q}xg2$ will not be fun to allow. However, White can get away with taking:

27. $\mathbb{B}xe1!$ $\mathbb{W}xe1\#$ 28. $\mathbb{B}xe1$ $\mathbb{B}xe1\#$ 29. $\mathbb{Q}f1$ d3

It looks over – ... $\mathbb{Q}e2\#$ and ...d2 are both massive threats. But White can keep fighting:



30.g3!

Attacking the knight, and stopping the bigger threat.

30...d2 31.Qc3!

And now stopping the smaller threat!

31...Qxc3 32.Qxc3!

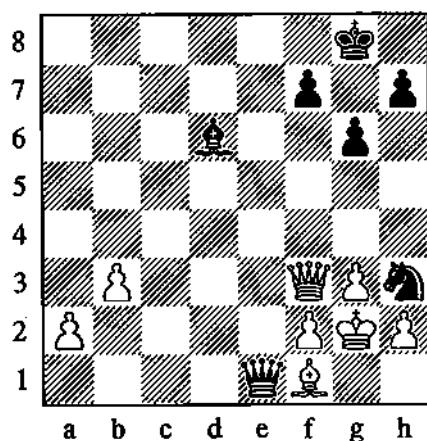
32.Qxc3 Qe2†

32...Qh3†

32...d1=Q 33.Wa8†! (33.Wxd1? Qh3†)

33...Qf8 34.Qxe1 Wxe1 35.gxf4 and it is Black who must be precise to make the draw.

33.Qg2 d1=W 34.Qxe1 Wxe1



35.Qc4??

35.Wd3! was more accurate. White gets his material back and equalizes on the spot: 35...We6 36.f4! Trapping the h3-knight. 36...Qxf4 37.Qc4 Wd7 38.Wb5 Neither player can avoid the draw.

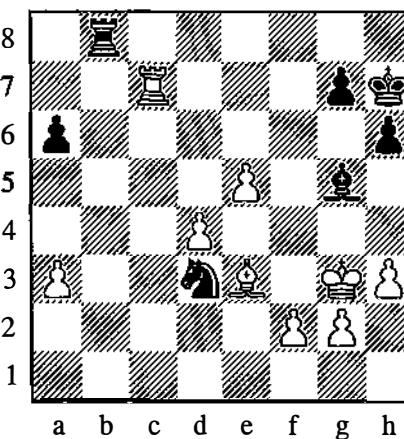
35...Qg5 36.Wd5

Around here Jacob put away his notes and came to the board himself. White is suffering but I believe the position should be defensible, and indeed I did hold the draw.

While I still have a long way to go before becoming truly elite, the last few years have shown a clear upward trend in my ability to calculate effectively. For instance, take the following games:

Sam Shankland – Surya Shekhar Ganguly

Edmonton 2016



28...Bf8

In a very tense ending, I felt like I should be able to get my pawns rolling, but the lines never seemed to work. After failing to resolve any issues with the concrete choices, I asked myself the three questions. What is my worst placed piece? The rook on c7 – it looks nice but does nothing and can get hit by ...Qf4†

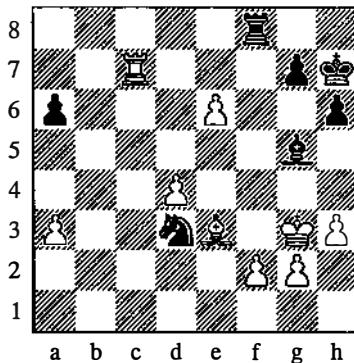
at an unfortunate moment. Where are the weaknesses? a6 is the only one I can see. Opponent's idea? Abuse the f4-square.

29.♕c6!

A patient and very strong move. White improves his worst placed piece, attacks the a6-pawn, and is ready to send his central runners.

29.e6?

This was my initial intention. d4-d5 will follow next, and the pawns crash through. But Black has a strong resource available:



29...♕xf2!

Taking advantage of the poorly placed rook.

30.♕f7!

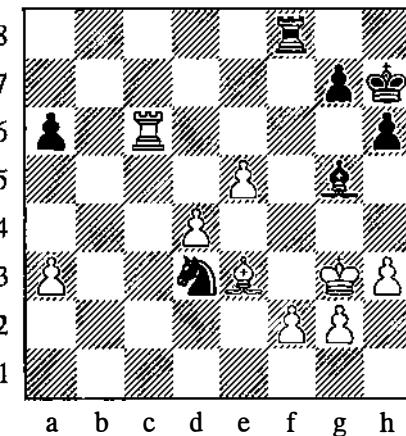
After other moves, White is worse:

- 30.♕xf2? ♕f4†
 - 30.♕xg5 ♕e4†! 31.♕h2 hxg5 32.e7 ♕e8 and Black should win.
 - 30.e7 ♕e4†! 31.♕h2 (31.♕g4 ♕f1! and Black is much better. The fork ...♕f6† is always ready to scoop up any new queen.) 31...♕e8 32.♕xg5 ♕xg5 33.d5 ♕e4 And White is out of steam.
- 30...♕e4† 31.♕f3 ♕e8 32.d5 ♕f6 33.♕d4 ♕g6 34.♕xf6 ♕xf6 35.♕e4

The white passed pawns are just enough to hold the draw.

29.♕xg5 Here White is attempting to get e5-e6 in without allowing the ...♕xf2 trick, but after 29...hxg5 30.e6 ♕f4! Black's knight

is much more secure now that a pawn is on g5. White cannot get d4-d5 in to lend added support and he will lose the e6-pawn. Black holds easily after 31.♕c6 ♕e8 32.♕xa6 ♕xe6.



29...♕f4†?

Black falls for my trap.

29...a5

Simply saving the a-pawn works according to the engine, though I would be very concerned about:

30.e6!

Since Black no longer has the ...♕xf2 tactic. However:

30.♕f4†!

30...♕f6 31.f4 still leaves Black with some problems to solve. d4-d5 and f4-f5 are coming and only some bizarre computer nonsense holds on: 31...♕b8! 32.d5 ♕b3 33.♕f3 ♕e1† 34.♕e4 ♕xa3 35.g3 ♕a4†! 36.♕f5 ♕e7! 37.d6 g6† 38.♕e5 ♕d3† 39.♕d5 ♕b4† 40.♕c5 ♕xc6 41.♕xc6 ♕f6 Black is okay. This is basically impossible for humans to play.

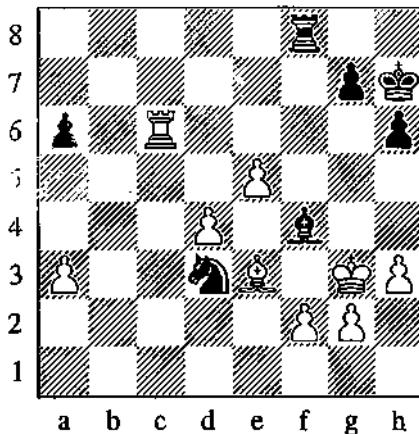
31.♕f3 ♕g5†! 32.♕e2 ♕f4† 33.♕xf4

33.♕d2 ♕xg2 34.♕xg5 hxg5 35.d5 ♕xf2† with serious counterplay.

33...♕xf4 34.d5 ♕d4!

Black has everything under control, since 35.d6 fails to 35...♕e4†.

29... $\mathbb{Q}xe3!$ 30.fxe3 $\mathbb{Q}f2!$ is the most human solution. The knight comes back to e4 to slow the pawns down, and he should hold the game. The point is that 31. $\mathbb{B}xa6$ (31.e6 $\mathbb{Q}e4\#$) is well met by 31... $\mathbb{Q}d1!$ 32.e4 (32.d5 $\mathbb{Q}xe3$ 33.d6 $\mathbb{Q}f1\#$! 34. $\mathbb{Q}g4$ $\mathbb{Q}e3\#$) 32... $\mathbb{Q}c3$ when White loses the e-pawn. Black should be fine.



30. $\mathbb{Q}f3!$

The power of candidate moves! This looks like it walks into a devastating discovery, but if White actually forces himself to consider $\mathbb{Q}f3$ as a candidate move, the details are actually pretty easy to sort out.

30... $\mathbb{Q}e1\#$

The best try.

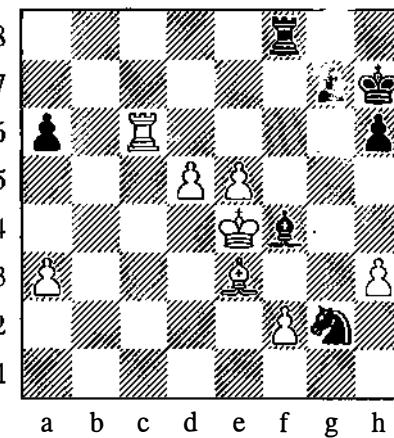
30... $\mathbb{Q}xe3\#$ 31. $\mathbb{Q}xe3$ $\mathbb{Q}xf2$ 32.d5 and the knight is ridiculous on f2. The pawns crash straight through.

30... $\mathbb{Q}xe5\#$ 31. $\mathbb{Q}e4$ and Black loses material.

30... $\mathbb{Q}g5\#$ 31. $\mathbb{Q}e2!$ (31. $\mathbb{Q}e4$ $\mathbb{Q}xf2\#$) 31... $\mathbb{Q}f4\#$ 32. $\mathbb{Q}xf4$ $\mathbb{Q}xf4$ 33. $\mathbb{Q}c4!$ A final accurate move seals Black's fate; g2-g3 and f2-f4 are coming. (33. $\mathbb{Q}d6?$ $\mathbb{Q}e7!$ 34. $\mathbb{Q}d7$ $\mathbb{Q}xa3$ with counterplay) 33... $\mathbb{Q}e4\#$ 34. $\mathbb{Q}d3$ $\mathbb{Q}e1$ 35.g3! Black should lose. The pawns are way too strong.

31. $\mathbb{Q}e4$ $\mathbb{Q}xg2$ 32.d5

White's pawns are rolling along. The time scramble produced some errors, but I did go on to win.

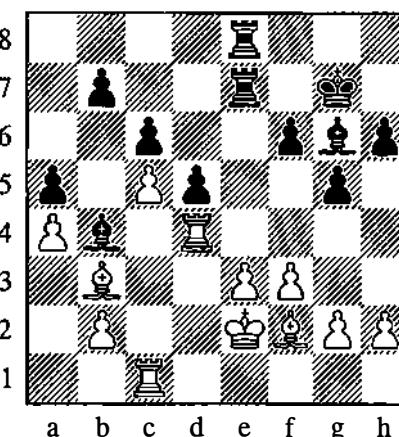


32... $\mathbb{Q}xe3$ 33.fxe3 $\mathbb{Q}g3$ 34.d6 $\mathbb{Q}e8$ 35.d7 $\mathbb{Q}d8$ 36.e6 $\mathbb{Q}h4$ 37. $\mathbb{Q}d5$ $\mathbb{Q}g8$ 38. $\mathbb{Q}xa6$ $\mathbb{Q}f8$ 39. $\mathbb{Q}a4$ $\mathbb{Q}f6$ 40. $\mathbb{Q}c4$ $\mathbb{Q}e7$ 41. $\mathbb{Q}c8$ $\mathbb{Q}g5$ 42.a4 $\mathbb{Q}xe3$ 43.a5 h5 44. $\mathbb{Q}c6$

1-0

Yaroslav Zhrebukh – Sam Shankland

Chinggis 2016



31. $\mathbb{Q}f1?$

Black definitely has the more pleasant position, but White has all of his weaknesses

defended and it will be tough to open lines. A search for candidate moves reveals Black can capture on e3 here, but should he pull the trigger? He definitely has a pleasant position after something like ...h5, gaining space and waiting to provoke fights for a later day.

31... $\mathbb{B}xe3!-$

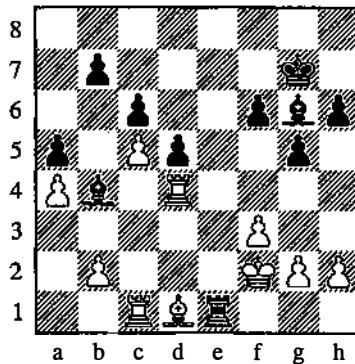
This move required a fair amount of calculation, but it is indeed correct. Black is basically winning, and this can be ascertained by asking the three questions at several key moments.

32. $\mathbb{Q}xe3$ $\mathbb{B}xe3$ 33. $\mathbb{Q}c2$

This was not the only move, but definitely the toughest one.

33. $\mathbb{Q}d1$ $\mathbb{B}e1\#$ 34. $\mathbb{Q}f2$

Here I was initially unsure if Black had anything special, but asking myself the three questions led me to the right conclusion. Specifically, the question of "What is my opponent's idea?" Soon I realized that if I do not blunder and allow $\mathbb{B}xb4$, I had absolutely no clue what his next move would be!



34... $\mathbb{B}h1!$

Indeed after this patient move, White is in a deadly zugzwang! Neither rook has any squares, the bishop is pinned, and none of the pawns can move.

35.h3

This is the least offensive move I can see for White, but even now his position is weakened.

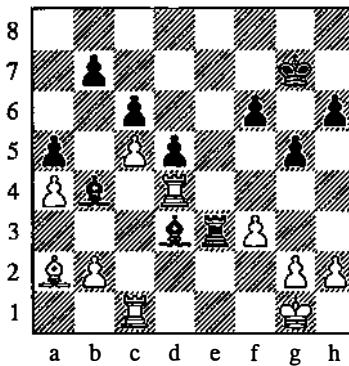
35.f4 $\mathbb{Q}e4$ and 35. $\mathbb{Q}g3$ $\mathbb{Q}e1\#$ are both winning for Black.

35. $\mathbb{Q}g4$ $\mathbb{Q}d2$ 36. $\mathbb{Q}a1$ $\mathbb{Q}f4$ and the rook is trapped on g4.

35... $\mathbb{Q}e1\#$ 36. $\mathbb{Q}e2$ $\mathbb{Q}g3!$

White is sorely missing the h2-pawn. $\mathbb{Q}g1$ will be next and g2 cannot be saved.

33. $\mathbb{Q}a2$ $\mathbb{Q}d3\#$ 34. $\mathbb{Q}g1$



34... $\mathbb{Q}a6!$

Again, the three questions. Worst placed piece? The d3-bishop. Opponent's idea? He has none. Weaknesses? The second rank, which now cannot be protected. White is dead lost.

My first inclination here was to grab my material back with 34... $\mathbb{Q}c4?$ but this is much less effective: 35. $\mathbb{Q}dxc4$ (35. $\mathbb{Q}xc4?$ $\mathbb{Q}xc5$ is great for Black) 35... $dxc4$ 36. $\mathbb{Q}xc4$ With $\mathbb{Q}f1$ and b2-b3 to follow, White will be one pawn down with no weaknesses and opposite bishops. He should have decent drawing chances.

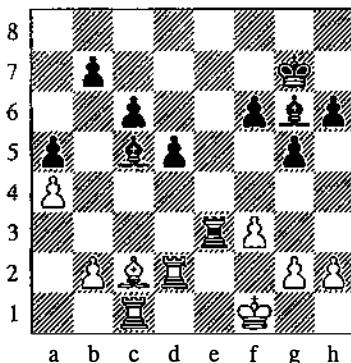
35. $\mathbb{Q}c2$ f5!

The engine wants to take on d5. I'll conclude my analysis with that.

33... $\mathbb{Q}xc5$ 34. $\mathbb{Q}xd5$

This is not a bad move, but also not a scary one. Black remains a clean pawn up after a move of calculation.

34.♗d2 This was the most critical position I had to evaluate when I was choosing whether or not to take on e3. I thought if White can get ♘e2 in and either trade rooks or take over the e-file, he would be okay. This is wrong (he is still much worse), but I found a way to shut him down anyway.



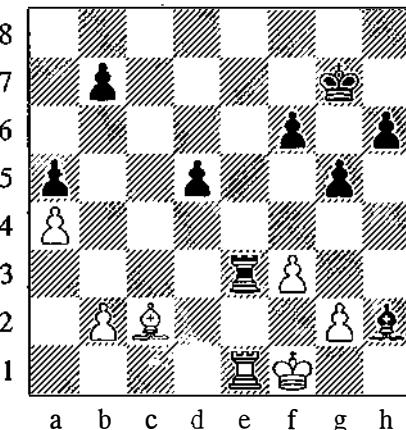
34...♝xc2! 35.♝cxc2 ♘b4! 36.♝e2 ♘b3 Black is ready for ...d4-d3, and he can install his bishop on e5 to shut down the e-file, keep everything protected, and start harvesting pawns with ...♝b4.

34...cx d5 35.♝xg6 ♘d6 36.♝c2

36.♝f5 offered more saving chances but should still lose: 36...♝b3 37.♝d1 ♘xh2 38.♝xd5 ♘g3

36...♞xh2 37.♝e1

37.♞f2 ♘f4 38.g3 ♘xf3†



37...♝xe1† 38.♝xe1 ♘g3†!

Black has to prevent g2-g4. The rest was straightforward.

39.♝e2 ♘f7 40.♝f5 h5 41.♝d3 ♘e7
42.♝g6 h4 43.♝f5 ♘d6 44.♝c8 b6 45.♝e5
46.♝b7 ♘f2 47.♝c6 d4 48.♝b7 ♘f4
0-1

Quite a difference a couple of years made! Of course, I take full credit for the improvements in my play, but I believe working with Jacob was the catalyst that led to my superiority in these areas. I have no doubt that diligent readers who study this book seriously and work through Jacob's planned exercise books will be rewarded for their hard work by becoming better chess players.

Sam Shankland
Walnut Creek, California
March 2017

Introduction

The chapters in this book are to some extent separate articles on themes I find very important for improvement in chess. But they are connected, as my thinking about these topics has become clear and integrated after thinking about it for years and discussing it with hundreds and hundreds of people. As I am finishing this book I am on a tour of eight Asian countries for training camps and open lectures, presenting the ideas in the book, constantly refining them. I doubt the ideas will ever be stagnant and I will continue to change my explanations of the basic ideas presented in what follows in new ways, hopefully with ever-increasing accuracy. But publication is also an aim, so I have decided to end the thinking and move forward to the typesetting.

This is a quick rundown of what follows.

1. Simple but Difficult

My favourite exercise as well as a clear explanation of the idea *simple but not easy*.

2. The Psychology of Chess Improvement

The natural inclination is to put the chapter on psychology at the end as an add-on, especially as I am not a psychologist by training. But I have found that what I have to say on the subject makes people think about how they approach this topic in their own lives and that surely must be a good thing.

3. Who Are You?

I am an activist. Dvoretsky's model of four different types of players is explained, with your author being an example of an intuitive dynamic player.

4. Decision Making

This is what everything is about! What should I play on the next move? And how to work it out? This chapter deals with the change that made a deep impact on my game and took me from International Master to Grandmaster.

5. Four Types of Decisions

This is the underpinning of the many techniques of training I use, which comes together to become something like a method when seen through this prism.

6. Simple Decisions

Skipping automatic decisions and going straight to a discussion of simplicity. The chapter will very briefly touch on one of my main training methods, the *three questions*, which I already wrote a full book on, *Grandmaster Preparation – Positional Play*.

7. What is Calculation?

Everyone has their own definition. This is mine, based on psychology and my own observations.

8. The Calculation Process

In this chapter I discuss general techniques that I focus on when teaching calculation. I previously debated the sophisticated techniques and approach by Mark Dvoretsky in *Grandmaster Preparation – Calculation*, but in this chapter I will go into really basic aspects of calculation, as I see it.

9. Abstract Thinking

Moving into the territory of strategic decisions, I debate a couple of games where the thinking was long-term and add a few thoughts on the subject.

10. Strategic Concepts

In *Excelling at Chess* I had a chapter called *No Rules?* which was polemical and controversial. This chapter could be called *No Rules!* but with age I have turned the irony down slightly. Rules make sense, but the word does not. In this chapter I will debate why and why not.

11. Dynamic Strategic Concepts

I have presented these ideas before in *Attacking Manual 1* and *Grandmaster Preparation – Attack & Defence*, but this time I show how I managed to squeeze them all into one game and play my personal Mona Lisa.

12. Openings

I am not an expert on this topic, but I have played the opening in all of my games, so I do have some experience and have made some observations over the years.

13. Analyse Your Own Games

This could have been an early chapter, as I think this is imperative for anyone who wants to improve in chess. But I wanted to explain my model of chess thinking and chess improvement thinking before suggesting that you use it as a way to analyse your games.

14. Training Methods

There are so many ways to do this. In this chapter I discuss my favourites, which I hope others will find useful. Not to pretend that they are superior to others, but because they are the ones I understand well.

Appendix 1 – Nutrition

Everyone has their own view. It is not crucial for chess improvement, but I still wanted to briefly mention what my studies and experience have led me to believe.

Appendix 2 – Advanced Engine Management

I am not an expert on computers. I use them. So do you. But Nikos is an expert and he kindly agreed to write his thoughts on this subject.

Appendix 3 – Cheat Sheet

Once you have read the book, you may want a summary of the key ideas. Happy to help.



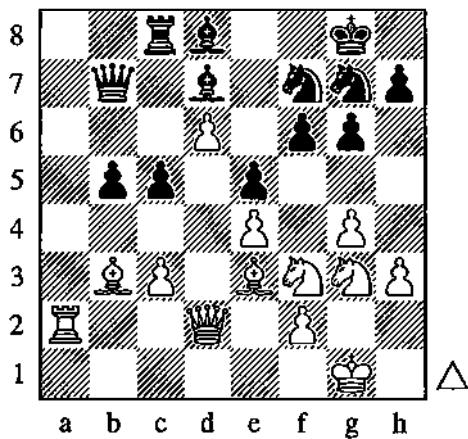
Chapter 1

Simple but Difficult

Jacob Aagaard – Jonathan Rowson

Great Yarmouth 2007

1



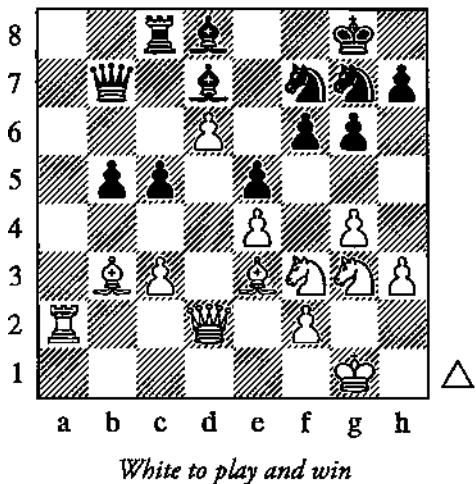
White to play and win

This is one of the most difficult exercises I have in my collection. Many great grandmasters have tried to solve it, but only one has succeeded. Give it 30 minutes, if you want to test yourself against the elite!

Too difficult for me

There are times when you have to accept that chess is too difficult. This can be psychologically difficult, because our brain plays a trick on us.

If you tried to solve the position on the previous page, you will know how difficult it is, even if you were the first person in the world to solve it. It is not because there are that many options, but simply because the way they can be put together successfully is entirely surprising. If you did not try for the full 30 minutes as I suggested above, I want to ask you to try for at least five minutes to consider what you would play here:



White to play and win

A mind trick

What often happens to players these days is that they finish their game, return to the hotel room and check the game with an engine; often without a post mortem analysis. At some point the computer will indicate some strong continuation that the player had not considered during the game. The reasoning behind the moves will not be too difficult to understand and everything seems so easy and the player starts wondering what happened to him since he did not see this “obvious” continuation.

Gone is the memory of suffering at the board in intense calculation with a multitude of possibilities that all appear promising, but in most cases are not. The only thing that remains is the computer’s singular sequence of “logical” moves.

Chances are that I am probably talking about you.

When I studied semiotics, I attended a few lectures on neuroscience. In one of them we were shown a few famous drawings where one object is visible, but another is hidden. For example, of a Greek urn that also turns out to be two faces looking at each other – though many of course see two people and not the Greek urn. (Very few people see both objects, but it does happen and kills the experiment.)

As reproducing famous drawings is costly, we will have to make do with explaining the point here.

At some point people see the other object, especially after being prompted. At times it can take a minute or more before you see it, because your brain is so fixated on the other object. Once this happens, you naturally switch between seeing one object and then the other every three seconds, which is the time a moment takes (also the time it takes to say ten syllables, to play 4/4ths in music in a pleasant tempo, or to speak an average sentence).

What you cannot do at that moment is to unsee either of the objects. The same is the case with a chess variation of standard simplicity. It happens that variations can be so complicated that they are hard to remember, but this is rarely the case with the mistakes even very strong players make. Once revealed, the logic behind a move is simple and compelling. For this reason, we suddenly believe that we have missed something easy during the game. Disappointment grows, and our confidence

erodes faster than people's confidence in bankers did during the credit crunch.

But it is all a trick of the mind. Knowing a solution is indeed easy; but even if the solution is simple, finding it is anything but. We have to overcome our first instinct and let reason paint the full picture of the situation.

Chess might be simple, but it is also a truly difficult game. What appears easy to the spectator, even without the engine, might be less so in the third hour of play, when we have already solved many difficult problems and have no idea where the next challenge will be; and where our time is slowly, but suffocatingly steadily, running out.

You need to give yourself the benefit of the doubt. Chances are that you tried your best during the game and that the fact that you did not see everything you would have liked to is just a sign that you have not fully mastered the game of chess yet. No one has.

And if you did not try your best, you already know it. A good or bad move should not change this feeling, nor should a good or bad result.

The Build Up

As this is one of the most important games in my chess career, I am including it in full. I think it has some interesting moments, but should the reader disagree, he can browse forward and find the conclusion. Personally, I like all aspects of chess, not just the highlights.

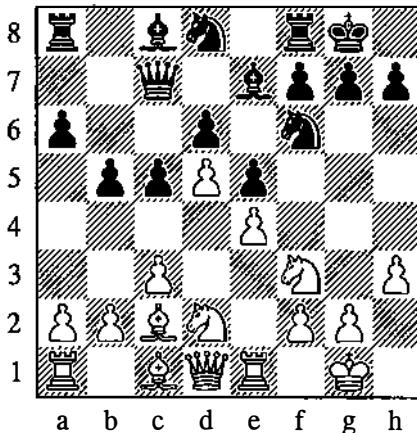
Jacob Aagaard – Jonathan Rowson

Great Yarmouth 2007

This game was played in the sixth round of the 2007 British Championship. I had by a combination of luck and occasional good play managed to win the first five rounds. I felt fit, happy and ready to play. Jonathan Rowson had won the British the previous three years and was a clear rating favourite for this event, with his career high rating of 2599, while I had just managed to scramble enough rating points together in Round 3 to reach the final requirement to become a grandmaster, a rating of 2500+.

Jonathan had a respectable 4/5 and was clearly looking to beat me, not just to defend his title, but also to assert himself as the leading Scottish Grandmaster. Although it would be fair to say that his status in this regard was never seriously in doubt, I did manage to win the tournament in front of him and surpass him in the Scottish rating list for just one moment in time.

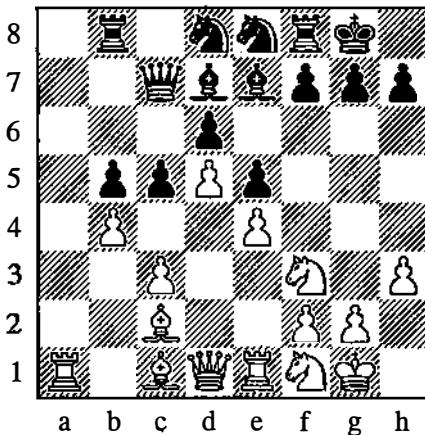
1.e4 e5 2. \mathbb{Q} f3 \mathbb{Q} c6 3. \mathbb{Q} b5 a6 4. \mathbb{Q} a4 \mathbb{Q} f6
 5.0–0 \mathbb{Q} e7 6. \mathbb{Q} e1 b5 7. \mathbb{Q} b3 d6 8.c3 0–0 9.h3
 \mathbb{Q} a5 10. \mathbb{Q} c2 c5 11.d4 \mathbb{Q} c7 12. \mathbb{Q} bd2 \mathbb{Q} c6
 13.d5 \mathbb{Q} d8



Mihail Marin had recently published his book *A Spanish Repertoire for Black*, which recommended this variation for Black. I knew this, as I was the publisher, but this does not mean I was familiar with all the details of the opening.

The idea is to outplay White slowly by keeping the queenside closed and eventually take over the game on the kingside. Jonathan correctly assumed that such play would favour him more than me.

14.a4 $\mathbb{B}b8$ 15.axb5 axb5 16.b4 $\mathbb{Q}e8$ 17. $\mathbb{Q}f1$ $\mathbb{Q}d7$



18.g4?

At the time of the game this was a novelty. Jonathan afterwards branded it a positional mistake, which I think is entirely incorrect. It is quite a committal move and maybe not practical. But I do not see that it should be a bad move.

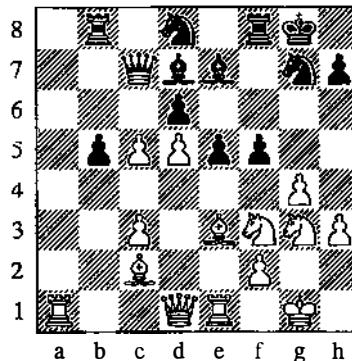
The main idea is of course to fight against a later ...f5 break, as well as to grab a lot of space.

18. $\mathbb{Q}e3$ is the main move.

18...g6 19. $\mathbb{Q}g3$ f6

Black has to build up his position slowly.

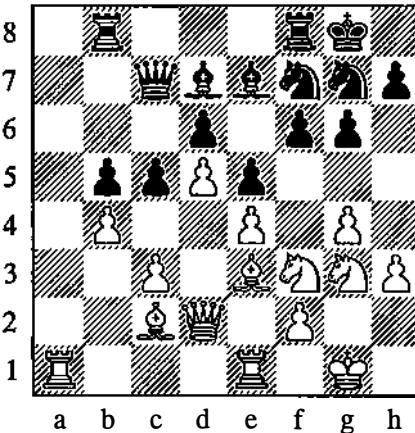
If he tries to push too hard, he can easily end in trouble: 19... $\mathbb{Q}g7$ 20. $\mathbb{Q}e3$ f5? 21.exf5! gxf5 22.bxc5



If Black recaptures, White has an immediate trick in 22...dxc5 23. $\mathbb{Q}xe5!!$ $\mathbb{W}xe5$ 24. $\mathbb{Q}d4$, after which 24... $\mathbb{W}xd5$ 25. $\mathbb{Q}xg7$ and 24... $\mathbb{W}d6$ 25. $\mathbb{Q}e5$ are both winning for White.

Black can try 22...fxg4, but White has many wins there too. 23. $\mathbb{Q}xe5!?$ is one example, while an even more convincing one is 23. $\mathbb{W}d3!$, when Black will be brutally mated.

20. $\mathbb{Q}e3$ $\mathbb{Q}f7$ 21. $\mathbb{W}d2$ $\mathbb{Q}g7$



22. $\mathbb{R}a2$

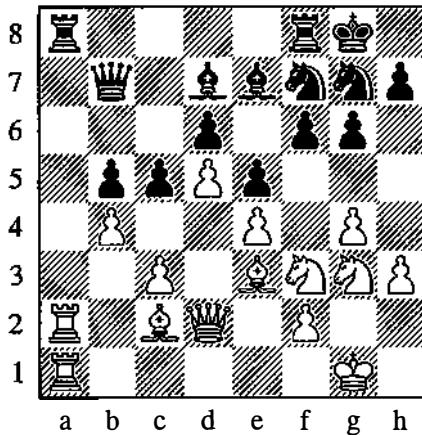
I probably chose this square in order to defend the bishop but, as we shall see, the rook would have been better on a3, making space

for the queen to support it from a2. But it is a marginal difference of course. We should not forget that the word decision comes from Latin and means “to cut off”, as in eliminating all other possible scenarios.

22... $\mathbb{Q}a8$ 23. $\mathbb{Q}eal$ $\mathbb{W}b7$

This move is quite natural, but leads to trouble in the game, when Black fails to find the right follow-up.

After the game we agreed that Black would be more or less all right if he had played 23... $\mathbb{Q}xa2$ 24. $\mathbb{Q}xa2$ $\mathbb{Q}c8$, though someone like Boris Gelfand, who loves a space advantage, would manoeuvre the queen to a1 and claim that things are easier for White.



24. $\mathbb{Q}b3?$

This was quite a clever idea in practical terms; it just so happens that Black has a fantastic response to it, which neither one of us considered for even a second.

24... $\mathbb{Q}xa2!!$

This concedes the a-file and gives White the advantage.

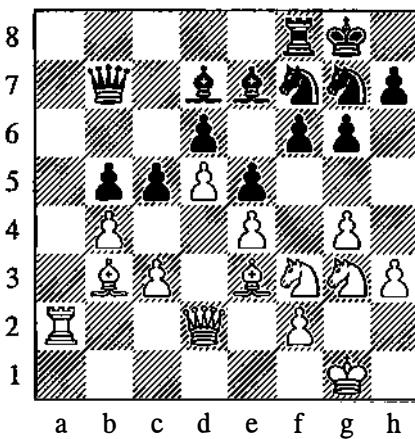
Black could have equalized with 24...c4! on account of the brilliant idea: 25. $\mathbb{Q}a7$ $\mathbb{Q}fb8!!$



Making space for ... $\mathbb{Q}c8$, after which Black is fine.

25. $\mathbb{Q}xa2$

25. $\mathbb{Q}xa2$ with a slight edge was also possible.



25... $\mathbb{Q}c8?$

Supporting the c-pawn, but there is a nasty catch.

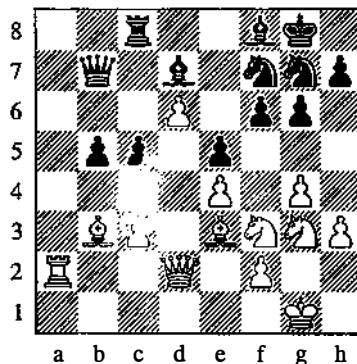
25...c4 26. $\mathbb{Q}a7$ is not as big an achievement as I probably imagined it to be during the game, but the decision to close the game without being able to challenge for the open file does favour White somewhat. Black is in for a tough defence.

Something like 25... $\mathbb{Q}h8!$? was possible. White is better placed, but there is no specific reason why Black should not hold.

26. hxc5 dxcc5 27. $\text{d6} \blacksquare\text{d8}$

Black is already lost. During the game I was looking forward to:

27... Qf8

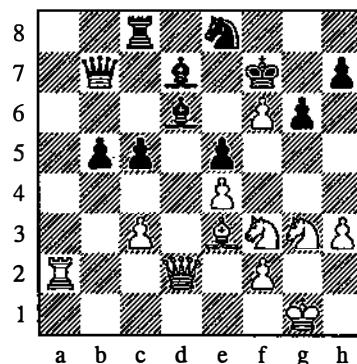


28. $\text{Qxf7!} \blacksquare\text{xf7}$ 29. g5

The pawn structure in the centre is in a state of collapse. The concrete justification for White's play comes after:

29... Qe8 30. $\text{gxh6} \blacksquare\text{xd6}$

This is as far as I made it during the game. White has a wonderful combination.



31. $\text{Qa6!!} \blacksquare\text{xa6}$

There is no great alternative to this.

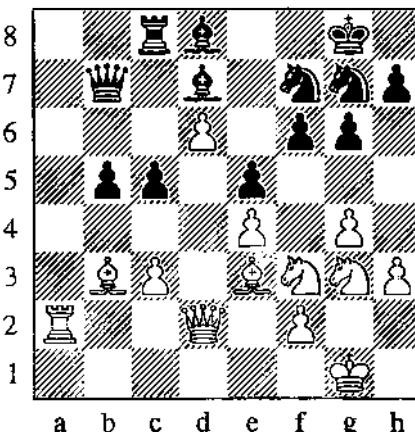
31... Qc6 32. Qa2! and 33. Qa7 also wins.

32. $\text{Qd5!} \blacksquare\text{xf6}$ 33. Qg5

This quiet move exposes Black's inability to defend the f7-square. The only line that White needs to be in control of is:

33... Qe7 34. $\text{Qf7!} \blacksquare\text{d8}$ 35. Qe6!

And 36. Qg5! , with mate to follow.



Once again we have reached this position. This is the critical moment. White has played his ideas and will soon see his options cut short by the ...c5-c4 move. If I had had the understanding of chess I have now, as well as the calculation abilities I had then, I would certainly have invested myself fully in this position (as I hope you did!). As it was, I did not manage to force myself to concentrate and played a seemingly decent move after a few minutes.

28. Qd5?

This is also quite a popular move from those who have tried to solve the position. Compared to the solution it is clearly inferior, but I did not perform worse than a long line of grandmasters did.

28... Qc6?

Jonathan played this as a winning attempt. He clearly overestimated his position, but his great will to win the game was leading his evaluation just as much as the pieces on the board. I have never shared this all-consuming competitive spirit, but hope that I will be among the last to criticize it when it leads to incorrect evaluations. It has many things going for it as well!

28... Qb6 was probably better. Black is planning ... Qe6 , so White has nothing better than: 29. $\text{Qxf7!} \blacksquare\text{xf7}$ 30. g5

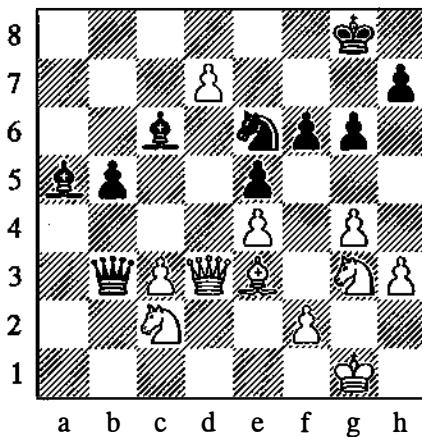


Black holds the balance with 30... $\mathbb{A}e6!$
31.d7 $\mathbb{B}b8$ and he seems to be entirely okay.
Of course White can try other things; they are just equally unimpressive.

29. $\mathbb{Q}xf7\#$ $\mathbb{W}xf7$ 30. $\mathbb{Q}xc5$ $\mathbb{W}a8$ 31. $\mathbb{B}xa8$ $\mathbb{Q}xa8$
32. $\mathbb{W}d3$

32.g5! was the right way to play, trying to bring the knights into the game. White still has the advantage, though Black has quite a lot of compensation for the pawn.

32... $\mathbb{Q}c6$ 33. $\mathbb{Q}e1$ $\mathbb{W}b3$ 34. $\mathbb{Q}c2$ $\mathbb{Q}e6$ 35. $\mathbb{Q}e3$
 $\mathbb{Q}a5$ 36.d7!

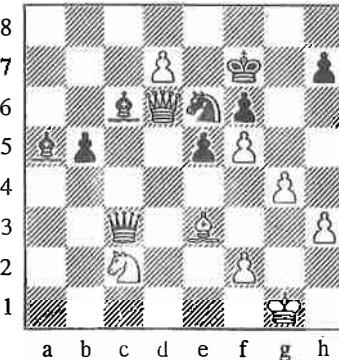


I believed for a moment that I was going to win the game.

36... $\mathbb{Q}d8!$

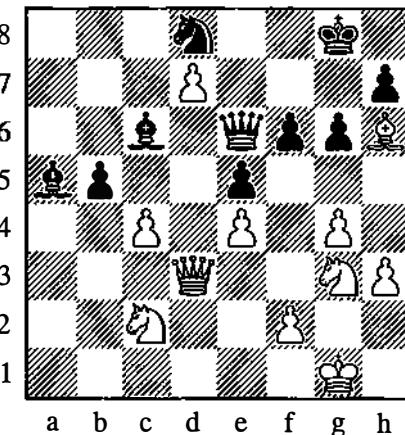
But Jonathan found the only move, despite being short of time.

36... $\mathbb{W}xc3?$ is refuted by 37. $\mathbb{W}d6$ $\mathbb{Q}f7$ 38. $\mathbb{Q}f5!$
 $gxf5$ 39. $exf5$ and Black's position is collapsing:



The main point is revealed after 39... $\mathbb{Q}d8$
40. $\mathbb{Q}c5$ when Black cannot defend the f8-square. It is quite remarkable how Black continuously has to look out for squares around his king being impossible to guard, in a variation where Black fills his kingside with pieces in the same way that some kids fill their mouths with sweets.

37. $\mathbb{Q}h6$ $\mathbb{W}e6$ 38.c4



38... $\mathbb{Q}f7!$

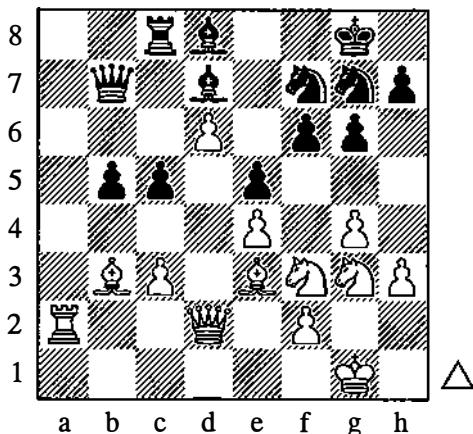
It was still possible for Black to blunder with
38... $\mathbb{B}xc4??$ 39. $\mathbb{W}a3$ when the double threat on
a5 and f8 wins the game.

39. $\mathbb{C}xb5$ $\mathbb{W}xd7$ 40. $\mathbb{W}a3$ $\mathbb{Q}xh6$ 41. $\mathbb{W}a2\#$ $\mathbb{Q}f7$

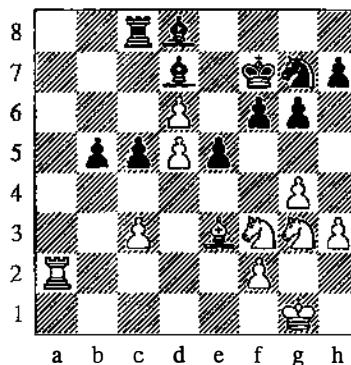
42.bxc6 $\mathbb{W}xc6$ 43. $\mathbb{Q}e3$ $\mathbb{Q}b6$ 44. $\mathbb{Q}d5$ $\mathbb{B}g7$
 45. $\mathbb{Q}g2$ $\mathbb{W}c5$ 46. $\mathbb{W}b2$ $\mathbb{Q}a7$ 47.h4 $\mathbb{W}d4$
 48. $\mathbb{W}a2$ $\mathbb{W}c5$ 49. $\mathbb{W}b2$ $\mathbb{W}d4$
 $\frac{1}{2}-\frac{1}{2}$

The climax

After the game, when I returned to the caravan I was sharing with two friends, I quickly checked the game with a computer. I had talked it over with Jonathan, but did not find that his opinions made me understand where I had messed up what I felt was a promising position. The engine suggested something earth-shattering:



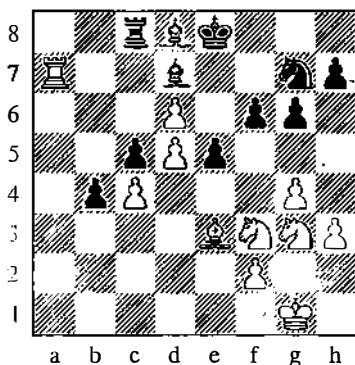
At this point I could have won the game with the “simple” 28. $\mathbb{Q}xf7\#$ $\mathbb{Q}xf7$ 29. $\mathbb{W}d5!!$, which seemed all wrong when the engine suggested it. Wise enough not to race against cars or have eating competitions with a garbage disposal unit, I put the moves on the board in order to understand what was happening, adding in 29... $\mathbb{W}xd5$ 30.exd5.



I moved the pieces around for a few minutes before I understood that White is indeed entirely winning. A few days later I told Jonathan about this option. He had not checked the game, but said he was sure that he had this one covered. After the tournament, I emailed him and got the following reply, showing Jonathan’s great wit and talent for explaining chess:

“I think I confused this line with the immediate 28. $\mathbb{W}d5$ (instead of 28. $\mathbb{Q}xf7\#$ first, which I associated mainly with g4-g5) which is also dangerous but not so convincing. It seems to be true that after giving away your best piece, activating my king, exchanging queens, doubling your pawns, you are indeed clearly winning – it’s a very instructive line because at a glance it seems that Black should have resources – I guess the salient point is that the new structure activates the dormant knight on g3 who was otherwise doing little for your position, and the d5-pawn restricts the g7-knight, d7-bishop and king, who were otherwise very active.”

If we add a few moves, we can see the true tragedy, which is Black’s position. For example: 30...b4 31. $\mathbb{Q}a7$ $\mathbb{Q}e8$ 32.c4



The knight is coming to e4, making c5 impossible to defend. Also, g4-g5 will be forever in the air. The passed b-pawn is entirely harmless and can always be blocked by ♜f3-d2-b1, if need be. On top of everything else, ♘h6 is in the air, trapping the sad knight on g7.

I could simplify this sequence to make it entirely logical. White has a bad knight on g3, which needs to come into the game. At the same time, Black is threatening ...c5-c4, emasculating the bishop on b3, as well as ...♝e6 to bring the knight into the game. With a simple exchange of pieces, White achieves everything. What could be simpler?

Yet, simple does not mean easy.

I gave this exercise to Boris Gelfand in Rome in 2009, just before we started working together. He thought for about half an hour, before Yuri Garrett and Maya Gelfand wrestled us away from the board and into the nearest restaurant.

By the time the desserts were being served, Boris turned to me and said: “OK, I give up. Tell me.” It took me a few moments to realize that he was talking about the Rowson game. I gave him the first move – 28.♗xf7† – and before I managed to say anything more, he exclaimed: “Ah yes, and 29.♘d5†. Brilliant!”

Later on, after I wrote the first draft of this chapter, Sam Shankland showed the position to Surya Ganguly, a mutual friend and briefly a student of mine. He gave him a hint, that Boris Gelfand had failed to find the solution. Knowing this, things were not so difficult for Surya. He looked at all the unnatural options and quickly realized that one of them worked.

Not only was this cheating, it also meant that I could no longer write on the first page that no one had managed to solve the exercise, even though I have given it to dozens of grandmasters...





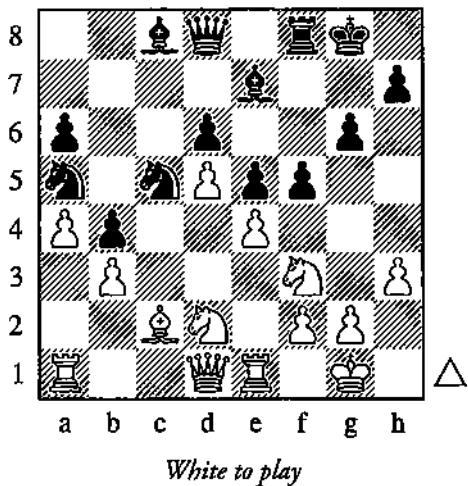
Sometimes all we need for success is someone who believes in us. After she lost her mother to cancer at the beginning of 2017, Sabina Foisor's fiance Elshan Moradiabadi built a small team of supportive people around her to assist her in her wish to play chess as a tribute to her biggest fan, her mother. Two months later she won the US Women's Championship with a one-point margin. The chess training and preparation probably helped, but in my estimation, not as much as the emotional support in that we all believed in her.

Chapter 2

The Psychology of Chess Improvement

Sam Shankland – Jeffery Xiong

St Louis 2017



White to play

White has won the exchange, but things are not so easy. In the game Black managed to use his considerable compensation to create enough counterplay to equalize. I am of the belief that White is close to winning here and have a suggestion on page 60 for a possible way to continue. Please spend the amount of time you need to come up with a plan for the next half dozen moves and compare your plan with mine. Which one do you like best?

This book deals with various ways to understand and play chess better. There are those who obsess about chess all the time and work incisively to improve their play. There must be – I have heard so much about them! But I have to confess that I have yet to meet anyone who is a natural hard worker and who is not affected by external circumstances when it comes to the pursuit of their goals within chess.

I have often been portrayed as a hard worker. A disciplined man with a single-minded obsession. I remember reading in *Chess Today* that it could be asserted with certainty that I did not sleep. At the same time, I was struggling with lousy discipline and low self-esteem, because I could not force myself to do things I knew I needed to do, and could not stop doing things that were in direct contradiction to my goals.

Around the early 2000s I had some meltdowns at the board that led me to become interested in the psychology of improvement. I read a lot and I thought a lot about the subject and how it applied, first to me, and later on to my students. The following chapter represents my beliefs and thoughts on the subject. They are by no means universal and, as with everything in this book, I recommend that you apply what seems natural to you and remember the rest, as it might be the right approach for you at a later time, even if it does not work for you now.

My thinking is divided into a few natural categories: **General Principles, Training, Preparation, At the Board and After the Game.**

General Principles

Before we go into the specifics, it is important to cover a few basic principles. Let us start with the psychology of the *fixed mindset* and the *growth mindset*.

The **fixed mindset** (or FM) sees the present (or immediate future) as the final destination. It is the culprit for utterances such as “I am no good at endings” and the designer of 30-day extreme work schedules. FM wants the rewards now and is only interested in results. FM believes in talent and believes in luck. FM thinks the world is treating her unfairly, and views the success of others as an injustice against herself. FM sends begging emails to chess writers, stating that he desperately needs help *now, now, now*. FM spends time worrying about the result, always wondering what it means. FM does not analyse his games with the opponent afterwards, except if he has won and wants to show all the great lines he saw. FM is described by concentration camp survivor Viktor Frankl in his inspiring book *Man's Search for Meaning* as the prisoner who tries to stay alive so he can go home for Christmas, only to wither away in January and die.

The **growth mindset** (GM) is the person who keeps on going, with the knowledge that someday this will be over. GM is interested in the game and not the result. Results come and go, but understanding the process, understanding the game, are lasting qualities. GM works on chess because he knows that eventually he will reach his goal. GM experiments; she enjoys the process of improving her game, because her self-esteem is not on the line. GM wants the national championship to become stronger, even if it means inviting in foreign players. GM has no sense of desperation or timeline for his end goal, as the process is more important than the result. GM measures his success by his effort, not his achievements.

You get the picture I am sure, although it would not hurt you to read Carol Dweck's book *Mindset* to look further into the mirror.

Compression and the growth mindset

Last year an International Master asked me: "What is the least amount of training I can get away with doing and still become a Grandmaster?" There are a few problems with this question, beyond the obvious laziness and presumption that such a plan could actually be devised. The main problem has to do with time compression.

Think back to the last flight you took. You may be able remembering going to the airport; arriving at the other end. What about joining the queue at the passport check point? Do you remember the two hours in the airplane?

My guess is that these two hours fill the same space in your mind as getting on the plane. That the 30-second inspection with the border guard fills as much in your consciousness as the ten minutes standing in the queue did – unless something out of the ordinary happened, of course.

Our memory is designed to remember things that stand out, making it easier for us to modify our behaviour in the future to improve our chances in an evolutionary sense. For this reason, mundane events are compressed, making our sense of time subjective.

The same happens with seeing yourself working towards a goal. The largest part of the work is mundane and repetitive. We might imagine starting the book and assert a specific time frame for each exercise. But we do not include time for finding the chess set, going to the toilet, going over the solution a second time (or even a first time!), when we do not thoroughly understand it. We do not imagine that it will take quite so much time to learn to slow down when we are training our calculation. And this is without factoring in spouses, kids, illnesses and so on.

In short, we compress large parts of the process and thus underestimate the task ahead. And when we set a deadline, whether it will be getting home for Christmas or becoming a Grandmaster in two years, we are in conflict with our reality.

I usually say to my students that *it will take longer than you think it will, even if you know it takes longer than you think*. Not because it always does, but because it frees us up from unnecessary disappointment. If you are trying to become a grandmaster and you are not there yet, it is because there are still things you need to learn. I recommend focusing on learning more about chess and enjoying the process, rather than following a strict timed schedule.

What I told the International Master is that he should change his attitude. He should do the work he believed was needed and then see how long it takes. Since then, he has emailed me each Monday with a record of the work he has done the previous week, which brings me to another main point:

Don't go it alone

I have never done anything I was proud of without someone to lean on. At my best tournaments, I went as a part of a group and I had someone on the other end of a phone (and later Skype connection) to help me with my opening preparation and strategizing for the game. The most effective training I've done has been group training and, when I was the national coach for the Danish squad, it was obvious that the training we did was often the only training, and certainly the most fun training, that the players involved were receiving.

Even if your only support is someone you send your training schedule to, you have some sort of support. It will help when you are struggling.

If you have the chance, find training partners. At one point, I organized an online training group for five of my students. One would take the exercises from a book and make them available online for everyone to solve. When four had a solution for the exercise, the last person was given a minute to finish up, while the others were sending the solutions to the person in charge. He would then check the solution and share it. One point was awarded for solving a puzzle. It was interactive, there was banter, there was a bit of soft competition and therefore additional motivation. I recommend that all ambitious players do this.

Habits

We are what we repeatedly do. Excellence, then, is not an act, but a habit. – Will Durant on Aristotle

Discipline is all fine and good, but not a sustainable way to do something long term. Why not? Because it requires attention and energy. Therefore, it is great to develop your training plan into a selection of habits. How do you do this?

Well, first of all, it is not easy. You have to give yourself a break and accept that you are very likely going to make mistakes, forget to do your calculation or give into temptation in some way. There are many books out there that will tell you that forming a new habit takes 28 days. Already when you see the number, you will know that it is made up in the marketing department and not the science department. In *Making Habits, Breaking Habits*, Jeremy Dean states that it takes less to develop simple habits, such as drinking a glass of water each morning, while it takes up to three times the promised 28 days to develop more taxing habits, such as an exercise programme. I would add a chess training programme to this latter category.

The first thing you need to know about creating a habit is that it will take attention and willpower. It is physics. Inertia to be precise. An object at rest stays at rest and an object in motion stays in motion with the same speed and in the same direction unless acted upon by an unbalanced force, as Newton's first law of motion states. Think of creating a habit as akin to moving a giant, round boulder. At first you will need a lot of power to get it to move, but as it picks up speed, it will be lighter and lighter to roll. But because you are not in space, there will always be resistance from the outside world and, at times, some serious bumps in the road. You may even stop pushing the rock for a while (playing a tournament, or maybe staying on for a few days' holiday after playing in the Bangkok Open...). The rock will lose momentum and at some point, stop.

Chess training is mentally stressful, as you are going to go outside your comfort zone (see below), into what could rightly be called your discomfort zone. There will be temptations to take a break, to skip a training session. This is when the rock starts to slow down. You return the next day, to find that it is easier to give in than it was the day before and harder to do the training than it would have been the day before. The temptation to "give yourself a break" can be strong; but in reality, you are in the slow process of giving up. Not because it is too hard, but because you are choosing to give in, to be weak. And at the end of it all, you will feel worse because of it.

I am not judging anyone; I am retelling my experience of doing this to myself more times than I can imagine. From this experience, I have a few pieces of advice.

Training

Start gently

The more challenging something is, the more likely it is that there will be a moment when you are going to give up. The International Master mentioned above recently told me that he was failing on his goal of doing six one-hour-long calculation sessions per week. This is coming from a man with a full-time job, an upcoming wedding and piles of worn-out running shoes. Yes, six hours a week is going to do great things long-term for his chess, but as a goal, it is stressful. I would set it at 15 minutes a day. On the days when he has done 15 minutes and feel tired, a headache or whatever, he can pack the set away and know that he has done the training; he has kept the chain unbroken, the habit intact. And the days he has more to give, he can do it, knowing that the goal he has set for himself will be closer.

I should say that this approach is, like almost any advice, not for everybody. Some people draw energy from being challenged. If this is you, then good on you.

Forgive yourself when you fail

This is the most important one. I have seen various studies suggesting that it takes between eight and 20 attempts for the average smoker to quit. FMs will think that there is a big story about how they are not good enough, if they come back from the tournament and don't get back into their training regimen as they had intended. GMs will accept their own imperfection, as it is built into their worldview that imperfections are OK. Then they will start again. Over a year, the effect of three lost training days will not matter much, but the fact that you stopped training will be heart-wrenching. So, dry your eyes, Baby Boo, and set up the next position. Life does indeed imitate chess; you cannot change your last move; you can only decide what to do next.

Obviously, do not forgive yourself in advance for failing. This is simply deciding to quit, obscured just enough for your subconscious to betray you.

Bright line thinking

My gym training used to go off track in the following way. I would decide to do something and pick a start point, such as going to the gym at noon. Then I would be in the middle of working, and decide to go a bit later. Then I would get hungry, eat something and decide not to go on a full stomach. Then I'd feel sluggish. At some point in the late afternoon, it no longer seemed worth it and I would not go. Classic procrastination turning into failure.

I changed and have now drawn a bright line between doing the training at the planned time, as being sticking with the programme, and everything else on the other side. A no-excuses, no-reasons, no-explanations policy. It works for me and might work for others.

The combination of a gentle start and a total non-tolerance for compromising on your programme can be a powerful combination. Make the goals laughably easy to achieve, but don't compromise on your commitment – except when you have to. Then be kind to yourself and get back to your training.

Bad habits

If, on top of establishing strong new habits, you also want to deal with old habits, there are a few things you need to know. Habits are set off by **triggers**, thoughts or external events, however

small, that we have linked to certain actions. The bad news is that the triggers are permanent. The pathways created in our brains cannot be undone. But the good news is that you can, with attention, link new actions to these triggers. The triggers that previously made me delay going to the gym, like some kind of mental snooze button, are now triggers for me to stop what I am doing and get out of the house. Not in five minutes, but now.

You may revise your plan from time to time, finding a balance between hope and realism, as long as you do not waste your time on planning. Action is what makes a difference, not a perfect plan.

Goal setting

Many coaches will teach SMART goals; Specific, Measurable, Achievable, Realistic and Timed. I think they have their place – which is the work place, where most people are paid to bring someone else's vision to life. For personal goals, I prefer to be vague, emotional, dreamy, true to my own lofty emotions and open for things to take the time they do. I do not like to diminish myself already in the planning stage. Enthusiasm is easily lost this way.

My favourite method of goal-setting is to lay out a plan of what I want to work on and then be a success whenever I am doing what I have planned to do. *Plan your work, then work your plan – Andre Agassi.*

There are a few reasons I want effort goals rather than achievement goals. It is not because I do not value titles or think that having a clear sense of direction is important. On the contrary, I believe that an achievement goal is a great destination. But on a day to day basis, I do not want to relate myself to the end of the journey. I want to feel good about myself and what I am doing. When I have a workable plan for what I want to do, and do it, I am succeeding. Every day I can achieve my goal; I can go to bed as a winner. This creates immense momentum.

Where there is a way, there is will

I know what you are thinking. That's supposed to be the other way around. But no – it is the rest of the world that has it wrong. We do not work towards goals that we do not believe we can achieve. Sure, we might pick up the guitar for an hour, read a book, or do one week of calculation training. But we give up inevitably, at least for a while, because we lack confidence in the direction and especially in our ability to reach the destination.

The most common question I get goes along the lines of "is it possible for a 28-year-old man with 2580 to reach 2650 without having to abandon his family to the wolves," or "is it possible for a 1900 rated man to become 2200 with hard work." Of course, it is. It may be difficult, but it is possible.

I have been asked the question, "Is it possible for a 1900-rated, 20-year-old man to become a professional chess player?" and answered "No" – even though it is possible, considering that grandmasters Jonathan Hawkins and John Shaw were around that age and level once (although not at the same time as each other). But I don't consider it a wise career choice in those circumstances; and if you have doubts or the inclination that maybe it is not the right path for you, it probably isn't. Hawkins works as a chess coach, Shaw as a publisher; they are chess professionals, but not professional players.

I have also met the opposite statements, such as "Of course I do not have what it takes to become an IM," uttered by (now) International Master Jakob Aabling-Thomsen in conversation. I could not control my laughing fit. I tried... but come on!

What is common for most of these points of view is a lack of faith. And faith – looking for it, or the lack of it – is a common reason why someone may be looking for a trainer. People want to hire your confidence in the path to achieving their goals, which is a fine idea! This is the main reason I have a fitness coach. I need someone to keep me accountable and someone who looks at me from the outside and tells me I am doing the right things, even when I feel the goal is unsurmountable.

Regarding limitations

My recommendation is to wait a while before you put limitations on your potential. I do not believe that anyone can learn anything and achieve everything. It may sound great as a soundbite, but if life in the 21st century should have taught you anything, it would be that the constant manipulation of your intellect has not brought you to a better place. Doing it to yourself on top of what psychometrics has already done to you, is not the path I suggest.

Every adventure starts with a desire of some sort. “You want what you want, no matter if you think you can have it or not,” says my favourite inspirational writer, Michael Neill. (Neill’s books are 90% strong observations and 10% New Age spiritualism that really bugs me. In person, I found him to be 20% funny and 80% a total prat. If interested, stick with the books and/or radio shows.) The world will put limitations on your progress soon enough, so don’t waste your time looking for them.

Most people I have worked with have fulfilled, and often exceeded, their goals. There is the caveat that I only work with people who have goals which I believe can be met.

There are those who decided that my approach was not right for them. I don’t try to convince people otherwise – it is up to each player to find his own path. I do believe that serious, systematic work will help everyone; but in case it does not, I am content that I have never put someone through a lot of work without them improving.

Improvement is found just outside your comfort zone

This truth is perhaps the reason one or two players did not like my way of training. A talented player who has a few aspects of the game that come naturally to him, as for example opening preparation and exploiting an advantage, can reach a high level before he finds it hard to progress. The work has been pleasant and natural for years, and pretty much as enjoyable as any consistent work can be. Once such a player reaches the limitations of his painless advance, his experience might be one of grave frustration.

This is one of the reasons I became a grandmaster and a lot of my contemporaries with greater talent and early promise did not. I learned earlier that the pain of resistance means that you are improving (Growth Mindset thinking) and not that you are no good (Fixed Mindset thinking). This is what I constantly tell my children, when they tell me they are unable to do something. We practise the things we cannot do, with the intention of learning them. There will be a slow progression from being useless to performing the techniques effortlessly.

Artur Yusupov told me about a conversation with a student, where the student complained about being confused. “Good!” said Artur. “You have reached Level 2, now you have some knowledge!”

Chess is difficult and we will never master it. Improvement includes overcoming frustration, knowing that it is temporary. Once you get into the habit of training, you will feel the resistance,

but your interpretation of it will change. You will see it as a good thing and you will feel a combination of pleasure and pain, as your strength increases. Eventually, it will become addictive.

Focus on doing the training correctly, not on solving correctly

When we solve exercises, it is important to focus on the skills you are trying to develop. I personally insist that my students start their exercises with the three questions and a candidate search. I encourage them to slow down in their calculation, to notice resistance, to look for candidates at the end of their variations, instead of making emotional evaluations. More about this follows in Chapter 14.

Triggers

An important part of becoming a strong player is to develop triggers. To react automatically to certain things. We all need to develop our own triggers. I had a problem of making moves too quickly at times. Yusupov suggested that I notice the trigger and create another reaction. He mentioned Miles, who would always stir his teaspoon in his coffee as a way to control himself.

The thinking here is that we were not created to play chess. Our brains function in a fight or flight mode. They look for the continuation of the species and the lowest possible amount of effort. Sports needs something entirely different, so in order to succeed, we will have to replace our default setting with different automatic actions. Notice the triggers and replace the reaction. Here are a few possible, where giving up is the default setting in your brain.

You feel frustrated because the training is hard – new reaction: you extend your planned training by 10 minutes and feel happy you are making progress:

You see a move you did not anticipate and feel frustrated – new reaction: you slow down and look for candidates. Is it really the end of the line? Your emotions will not tell you; you need to investigate.

Your opponent plays a move you know is ridiculous – new reaction: you slow down and try to understand his thinking. Maybe he is stupid; maybe we are naive. Let's find out BEFORE we make a move, shall we?

Work on your own triggers. Be conscious of how you function. Take control. And yes, a lot of the positive reactions in chess involve slowing down. People often feel a bit weird when they play tennis with me, as my calls can be slightly delayed. Any sense of uncertainty makes me slow down; I can't help it.

Preparation

Everyone has to find their own pre-game ritual. Personally I have always felt it was useful to lay a strategy for the game. To think, in advance, of various situations that could arise. I did not always do this; but when I did not, I always regretted it. Being emotionally unprepared for a draw offer in time trouble, or maybe even for having a winning position against a famous opponent. If you are not ready for this, emotionally, you could find yourself bitterly disappointed afterwards.

Sune Berg Hansen – Levon Aronian

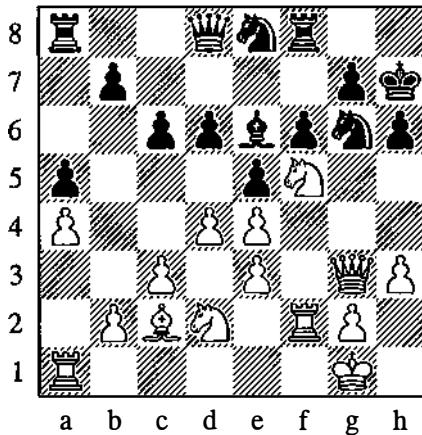
Porto Carras 2011

This was played at the European Team Championship in a match between Denmark and Armenia. Denmark quickly fell behind when a guy whose only ability seems to be organizing a mass production of A's in his surname lost like a clown...

1.e4 e5 2.♘f3 ♘c6 3.♗c4 ♗c5 4.c3 ♘f6 5.d3
a6 6.♗b3 d6 7.0–0 0–0 8.♗g5 ♗a7 9.♗bd2
♗h8 10.h3 h6 11.♗e3 ♗xe3 12.fxe3 ♘e7
13.♗h4 ♗g6 14.♗e1 a5 15.a4 c6 16.d4
♗d7 17.♗g3 ♘h7?!

17...♗xh4 18.♗xh4 ♗e6 was better, with a more or less equal position.

18.♗f5 ♗e6 19.♗c2± ♘e8 20.♗f2 f6

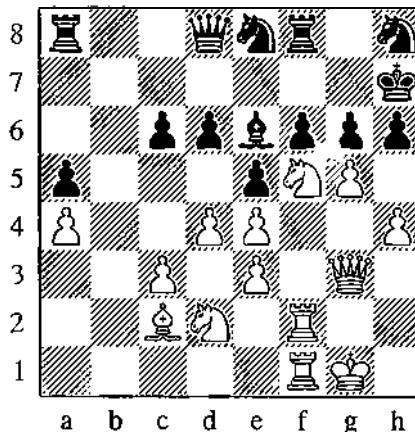


It is clear that Aronian is not managing to get his pieces working in this phase of the game.

21.♗f3 ♘h8 22.♗af1 ♗b6 23.b3 ♗c7 24.g4!

Sune understands where his advantage lies and goes to exploit it. He played without great fear in this phase, maybe because it did not feel real that he had such a nice advantage.

24...b5 25.h4 bxa4 26.bxa4 ♗d8 27.♗g3 g6
28.g5!±



A nice piece sacrifice. There are so many positional reasons to do this.

28...gxh5?!

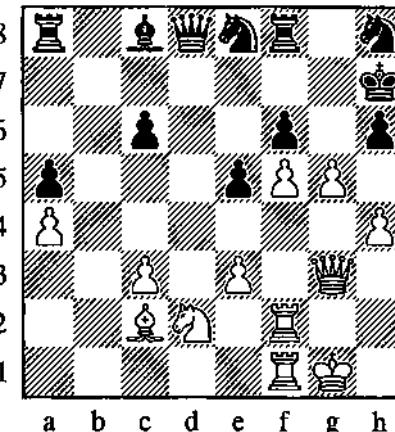
Aronian is dreaming about winning the game still, so he accepts the gift. Anything to unbalance the position is seen as a good thing by him, especially as he would be quite aware that something would have to happen to save him.

28...♗f7 29.♗f3 ♗c4 was objectively correct, with an unpleasant but playable position.

29.exf5 ♗c8 30.dxe5!

Creating a great square for the knight on e4.

30...dxe5



31. $\mathbb{Q}e4 \mathbb{B}a7$ 32. $\mathbb{W}g4$

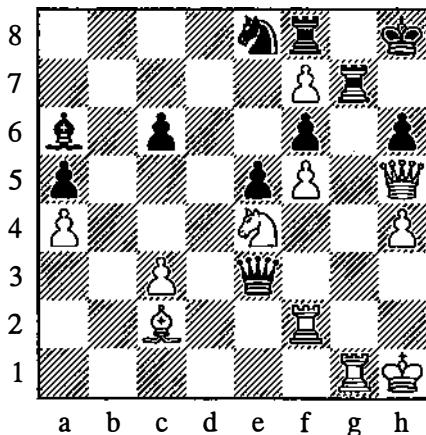
32. $\mathbb{B}g2!$ was even stronger.

32... $\mathbb{W}b6$ 33. $\mathbb{Q}h1 \mathbb{Q}a6$ 34. $\mathbb{B}g1 \mathbb{B}g7$ 35. $\mathbb{W}h5$
 $\mathbb{Q}f7$ 36. $g6\#$ $\mathbb{Q}h8$

36... $\mathbb{Q}g8$ 37. $gxf7\#$ $\mathbb{B}xf7$ 38. $\mathbb{W}xh6$ and White is simply winning.

37. $gxf7 \mathbb{W}xe3$

This was the critical moment of the game. Sune was low on time and visibly nervous. His brain simply clocked out. I have experienced this as well (see pages 173 and 328). I am not sure there is a universal defence.



38. $fxe8=\mathbb{W}??$

The computer gives 38. $\mathbb{B}g6$ as the “best” winning move, but more human is 38. $\mathbb{Q}g5!$, which is the move Sune regretted not seeing. Especially when the President of the Danish Federation, Lars Bech Hansen, who was busy being an arbiter in the adjacent match, asked at dinner: “Sune, could you not just have played the knight to g5 at some point? It looked totally winning.” This underlined how winnable the position was. A chess politician and arbiter; a cross breed between a species that has no interest in chess and a species that is unsure about how the knight moves, was able to find this. Other moves win as well, but not the one played.

38... $\mathbb{W}h3\#$ 39. $\mathbb{B}h2 \mathbb{B}xg1\#$

Sune resigned in view of 40. $\mathbb{Q}xg1 \mathbb{W}f1\#$.

0–1

The next day Aronian was teasing Sune, saying: “You are going to hate me forever!”

The difficult thing for Sune was not just that he was not ready to beat the number two player in the world, but that he was not emotionally prepared for having outplayed him. He learned from this and, four years later, he won a beautiful game against David Navara at the European Team Championships (see page 108).

I am personally really glad that I had a chat with Mihail Marin before my game against Vallejo in the Spanish League 2007 (see page 92), otherwise I might not have been as composed as I was in that game.

My best pre-game routine was in 2007, when I played the British Championship. I would get up around 6 am, go for an hour’s walk on the beach, then speed it up and run for six or seven miles. Once back, I would have breakfast, relax for a bit, then talk to grandmaster John Shaw on the phone about the opening for the day. We would have lunch and I would go to write for half an hour about the game (I think best when I write), then meditate for half an hour. After this we would cycle to the playing hall, which was about eight miles away.

Before the game, I would listen to some songs to pump me up. Mainly 50 Cent songs, “If I can’t” and “Gotta Make it to Heaven” and “Many Men (wish death).”

I want to emphasize that everyone has to find their own method. I suggested to Sam Collins that this was a good pre-game method. He tried it and was falling asleep at the board... What I am asking you is not to replicate my way of doing it, but to replicate the thinking that went behind it. As long as you approach

the topic with an acute feeling of self and an analytical approach, you should be able to find a pre-game routine that works for you.

At the Board

A lot of my students struggle with nerves affecting them in a variety of ways. Below I will talk a little about confidence and what a competitive personality looks like. But first I would like to share my own starting point. I would frequently become almost paralysed with anxiety. Much more than average. The first time I played for the IM norm I played the worst game of my adult life, losing a rook after a dozen moves. The first time I played for the GM norm, I also played badly, having no strategy for the game and relying on a trick line as White in the Nimzo-Indian to do the job. It did not. Amusingly, Kramnik used it to defeat Kasparov in the 2000 World Championship Match in London, three years later, but that's beside the point. I played it to escape being nervous. Because I had no safe place to go in my mind. No confidence. No interpretation that helped me. Just defective default setting, provided by my monkey brain.

But before we discuss what I did about it, let's talk about...

Confidence

To a great extent, lack of confidence is lack of preparation. Bang! There you go. No subtlety. If you go to the board nervous and with a feeling of being out of your comfort zone, you did not work hard enough. Or you worked hard, but have no experience playing at the level you are playing at, because you only just qualified for the A-group in Wijk aan Zee – or the top group in the club championship. You may not feel nervous, as some do, but your expectations may still be low and your respect for the opponents excessive.

Experience will get you a long way. By the third or fourth event, you will have a solid feeling of belonging. But if you have done a lot of work, you might have this confidence already on your first appearance. Usually a hunger to prove yourself will do well to glaze over any insecurity.

Being nervous is only a problem if you think it is. The number of famous performers that have treated pre-performance anxiety with alcohol and drugs is almost endless. But in my experience, butterflies in your stomach before a game leads to a cool head during the performance. The anxiety seems to be a natural reaction to not being able to do anything yet. Accept the anxiety and prepare, physically, emotionally or opening-wise.

When I talk about the psychology of being a top chess player, I am not so much advocating a personality change as I am talking about what it is about you that will help and what will hinder getting great results. And the main thing that will get you great results is the prescription from the greatest ever professor in chess psychology, Dr R.J. Fischer, who believed “in the psychology of good moves.”

The thinking behind this chapter is this: Good moves comes from good decision making. Good decision making comes from deep knowledge, deep preparation and effective thinking at the board. Those are the subject of this book and I hope you will find help to improve within, mainly by inspiring you to action.

Examples of great athletes

There are some athletes that arrive fully formed. You feel that they always had the determination to do what they do and never doubted their own abilities. Most of the time this is only what it looks like from the outside, though there are some genuine cases where a champion was born that way, rather than grew into his role.

In tennis, you can get the feeling that Rafael Nadal was always a champion, or to people of my generation, John McEnroe. But most of the great champions were insecure young men at some point, full of talent and ambition and determination, but without the confidence and resilience of a champion.

Roger Federer had a poor reputation as a junior player. He used to lose his temper all the time and behave really poorly. By the time he won his first Grand Slam, he had his emotional system under lock and key and really only started to act out of place once he stopped winning.

Novak Djokovic was more of a comedian when he was coming up, always up for imitating the other players. In time, he turned this sociable personality into an attitude of appreciation and gratitude that has worked wonders for him.

Andy Murray is famous in Scotland for behaving badly when he was younger. My former team captain (club tennis) played him in a doubles match when Murray was ten. He was not impressed. At one moment Murray hurled his racket into the ground so hard that it bounced over the fence. With no one feeling sorry for him, he had to take the long walk of shame across the court, round the fence to pick it up.

These days Murray is a quiet and polite man away from the court, careful not to say anything offensive. But on the court, he is using the fire inside to gain confidence from everything that goes his way and pushing himself harder not to repeat his mistakes and to try harder.

In chess, among the modern champions, we have an even more diverse group of individuals.

Viswanathan Anand is a humorous and polite man. He never behaves badly or speaks badly about anyone in public, and is well known for being sharp-witted in private. He is naturally respectful and controlled and in this sense every manager's dream, as sponsors loathe being associated with conflict and controversy.

Clearly, he gets annoyed with the constant questioning of retirement, which he answers by winning top events. He also gets angry when people tell him computer lines after the games, feeling it is disrespectful.

But more importantly, he has proved in three matches (1995, 2013 and 2014) that he cannot compete against players he considers stronger than himself. This is a fairly big disadvantage to have and one that other players would have found to be a career-defining limitation. Only when you are as great as Anand you can get away with this.

I do not know the details, but I cannot get past the feeling that this issue was part of the reason why he declined to play Kasparov for the World Championship in 2000. The chance instead passed to Vladimir Kramnik. There were technical reasons as well; Anand did not like the contract. But his eagerness to compete with Kasparov was not visibly there.

Veselin Topalov is a fighter. He might lose a few games, but he will turn up with the same

unwavering determination in the next round. His weakness is that he lacks the ambition and drive to work as hard as some other players in between tournaments. He has always been rather professional but, from 1996, where he was in the world's top three with Kasparov and Kramnik, to 2001, he struggled to make his mark on top-level chess. After Ponomariov made it to the final in the 2001 knockout World Championship, he hired Topalov as a second, and Silvio Danailov, Topalov's manager, as a manager. This started a period of intense work for Topalov. Once the attempt to organize a match between Ponomariov and Kasparov collapsed, Topalov had been working hard for a few years and was ready to make his own leap forward. With amazing physical preparation, the assistance of a Spanish sports psychologist and a strong team around him, Topalov was almost unbeatable from 2003 to 2005, where he not only defeated Kasparov in the latter's last ever competitive game, but also dominated the World Championship in San Luis.

Of course, everything changed in 2006!

I consider Vladimir Kramnik to have contributed more to our understanding of chess than any other living World Champion. He started big trends in many openings, revolutionized our understanding of lots of positions and generally expanded our understanding of chess immensely. But as a competitor he is, relatively speaking, a disaster – and I say this even taking into account his two victories in World Championship matches.

Kramnik looks to be at his best when he is playing interesting chess. In the 2013 Candidates tournament in London he played amazing chess and could, with a bit more luck, have won the tournament. He was poor in the last round against Ivanchuk, where he felt he had to win with Black and thus opted for the Pirc, somehow afraid that Ivanchuk might want to force a draw on him?

In the 2006 match against Topalov, he walked in and out of the toilet for whatever reason. When a complaint was made and his private toilet was locked, he completely lost it and sat waiting around for someone to unlock the toilet, while his time ran out. Obviously, his manager failed entirely in his duties, not handing in a complaint. Kramnik later said that he regretted losing the game on forfeit when he saw how happy his opponent was with taking the full point.

I do not want to go into the controversy about the match; I was not there after all. But I think it is fair to say that Topalov handled the controversy better than Kramnik. While Kramnik was arguing with Danailov at a press conference, Topalov was playing tennis...

Kramnik eventually won the match in the play-offs, but only after first having squandered a two-point lead.

Magnus Carlsen strikes me as a natural competitor. Obviously, he has matured and improved, but I do not really see a big change between the 13-year-old boy I played in 2004 and the confident young man who took the crown in 2013.

Building a Competitive Personality

After an unpleasant experience in Cappelle-la-Grande 2005 (see page 87), where I had lost rating, I lost my confidence. I started focusing more on Quality Chess and less on the quality of my own chess. But after a while I decided it was time to address the real problem. I did something many chess players have done as a part of their improvement; I sat down and ruminated over what I could do differently.

I realized that my focus had been too much on results. I did not know about the fixed and growth mindset, but I had heard about being process-oriented versus result-oriented, so this is what I worked with. I realized quickly that whatever my wishes were for the results, merely wanting something did not contribute to getting it. We live in a culture that tells us that if we want something badly enough, we can get it. “You can have it all, but how much do you want it?” is the great line from Oasis’s song *Supersonic*.

I had believed this with all my heart, but no longer did. It is an easy notion to refute. If it was true, the leader of the free world would be Hillary Clinton...

I eventually came up with some simple notions. Good results come from good moves. Good moves come from concentration and preparation. I definitely needed to prepare better. And I needed to focus on making moves. Results are affected as much by our opponent’s level on the day as it is by ours. I might play my best game of the year, but if my opponent does the same, it could be insufficient.

I decided not to let my happiness depend on results any longer. Ideally, you should be happy all the time. After all, there is not much valuable you can do with negative emotions that you cannot do at least equally well with positive emotions. But I was a morose bastard and could not entirely let go of the concept of being angry with myself. I decided that I would link this anger at myself to my effort, not the results.

I needed a system to refocus me during the game. I eventually came to a simple idea that worked for me that I still use on the tennis court when I am struggling: **Come on Jacob, prove who you are!** Or the question, “who do you want to be?”

I had my own answer to this, which I will not include here. I fear that it could crowd out someone else’s image of who they want to be. But I will tell you a small story.

Being ready

In 2006, I played the Danish Championship under the gladiator format, designed by grandmaster Curt Hansen. The format involved a rematch until every round had a winner. So, a draw in the ordinary game would be followed by a rapid game and then blitz games. I lost the first game, then lost the next two rounds in the rapid play-off. After three rounds I was in last place with 0 points. Some people were joking that this was the turning point and that I would win the tournament.

I won the next play-off after being both lost and winning in the drawn ordinary game. Then I won the next four games in a row. In the last round, I tried to surprise my opponent, but ended in a worse ending. I held and we went to the first rapid game. As Black I had a rook against bishop, knight and pawn. I held by a miracle.

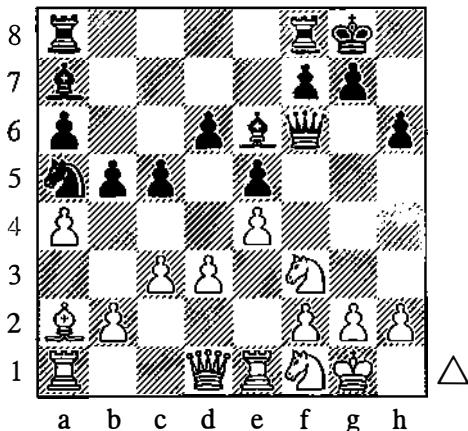
Finally, it was time for the blitz game. Another game was being played at the same time. If the outcome in that game went in my favour, which it did, I would become Danish Champion by winning my game.

I was better, but lost my way and lost the game. The way the tie-break worked, I went from being champion to ending in sixth place with no prize, in a single blitz game.

The moment it was over, my opponent and a few spectators pointed to the following position:

Jacob Aagaard – Steffen Pedersen

Aalborg 2006



At this point I played a normal move and eventually lost the game on move 38. Steffen simply played better than me. They showed me that I had missed 15. $\mathbb{Q}xe6$ $fxe6$ 16. $a xb5$ $\mathbb{Q}b6$ 17. $bxa6$, winning two pawns and most likely the championship. “Ah well,” I said, “I did not see that. Anyway, who wants a beer?” There was no emotion in my reply, no disappointment. Why would there be? I had tried hard and I just did not see it. I had no problem with accepting my fallibility.

I later heard that people had been astonished by my reaction. I guess it would be surprising if you base your happiness on results, but if you value your experience based on your effort, your happiness is always accessible to you.

The shift from preparation to playing

One of my continuous weaknesses as a player was that I would not manage the emotional shift from playing my preparation into thinking well. It was only in later years, when my emotions were well developed that I felt somewhat in control.

It is important to sense in what phase the game is. To understand which type of decision you are making (see Chapter 5) and

adjust accordingly. I am not a great expert on this topic, but I invite you to become one. Keep this in mind in your pre-game mental preparation.

One of my biggest failures in this area was luckily supported by a show of great resilience, as all the other parts of my mental state dealt with in this chapter were optimized.

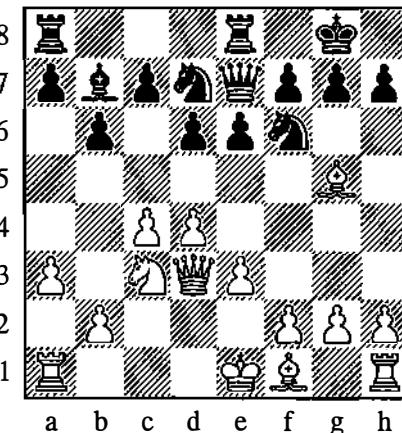
Glenn Flear – Jacob Aagaard

Great Yarmouth 2007

1. d4 $\mathbb{Q}f6$ 2. c4 e6 3. $\mathbb{Q}c3$ $\mathbb{Q}b4$ 4. $\mathbb{W}c2$ 0-0
5. a3 $\mathbb{Q}xc3\#$ 6. $\mathbb{W}xc3$ b6 7. $\mathbb{Q}g5$ $\mathbb{Q}b7$ 8. e3 d6
9. $\mathbb{Q}e2$ $\mathbb{Q}bd7$

In the final round of the Spanish Team Championship I had sat next to a game that I now decided to follow.

10. $\mathbb{W}d3$ $\mathbb{Q}e8$ 11. $\mathbb{Q}c3$ $\mathbb{W}e7?$



With this move I offered a draw, taunting my opponent to sacrifice the pawn. I wanted to win the game, but at the same time knew that my opponent would not be interested in a draw. If he won the game, he would still be in the running for the championship. My draw offer was a small psychological ploy, meant to make him feel more aggressive. I do not

know if it influenced him, or if it was to my advantage...

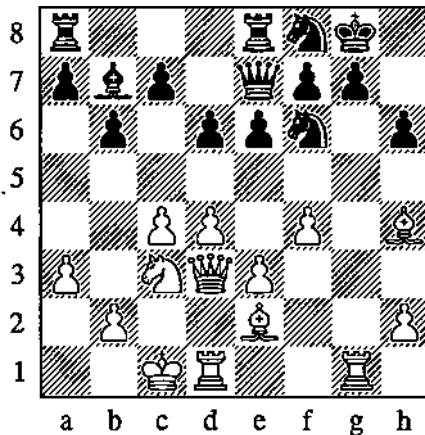
12.♗e2?

Objectively this is not right, but soon White had a great position.

12...h6 13.♗h4 ♗xg2 14.♗g1 ♗b7 15.0–0–0 ♗f8 16.f4!

The first new move of the game, and a good one.

Worse was 16.♗g3 a6 17.♗c2 e5 18.d5 c6 19.dxc6 ♗xc6 20.f4† as in Narciso Dublan – Almasi, Torrelavega 2007.



This is our main moment of interest. I was pleased to be ahead on the clock, but my confidence confused me, making me think I actually knew what I was doing much better than I did.

16...e5??

I played this quickly, totally deludedly thinking I was still following Almasi.

16...♗g6 was better; then 17.♗xg6?! fxg6 18.♗g1 ♖f7 19.♗xg6 reaches a position where Black might be slightly better objectively, but that assessment would have no influence on the final outcome of the game.

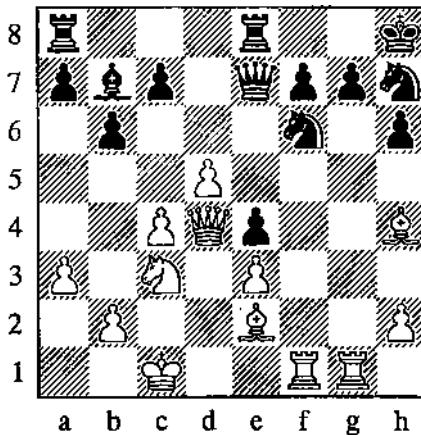
17.fxe5 dxe5 18.♗df1

Suddenly I am under great attack.

18...♗8h7 19.d5!

Cutting out the bishop and taking control of the e4-square.

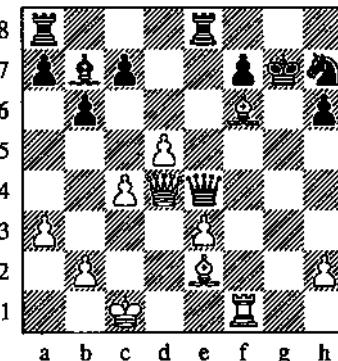
19...e4 20.♗d4 ♗h8



21.♗b5!!

A great move by Glenn. At this point I was fully aware that I was being outplayed.

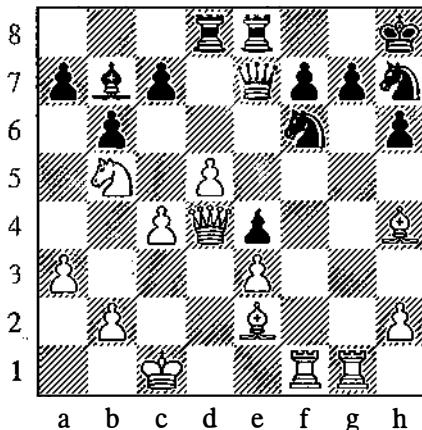
21.♗xg7?, on the other hand, does not work:
21...♗xg7 22.♗xe4 ♖xe4 23.♗xf6†



23...♗xf6! (But not 23...♗f8?, which is refuted by 24.♗e7†!! as pointed out by Geoff Chandler.) 24.♗xf6† ♗h7 White only has perpetual check.

21... $\mathbb{E}ad8!?$

I also considered 21... $\mathbb{E}g8$, but felt that 22. $\mathbb{Q}g3$ was so sad that it would not give me a chance of saving the game. I had to rely entirely on my opponent's fallibility.

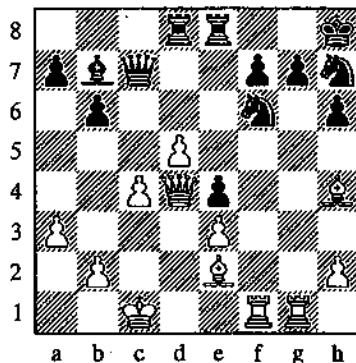


22. $\mathbb{Q}g3?$

I expected Glenn to play 22. $\mathbb{Q}xa7$, which is just great for White.

But I also became worried about:

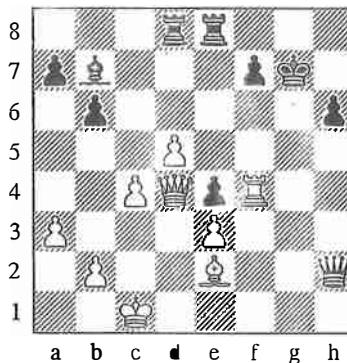
22. $\mathbb{Q}xc7!! \mathbb{W}xc7$



23. $\mathbb{E}xf6$

I did not see this move.

I saw that 23. $\mathbb{E}xf6? \mathbb{Q}xf6 24.\mathbb{E}xf6$ allowed me to offer resistance with: 24... $\mathbb{W}xh2!$ The only move I looked at was 25. $\mathbb{E}xg7?!$ (25. $\mathbb{E}g4!?$) 25... $\mathbb{Q}xg7 26.\mathbb{E}f4\#$



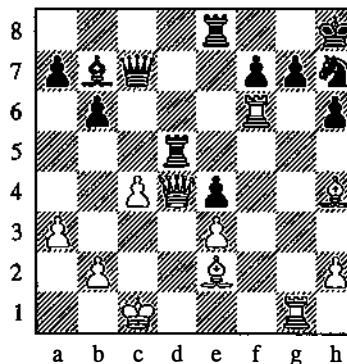
But here I saw 26... $f6!!$ as a surprising saving move. White has many options, but no advantage.

23... $\mathbb{Q}xt6$

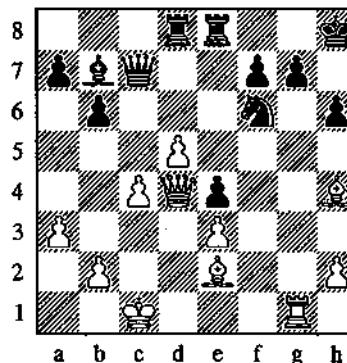
There are other variations:

23... $\mathbb{W}xh2 24.\mathbb{E}xg7 \mathbb{Q}xg7 25.\mathbb{E}h5!!$ and White wins.

23... $\mathbb{E}xd5$



24. $\mathbb{E}c6!!$ is another cutie.



24. $\mathbb{W}xf6!!$

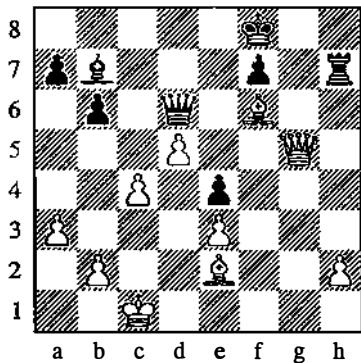
The most decisive. 24. $\mathbb{Q}xf6$ also wins, but more slowly.

24... $\mathbb{E}g8?$

This quiet move looks strong, but White can continue the attack:

25. $\mathbb{B}xg7!$ $\mathbb{B}xg7$ 26. $\mathbb{W}xh6\#$ $\mathbb{Q}g8$ 27. $\mathbb{Q}f6$ $\mathbb{B}h7$

28. $\mathbb{W}g5\#$ $\mathbb{Q}f8$ 29. $\mathbb{Q}xd8$ $\mathbb{W}d6$ 30. $\mathbb{Q}f6$

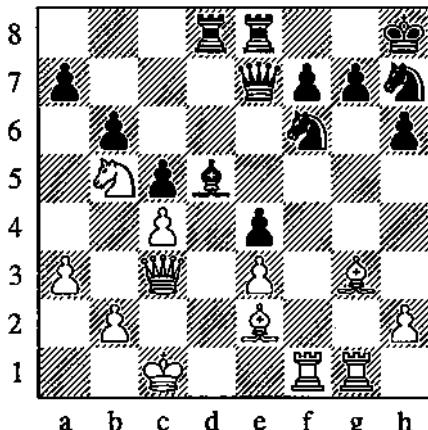


White wins. Black simply does not have a move. For example: 30... $\mathbb{W}xh2$ 31. $\mathbb{Q}e7\#$ $\mathbb{Q}e8$ 32. $d6$ and mate is getting near.

22... $c5$ 23. $\mathbb{W}c3$

My position is still poor, so I decided to take a risk.

23... $\mathbb{Q}xd5!?$



24. $\mathbb{Q}e7?$

Winning the exchange is wrong.

24. $cxd5$ is simple and strong. Black would gain one tempo against the queen, before White's attack would resume with unrelenting force.

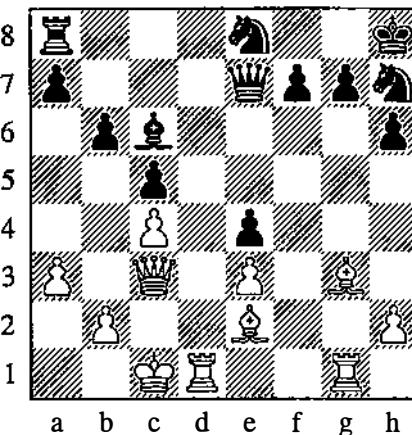
24... $\mathbb{Q}c6$ 25. $\mathbb{Q}xe8$ $\mathbb{Q}xe8?$

25... $\mathbb{R}xe8\pm$

26. $\mathbb{Q}d1$ $\mathbb{B}a8?!$

I wanted to keep a rook on the board for later, but there was a tactical flaw with this.

26... $\mathbb{B}xd1\#$ 27. $\mathbb{B}xd1$ $\mathbb{Q}hf6$ 28. $\mathbb{W}e5$ was also excellent for White though.



27. $\mathbb{Q}f4?$

Glenn missed his chance: 27. $\mathbb{Q}d6!!$ with a double threat on c6 and h6. And after 27... $\mathbb{Q}xd6?!$ 28. $\mathbb{Q}xd6$ $\mathbb{W}f6$ 29. $\mathbb{Q}e5$ White wins.

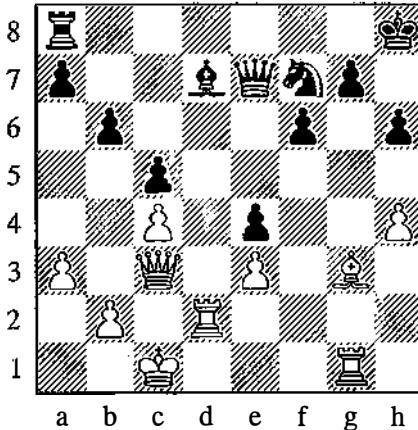
27... $f6$ 28. $\mathbb{Q}h5$ $\mathbb{Q}f8$ 29. $\mathbb{Q}xe8$ $\mathbb{Q}xe8$

I have survived the disastrous opening and have about even chances. The presence of opposite-coloured bishops is a great asset when you are looking for compensation for the exchange, as your opponent's rooks will only be safe on half of the squares.

30. $\mathbb{Q}d6?!$

I would play 30. $\mathbb{Q}d6!$ $\mathbb{W}f7$ 31. $\mathbb{Q}xf8\pm$ if I was White.

30... $\mathbb{Q}e6$ 31. $\mathbb{Q}g3$ $\mathbb{Q}g5$ 32.h4 $\mathbb{Q}f7$ 33. $\mathbb{Q}d2$
 $\mathbb{Q}d7!$



Looking for the g4-square, to stop White from taking over the d-file.

34. $\mathbb{Q}f4$ h5 35. $\mathbb{Q}d5$ $\mathbb{Q}g4$ 36. $\mathbb{Q}g2$ $\mathbb{Q}g8$ 37.b4?

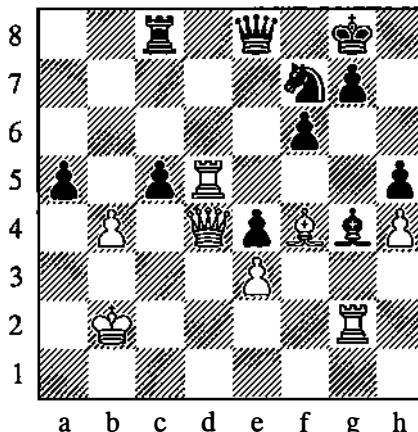
Flear goes over the edge, hoping for a last chance to win the game.

37...cx b4 38.ax b4 $\mathbb{W}e8$ 39. $\mathbb{Q}b2$ $\mathbb{Q}c8$ 40.c5
a5!?

Trying to blow the queenside open.

41. $\mathbb{W}d4$ bxc5!

I wanted to avoid 41...axb4 42.cxb6 $\mathbb{W}a4$ 43. $\mathbb{Q}c7!$, where White is OK.



42.bxc5?

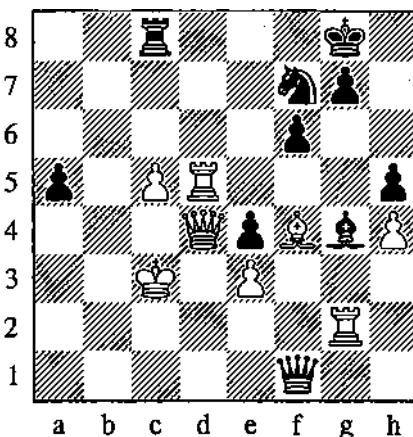
The final mistake.

The computer shows that 42. $\mathbb{Q}xc5$ $\mathbb{Q}d8$ 43. $\mathbb{Q}d5$ $\mathbb{Q}xd5$ 44. $\mathbb{W}xd5$ axb4 45. $\mathbb{Q}c2$ $\mathbb{W}a4$ 46. $\mathbb{Q}c5!$ gives White reasonable drawing chances; but this is difficult to understand for a human brain.

42... $\mathbb{W}b5\uparrow$ 43. $\mathbb{Q}c3$

43. $\mathbb{Q}c2$ a4 does not help White.

43... $\mathbb{W}f1$



Around this point, Tony Kosten went to look at our game. He had seen it earlier and was still hoping to do well in his own game, giving him a shot for a title play-off. When he saw the way things had turned around, his face drained.

44. $\mathbb{Q}b2$ $\mathbb{Q}e6$ 45. $\mathbb{W}xe4$ $\mathbb{W}c1\uparrow$ 46. $\mathbb{Q}c2$ $\mathbb{W}a3\uparrow$
47. $\mathbb{Q}d2$ $\mathbb{Q}xd5$ 48. $\mathbb{W}xd5$ $\mathbb{Q}d8$ 49. $\mathbb{Q}d6$ $\mathbb{W}b4\uparrow$
50. $\mathbb{Q}d3$

50. $\mathbb{Q}e2$ $\mathbb{W}b5\uparrow$ and Black will have a winning endgame.

50...a4 51. $\mathbb{Q}c3$ $\mathbb{W}xh4$ 52.e4 $\mathbb{W}g4$ 53. $\mathbb{Q}d4$ h4 54. $\mathbb{Q}a3$ h3 55. $\mathbb{W}a2$ $\mathbb{Q}e8$ 56. $\mathbb{W}d5$ $\mathbb{W}g1\uparrow$
57. $\mathbb{Q}c4$ h2 58. $\mathbb{Q}xh2$ $\mathbb{W}xh2$ 59. $\mathbb{Q}xa4$ $\mathbb{W}c2\uparrow$
60. $\mathbb{Q}b5$ $\mathbb{Q}b8\uparrow$

61.♕a5 ♜b2 looked good, but I could not see what my next move had to be. Fortunately, I do not have to have a next move; it is White to play first!

0–1

With this I achieved my greatest ever triumph as a player, winning the 2007 British Championship.

Chaos theory

Earlier in the tournament, I was not looking that far ahead at all. When I decided to play, only a few weeks before the event, I told John Shaw that I was going there, hoping to get a shot at the title. He encouraged me and we talked about how well I had been playing the last few months. It was only after a minute or so that I realized that we were not talking about the same thing. I was talking about winning the remaining eight rating points I needed to become a grandmaster; John felt I had a real chance to win the whole tournament, even though I would be seeded 12th. I laughed it off.

I won my first game with Black against a decent but manageable opponent and then played a respectable game with White against GM Mark Hebden, with some mistakes, but still good enough to win. I calculated everything accurately and saw that, yes, I had won eight rating points and made it to 2500. It was also my birthday. I went to dinner with Jonathan Rowson to celebrate. It was a glorious evening. I had been convinced that I would make it for a few months and my new mental attitude was working wonders.

Now it was time to just enjoy the next game...

In the next round I was facing a young junior. In our preparation, John and I determined that he enjoyed playing very solid games. I decided to play the Blumenfeld Gambit, in

an attempt to get an interesting game. My thinking then, and now, is that the player who decides to press the chaos button has the greatest chance of winning the game, if he does so with confidence and conviction. It was one of the reasons for Mikhail Tal's early successes. Playing well is not always necessary, as long as you are playing the game on your terms.

Li Wu – Jacob Aagaard

Great Yarmouth 2007

1.d4 ♜f6 2.c4 e6 3.♗f3 c5 4.d5 b5 5.♗g5 exd5 6.cxd5 d6 7.e4 a6 8.a4 ♜e7 9.♗bd2 0–0 10.axb5 ♜xd5 11.♗xe7 ♜xe7

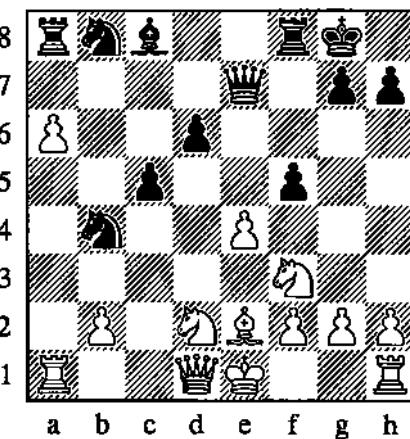
The opening has been a success for Black, but the next move is bad.

12.bxa6?

12.♗c4 had been played in a few other games I had seen.

12...♝b4 13.♗e2 ♜!

Energetic play.



14.exf5 ♜xa6

During the game I looked at 14...♜xa6!? 15.0–0 ♜xe2 16.♗b3† c4 17.♗xb4, but missed 17...♛a6!† winning the exchange.

15. $\mathbb{B}xa6 \mathbb{Q}xa6$ 16. $\mathbb{Q}f1 \mathbb{Q}b7?$

Too optimistic; and bad. With 16... $\mathbb{Q}xf5$ I would have kept the advantage.

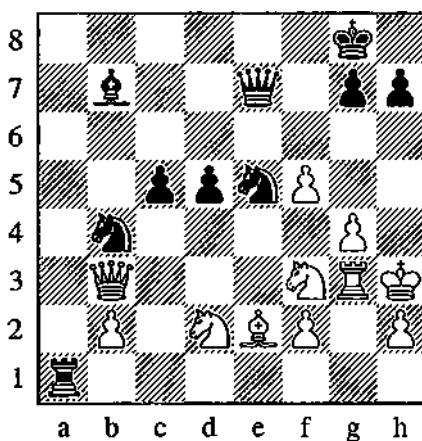
17. g4 $\mathbb{Q}8c6$ 18. $\mathbb{Q}g1!$ d5 19. $\mathbb{Q}g3 \mathbb{Q}e5$
20. $\mathbb{W}b3!?$

20. $\mathbb{Q}xe5 \mathbb{W}xe5$ 21. $\mathbb{W}c1$ would have left the game unclear.

20... $\mathbb{B}a8!$ 21. $\mathbb{Q}g2 \mathbb{B}a1!?$

21... $\mathbb{Q}h8\#$

22. $\mathbb{Q}h3!?$



22... $\mathbb{Q}xg4?$

I kept playing the most complicated moves.
22... $\mathbb{Q}xf3$ was objectively best, with unclear play.

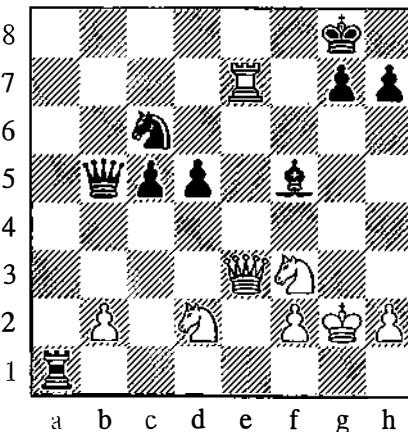
23. $\mathbb{B}xg4 \mathbb{W}xe2$ 24. $\mathbb{B}e4!?$

24. $\mathbb{W}c3!$ $\mathbb{W}e7$ 25. f6 $\mathbb{W}e6$ 26. $\mathbb{Q}h4!$ with a winning attack. For example: 26...g6
27. $\mathbb{Q}g5+$ —

24... $\mathbb{W}b5!?$

I wanted to play 24... $\mathbb{W}d3\#$, but rejected it on account of 25. $\mathbb{B}e8\#$ $\mathbb{Q}f7$ and I was afraid of $\mathbb{Q}e5\#$, which does not work.

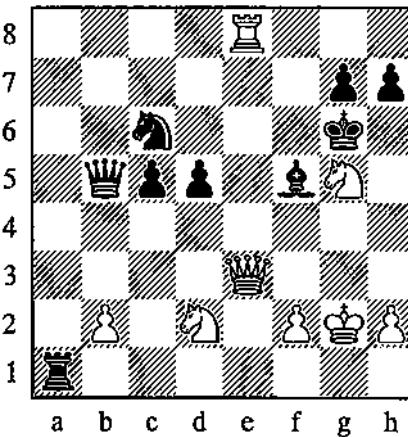
25. $\mathbb{B}e7!$ $\mathbb{Q}c8$ 26. $\mathbb{W}e3 \mathbb{Q}xf5\#$ 27. $\mathbb{Q}g2 \mathbb{Q}c6$



28. $\mathbb{B}e8\#!?$

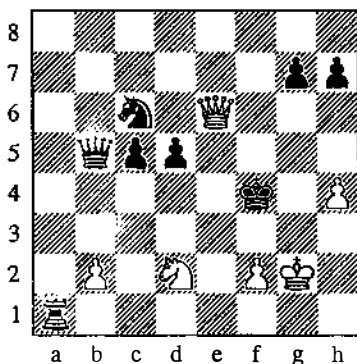
John Shaw was watching the game live and was really nervous about my position here on account of 28. $\mathbb{B}b7!$, which wins easily.

28... $\mathbb{Q}f7$ 29. $\mathbb{Q}g5\#$ $\mathbb{Q}g6$



30. $\mathbb{Q}d3!?$

The computer points to the flashy: 30. $\mathbb{B}e6\#$ $\mathbb{W}xe6$ 31. $\mathbb{W}xe6\#$ $\mathbb{Q}xg5$ 32. $h4\#!!$ Who can see such moves? 32... $\mathbb{Q}f4$



33. $\mathbb{W}xd5!$ with mate coming.

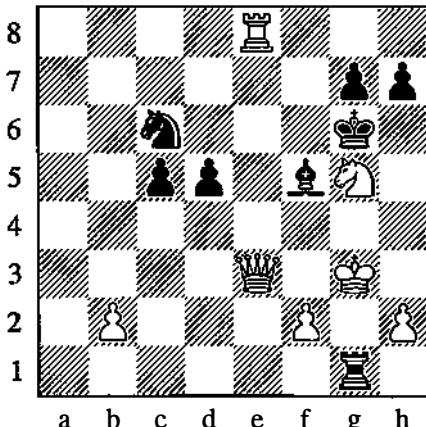
But I was really worried about 30... $\mathbb{W}g3!$, which is a simple human move. After 30... $\mathbb{W}d3$ 31. $\mathbb{E}e3$ it is time to resign.

30... $\mathbb{W}f1\#$ 31. $\mathbb{Q}g3$ $\mathbb{W}g1\#?$

We were both very low on time and I was out of control, as was my opponent. I decided to go all in.

My main alternative was 31... $\mathbb{E}a4!?$, when after 32. $\mathbb{h}3$ $\mathbb{Q}d4$ 33. $\mathbb{Q}h4\#$ $\mathbb{Q}h5$ 34. $\mathbb{Q}g2$ $\mathbb{Q}e2\#$ 35. $\mathbb{W}xe2\#$ $\mathbb{W}xe2$ 36. $\mathbb{E}xe2$ $\mathbb{Q}xg5$ 37. $\mathbb{E}e5$ White holds.

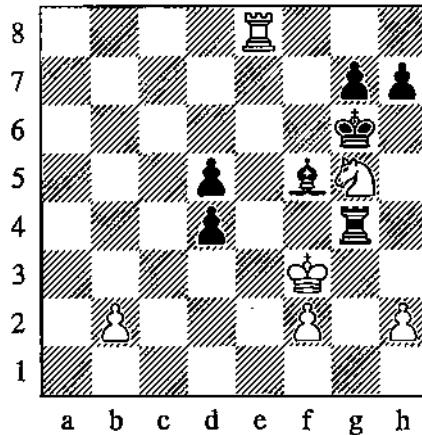
32. $\mathbb{Q}xg1$ $\mathbb{E}xg1\#$



33. $\mathbb{Q}f4??$

I shared my fragmented thoughts with the audience in the commentary room after the game. They asked me what I had intended after 33. $\mathbb{Q}f3!$ and I said, “he cannot do this on account of 33... $\mathbb{Q}d4\#$ 34. $\mathbb{Q}f4$ $\mathbb{E}g4\#$ 35. $\mathbb{Q}e5$. Oops...” Well, sometimes you get lucky.

33... $\mathbb{E}g4\#$ 34. $\mathbb{Q}f3$ $\mathbb{Q}d4\#$ 35. $\mathbb{W}xd4$ $\mathbb{C}xd4\#$



Suddenly everything works.

36. $\mathbb{Q}h3$ $\mathbb{E}e4$ 37. $\mathbb{Q}f4\#$ $\mathbb{Q}g5$ 38. $\mathbb{E}xe4$ $\mathbb{Q}xe4\#$
39. $\mathbb{Q}g3$ $d3$
0–1

After the game Alex McFarlane, the chief arbiter, congratulated me on becoming a grandmaster. I thanked him and said that it was especially nice that it had happened on my birthday. “I thought your birthday was yesterday?!” Alex said, looking bemused. Only then did I realize that I had been unable to do simple maths. The win the previous day had apparently taken me to 2499.4 – or, rounded down, 2499.

Dealing with idiots

Have you ever had the feeling that your opponent is an idiot? Sorry, let me rephrase. Have you ever realized that your opponent actually is an idiot? You were right. Afterwards,

when you looked at the game together, you got your assumption confirmed. He understood nothing. And still, you did not win.

The reason you did not win is because his idiocy was contagious; you relaxed and played like an idiot too.

The way to deal with having an advantage was best explained to me by Donald Holmes. It is akin to a boxer who has his opponent on the ropes. Rather than relaxing, he will make sure to deliver the knockout punch.

In the same way, I propose that you develop a trigger that says: “With an advantage, I will see it as a chance to be exploited. I will increase my level of concentration, to make sure I understand which type of decision I am faced with and to make it to the best of my ability.”

After the Game

What is your post-game ritual? The fixed mindset will be all about how the game went. I have seen it often. The most extreme negative example is the petulant boy who throws the pieces everywhere; the most positive example is actually myself, although not often enough. When I was most hungry for the game, I wanted to analyse the game, check my assumptions, debate the course of the game with opponents and friends, to find out what happened. There are many players who are like this after the game and it is a wonderful thing to participate in such post mortem analysis. I loved seeing Grischuk, even though obviously shell-shocked by coming so close, analysing with Boris Gelfand after losing the sixth and final game of the 2011 Candidates Final in Kazan. Later on, he debated and analysed the game with his second Peter Svidler, explaining why he lost while praising Gelfand’s play. The game can be found in Boris Gelfand’s book, *Dynamic Decision Making in Chess* (beginning on page 199).

On top of this, I think there are some routines that would be excellent for the aspiring player to incorporate into his practice.

Analyse the game with your opponent and/or a friend before consulting an engine. Develop a sense of a narrative of the game.

Write down your variations and assumptions about the game.

Consult an engine; check your assumptions.

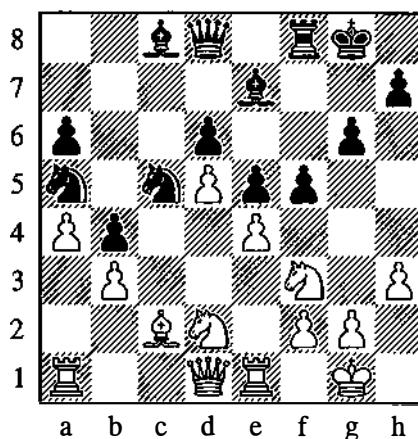
Write down three things you have learned from the game. You can either do this right after you have played the game or after having analysed it. I mixed and matched when I was trying to improve.

This is the last chapter I am finishing in this book. On the last day of writing, I have analysed a game together with Sam Shankland from his recent tournament in St Louis.

Sam Shankland – Jeffery Xiong

St Louis 2017

1.e4 e5 2.♘f3 ♘c6 3.♗b5 a6 4.♗a4 ♘f6
5.0–0 ♖e7 6.♗e1 b5 7.♗b3 d6 8.c3 0–0
9.h3 ♘a5 10.♗c2 c5 11.d4 ♘d7 12.a4 ♘b7
13.d5 b4 14.b3 bxc3 15.♗xc3 ♘b8 16.♗d2
♗c8 17.♗b1 g6 18.♗h6 ♗e8 19.♗a3 ♘b4
20.♗d2 ♗f8 21.♗xb4 cxb4 22.♗b1 ♘c5
23.♗bd2 f5



The game has gone reasonably well for Sam. It is possible that he could have played more accurately earlier, but he still managed to win the exchange. However, converting it was by no means easy. Sam made a few sensible-looking moves, then sacrificed a pawn to activate the rook. He was better for a long time, but did not manage to win the game.

24. $\mathbb{E}c1$ $\mathbb{W}d7$ 25. $\mathbb{W}e2$ $\mathbb{Q}f6$ 26. $\mathbb{Q}d3$ $fxe4$ 27. $\mathbb{Q}xe4$ $\mathbb{Q}axb3$ 28. $\mathbb{Q}xb3$ $\mathbb{Q}xb3$ 29. $\mathbb{E}b1$ $\mathbb{Q}c5$ 30. $\mathbb{E}xb4$ $a5$ 31. $\mathbb{E}b6$ $\mathbb{Q}xa4$ 32. $\mathbb{E}c6$ $\mathbb{Q}c5$ 33. $\mathbb{W}b5$ $a4$ 34. $\mathbb{Q}c2$ $\mathbb{W}d8$ 35. $\mathbb{W}b4$ $\mathbb{Q}e7$ 36. $\mathbb{E}xc5$ $dxc5$ 37. $\mathbb{W}xa4$ $\mathbb{Q}d6$ 38. $\mathbb{W}b3$ $\mathbb{W}f6$ 39. $\mathbb{Q}e4$ $\mathbb{Q}f5$ 40. $\mathbb{W}c2$ $\mathbb{Q}h8$ 41. $\mathbb{E}b1$ $\mathbb{Q}xe4$ 42. $\mathbb{W}xe4$ $\mathbb{W}f4$ 43. $\mathbb{W}xf4$ $exf4$ 44. $\mathbb{E}b6$ $\mathbb{Q}d8$ 45. $\mathbb{Q}g5$ $\mathbb{Q}g8$ 46. $\mathbb{Q}e6$ $\mathbb{E}d7$ 47. $\mathbb{E}c6$ $\mathbb{Q}e7$ 48. $\mathbb{Q}xc5$

$\frac{1}{2}-\frac{1}{2}$

We debated the game and tournament in general terms, trying to draw some lessons for the US Championship, which was less than a week away, making general preparation more important than deep chess analysis. But this one position was interesting and we looked at it for ten minutes, coming up with a nice strategic plan that seems to work.

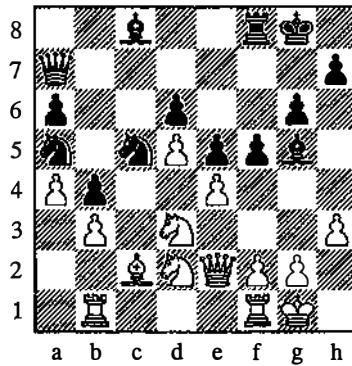
24. $\mathbb{E}b1$!

This move seems better. Black's counterplay is based on the strong knight on c5, which aims at b3 and e4. Supporting both squares makes a lot of sense.

24... $\mathbb{W}d7$ 25. $\mathbb{W}e2$ $\mathbb{Q}f6$ 26. $\mathbb{E}f1$!

Another mysterious rook move. White is supporting the f2-pawn and vacating the e1-square for the knight.

26... $\mathbb{W}a7$ 27. $\mathbb{Q}e1$ $\mathbb{Q}g5$ 28. $\mathbb{Q}d3$



White will eliminate the knight on c5. Once this is done, he will be able to get his pieces into the game and his material advantage will be sufficient to win the game.

Is this a winning continuation? It is hard to know for sure. If Sam had played this way, his opponent would have had to find a deep plan to counter this sensible way to play. If we had more time on our hands now, we would have analysed the game (and the rest of the games from the tournament) deeper, learning more about Sam's abilities and weaknesses, as well as the game of chess in the process.

Doing something difficult

When you are trying to do something difficult, it is important to use all the resources and techniques you have available. Here are a few:

1. Follow a plan. It does not have to be too strict; for most people it is better if it is not. You need something that tells you what the next step is. What most people need is a weekly routine: a basic framework they can expand or vary upon.
2. Allow it to take the time it takes. Whenever you follow the plan, you are succeeding. Putting an arbitrary deadline on your goal will make you a potential failure until you make it. People who follow a plan in this way will often feel a sensation of emptiness if they reach their goals. The most valuable thing we get from achieving our goals is to have risen to the occasion, not the prize. It is who we become, not what we achieve, that will have lasting value.
3. Keep track of your progress. Where there is a way, there is will. Once you see progress happening, you will get energized. If your progress is stalling, often you will need patience. Follow your plan; but know that it may take longer than you expect. At certain times, you may need to revise your strategy. The thing that will take you to one level will not necessarily take you to the next. And few people dedicate large amounts of their time to get to level 2.
4. You should always look for ways to improve your habits; to notice our bad habits, their triggers and substitute them with good habits. Fighting yourself will lead to loss of time and energy, making it harder to achieve your goal.
5. Make things easy. Use whatever habits, techniques, tricks and assistance you have at your disposal to make things easier.
6. Accept that you will lose your way. Notice it when it happens; be unemotional about it (easy when you are prepared for it), and get back on track quickly. Few things are as difficult as for a smoker to quit, but many of my friends and family members have done this; maybe even more than those that still smoke. If you keep on trying, you will get there eventually.
7. Make yourself accountable for others. Ideally, get into a situation where others will gain from your success and lose out in case of your failure. An intelligent bet can solve this.
8. Don't go it alone. Find support. A gentle push when you are losing momentum can be the difference between failure and success. Knowing that someone cares is often decisive. Few people enjoy doing things alone.
9. This last point is probably the most important of all. **When you are working towards your goal, you need to work on it with focus and attention.** Too many times we watch the clock and think of when we have “done enough”. It is important that you work hard when you work; you can always play hard afterwards. Work before play, baby! Improvement comes from you

stretching yourself. There may be days when getting through your training is all you can do; but don't make this the norm. If this happens frequently, you need to revise your plan or the other things you are doing, to make sure you have enough energy to do the training right.

The Shankland Bet

My hunger for progress in chess has been satisfied. I still enjoy the game; I enjoy working with young people, to share the things I have learned and to see their progress. But I no longer have any goals as a competitor; my personal ambitions lie elsewhere, as is common for middle-aged men.

One of these ambitions has been the same for years; to deal with my expanded waistline. Again, a typical middle-age ambition. I have taken a lot of steps towards dealing with this over the years, with varying success.

In 1997, the scales showed 99.5 kg. The threat of a triple digit weight shocked me into action. Over half a year, I ate very little and went for longer and longer walks each day. By the end of October that year I was down to 79.5 kg, but had also contracted a serious depression. The method worked, but the price was too dear when viewed retrospectively.

I started working with Sam Shankland towards the end of 2013. Over the years, my weight had crept back up to 96 kg. I was stronger than I was in 1997, but still verging on obesity (BMI at 30 or over).

Over the years we have worked together, Sam and I made a lot of bets. The only one I lost was regarding weight loss.

In 2016, while visiting Sam in San Francisco, we had lunch while watching the semi-final of the European Championship in soccer. I declared my deep confidence in the French team. "But they play Germany, the World Champions, the best team in the world!" Sam declared. He took the bet and I had this evasive thing called free lunch.

Two days later we were watching the final. I offered to take Portugal against France. Sam wanted to take the bet; the odds were good, but he had had enough of losing bets. He declined. Once Ronaldo got carried off the pitch on a stretcher after 25 minutes, I looked him in the eyes.

"Now you have to take it!"

Sam took it. Free lunch is very tasty!

Walking to the town centre of Walnut Creek one evening, Sam and I suggested a different sort of bet. Rather than competing against each other, we both set a big goal and promised a big reward to the other. There was no deadline and it does not matter who will make it first. (Not technically at least, although there is always the ego dimension when you have two competitive people wanting to achieve something.)

Sam's goal is Sam's business, so let's stick with mine. My goal was to get down to 79.4 kg. A weight I had not been down to since around 1988. Sam was born in 1991, so the goal was formulated as *getting to a lower weight than I had been in Sam's lifetime*.

Two months later I went on a 21-day, juice-only fast. I had done this before with good results and this time too, I managed to lose weight. I went down to 84.5 kg. This was 10 kg less than 18 months earlier, when I went through a divorce, got more spare time on my hands and spent them playing so much tennis I injured myself.

But in September and October, the weight crept back on. Not because juice-only fasts do not work, but because I went back to bad habits.

The real shift happened in October 2016. Two months earlier I had changed gym from the village I had lived in previously, to the gym two-and-a-half minutes' walk away. This meant I played more tennis and it was useful during the juice fast, where my resting daily average heart rate went down to 50, with a recorded low of 43 at one point.

My purpose with going to the gym was simply to play tennis, but one day I went to a circuit training class. I really enjoyed it. I realized that it was easy to book classes. I met instructors who encouraged me. As said earlier, *where there is a way, there is will*.

Let's put meat on the points above.

1. Together with an instructor, I put a plan together. It had various action goals – things to work towards. Weight loss would eventually be the result of it, but acting on it would be my focus.
2. I was hoping to achieve the goal before finishing this book. But the hard deadline of the book tour and the soft deadline of a life goal of returning to the weight I had aged 15 were at odds with each other. The lowest I have been is my current weight of 80.9 kg. The lowest weight for 20 years, which is nice, but not the end of the road.
It will take more time; I will continue working my plan until I reach my goal, and most likely beyond.
3. I use Fitbit gadgets to track my weight, my body fat percentage and my fitness activities.
4. I improved my diet. I used to be vegan five days a week, vegetarian one day and omnivore the last day; but have switched to being fully plant-based every hour of every day.
I increased my exercise load to as much as I could take. I go to circuit training a few times a week, play tennis and go to spin classes.
5. Having the gym across the road was really important. It makes going there really easy; especially as I work from home most of the time. Booking classes with their app is trivial. I also created a bright line rule about these classes: I am only allowed to cancel a booked class if I am fearing injury or replacing it with a different fitness activity. I am an early riser, so I will often go to a circuit training class at 7 am and a spin class in the evening, or maybe a tennis game. I do this five or six days a week.
6. While finishing this book, I have been working from 7 or 8 in the morning until past midnight seven days a week. Often, I have had a few hours of writing in the morning, then many other responsibilities in the afternoon and evening, including being a caring parent for my two children

and a responsible publisher. I have only allowed this to affect my fitness regimen for a few days, but the real damage was to my rest and diet patterns. I started to eat less well, including some dark chocolate. I have also slept about five hours on average recently. This causes stress, which leads to weight gain. In the two weeks before I went on tour, I gained about one kilo.

I accept this. The obstacle is temporary; the resilience is permanent.

7. My bet with Sam is very important. If I win, he has to write a book for Quality Chess. He is a smart man and a great writer; it would not only be a loss to our company and our finances, but to chess culture if this book will not exist. I am often motivated by a sense of responsibility to others. This goal is ideal for me.

8. I receive the advice and support from fitness coaches and friends. I debate my progress with my children. It is always a part of the conversation. Especially kids are good to motivate us; losing face in their presence is not something I am willing to do.

9. When I am at the gym, I keep the intensity going. I exercise to exhaustion. I focus on the technique of the exercises. When the instructors count down to a twenty-second break, I do not stop three seconds out like most of the other people there, but execute an extra rep after zero.

I took a break from this goal during the book tour accompanying the completion of this book, then returned to it with unhindered determination. I have gained a lot of strength over the last five months and lost 6-7 kg. I have improved my habits immensely and my health has benefited a lot. I have not yet won the bet, but I am no longer overweight. I almost never get ill and I have more energy than ever before in my life. My mood swings are gone; I am the happiest I have ever been.

When I returned from the book tour, I had trimmed down a bit. I ate well on the road. Being plant-based traditionally leads to difficulties finding other food than rice and vegetables, which are very low calorically. I had hoped to sleep a lot and de-stress in general, but the constant travel made sleeping difficult. Even so, I had plenty of energy for the many lectures I gave over the four weeks.

I will revise my plan, looking for improvements. In the beginning the main challenge was to get into a consistent exercise regimen and change my diet in a positive direction.

The challenge will be to change my exercise so that it benefits weight loss. I have accumulated a lot of knowledge about fitness and weight loss over the years. I know that cardio should be done in the morning, before breakfast, where the glucose depots are depleted and the body has no choice but to burn fat. I will enjoy the spring and go running some days. Other days I will get on the treadmill in the gym, put the incline at 15% and walk at a pace of 5km/hour for 45 minutes, burning over 600 calories. I will also walk to the office, rather than taking the train. This takes over an hour, burning over 500 calories. And so on. In order to lose weight, I need to up my calorie burn.

I will also include occasional high intensity interval training (HIIT) into the mix. Sprints of half a minute to 45 seconds, with thirty-second breaks in between. This sends a different signal to the body than permanent stress does. With permanent stress, a signal of persistent danger will encourage the body to gain weight. Either because stress can be misunderstood as shortage of

food, or because a bigger person is harder to kill.

HIIT has been proven to work scientifically again and again. The reason seems obvious to me; the body gets a signal that it is not fast enough to either catch the prey, or outrun the predator. It is simple evolutionary thinking; our bodies are designed to improve our chances of survival and little else.

I will also focus more on specific resistance exercises. I can do a bit more than ten high quality push-ups at the moment and am close to being strong enough to do my first high quality pull-ups. My fitness coach and I have put a programme together that I will follow on top of the circuit training. I wish to be able to do high quality push-ups and pull-ups as a combination of cardio and strength training, as both use most muscle groups.

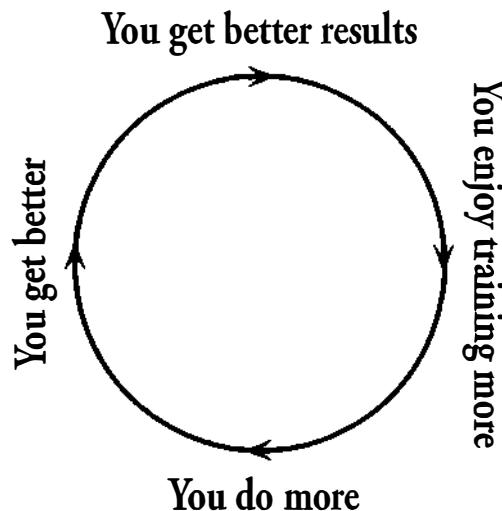
At the same time, I will take a few steps regarding my diet in the short term. I will give up dried fruit, which I love, and drastically reduce my fruit intake. My main diet will come from vegetables and starches; mainly rice and potatoes. (See Appendix 1 on page 361 for my wider thoughts on the subject of Nutrition.)

My target weight to win the bet is still 1.5 kg away. Whatever the timeline, I will work the plan for as long as it takes. It will take some discipline in the beginning but, after a week or two, the habit will be somewhat established, the ball will be rolling and things will get easier.

Already now, it is easy to go to the gym. I show up on time, do the exercises and experience very little pain. The physical sensations are the same as before, but the mindset has entirely changed. The feeling of physical discomfort is the same, but the signal my brain receives is one of achievement, encouraging me to go on, rather than one of frustration with a wish to give up.

The Improvement Circle

The last model I want to share is that of the improvement circle. The purpose with this is to explain how motivation originating from the outside works. It has four stations:



Most people will start with doing more, force themselves to follow a plan with discipline, then eventually get better. If they keep up the training until they get better results, they will feel better about putting in the effort, starting back at the first station, hopefully continuing forwards and upwards.

The problem is that most people find the effort they have to put in to make it to the third station is too demanding of them – especially if they do not feel confident about the outcome. Often, they face setbacks on account of another phenomenon: when we learn to do something in a new way, we will often do it with less efficiency than we did it before, even if the new way is better. Front crawl offers more speed than breaststroke, but a swimmer who changes style will find the new way less natural and be slower during the transition period, until crawl becomes second nature to him, the way breaststroke already is.

During this transitional phase it is easy to lose heart, and to think that the training is not working. You have not yet arrived at Station 2, but you are experiencing the toll that the process of moving there takes.

Another possible outcome is that you will have improved, but not yet received the improved results you are looking for. Chess is difficult; winning rating points or achieving title norms takes a lot of time. There is an element of luck in tournament results. You may face underrated juniors on their way up, or someone who happens to have recently prepared against your new favourite opening. Anything within one point of your expected score could be seen as a normal result. But when luck goes against us, as it statistically will have to do about half the time, it is possible to lose heart.

The solution to this dystopic view on improvement is to start your journey towards improvement at Station 4. Find ways to make your training more enjoyable. Make it a game; work with friends; set yourself small challenges; and reward yourself in ways that do not conflict with your goals.

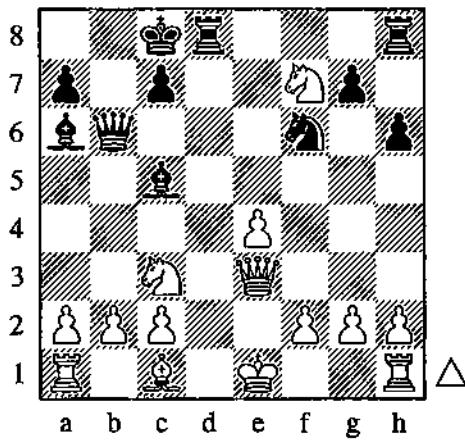


Chapter 3

Who Are You?

Mikkel Strange – Jacob Aagaard

Aalborg 1994

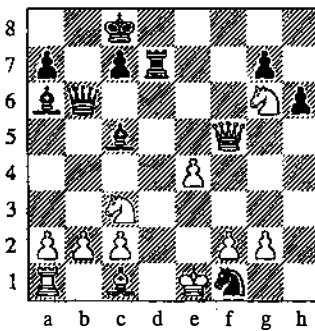


White to play

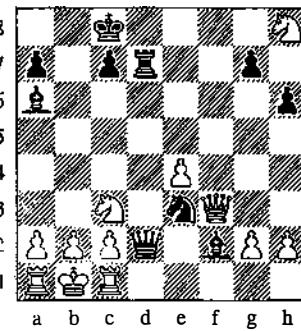
The most creative game of my youth, where I managed to crown the game with checkmate and win the best game prize of the Danish Championship, despite playing in the B-group. But at this point, the computer points out after a twenty-year delay, White could have refuted my play with great accuracy.

Test yourself against the book

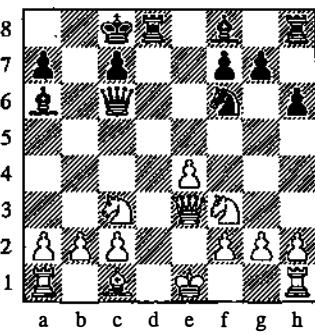
This book is not an exercise book, but an experienced trainer can always find interesting moments in games that can be more effective for the student if he thinks about them first. On this page, I have included a few positions from this chapter that you can look at, should you feel so inclined. As long as it does not make you put off reading the chapter!



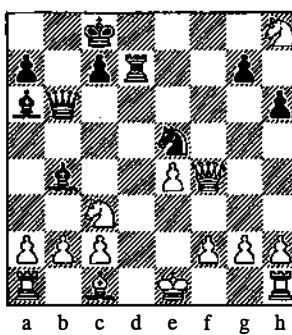
A remarkable combination
found by the engine
(see page 75)



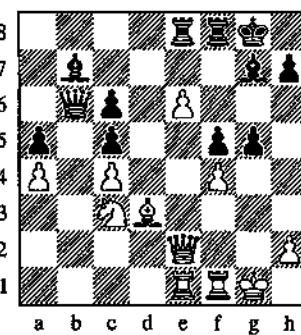
But given a second chance,
I did not falter
(see page 78)



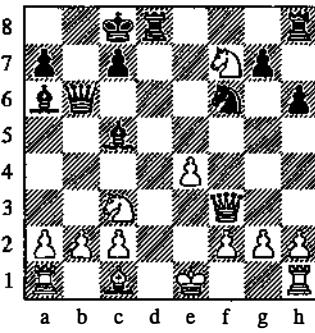
An early chance?
(see page 71)



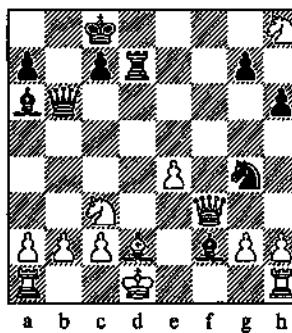
The win in this position is
something quite extraordinary
(see pages 75/6)



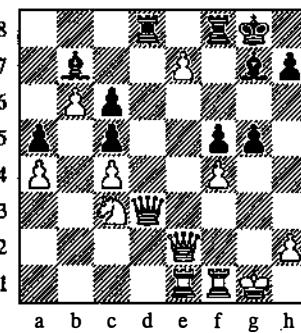
Deep calculation time
(see page 80)



Losing the exchange,
but is there compensation?
(see page 73)



I missed the direct path
at this point...
(see page 76)



The common binary
choice problem...
(see page 81)

When you write a book with the title *Thinking Inside the Box*, inevitably there will be people who think this is a dismissal of innovation and imagination. Trust me, nothing could be further from the truth. It is my firm belief that everyone should play to their strengths, as well as changing their weaknesses into strengths. My strength was dynamics and imagination. But let us talk about personalities first.

Four types of players

Mark Dvoretsky, in a footnote in one of his books, divided players into four different groups, based on a two-way axis, of whether a player was *logical* or *intuitive* and whether or not he was *dynamic* or *technical*.

Danish grandmaster Lars Bo Hansen wrote a book called *Foundations of Chess Strategy* based on a very similar idea, inspired by the human resources scientist Jean-Marie Hiltrop. Lars Bo Hansen's two axes are logic vs. intuitive and calculation vs. general concepts.

Grandmaster Sune Berg Hansen said it was the most helpful book he ever read about chess. After reading it he abandoned the idea of being an attacking player and became what almost all Danish chess players have been for the past few decades, *accountants*, people who add up all the small advantages and then hope it is enough to win the endgame.

I recommend reading Lars Bo Hansen's book to anyone who wants to get further into this topic, though in this book I will focus on my interpretation of Dvoretsky's model.

I would put the following players in these groups.

1. Logical and technical: Botvinnik, Gelfand, Korchnoi
2. Logical and dynamic: Kasparov, Topalov
3. Intuitive and technical: Karpov, Carlsen
4. Intuitive and dynamic: Tal, Anand

No box fits any player perfectly of course, but it helps us work out where our natural strengths are and what we need to work on.

Groups 1&2: These groups need to develop an understanding of the game. The greats mentioned above worked hard to do so. Although not much comes for free, they have a natural talent for working systematically on the game and their skills. These guys are often good at calculation, but are weak in positional play and strategy and have to study it seriously to understand it. Some of them will find dynamics really difficult to learn. While there are many skills that are hard to learn for those with no natural tendency in that direction in chess, I think the hardest is to learn dynamics for players that do not have a natural feel for it.

Groups 3&4: These groups get a lot for free, but they have a tendency to be sloppy. The areas they usually will have to work hard on are the areas that require accuracy – opening preparation, learning theoretical endings and, especially, calculation. On page 122 you will find the story about a Group 3 and Group 4 player whom I coached at the same time. Both struggled with winning won positions. The best way for both to improve their results was to learn to calculate. This takes a lot of work for intuitive players, as I understand way too well.

Jacob – the activist

Lars Bo Hansen termed intuitive, dynamic players (Group 4) as activists. This characterizes me well. I sense the dynamic potential of the pieces well and have a good feeling for where I need to put them to create an attack. For this reason, I often obtained very promising positions, but also often failed to win these promising positions. You will find this pattern throughout this book; grand lay-ups and then the accuracy was lacking. This early triumph could have gone wrong, as so many other games did, had my opponent defended better once I let it all slip away.

Mikkel Strange – Jacob Aagaard

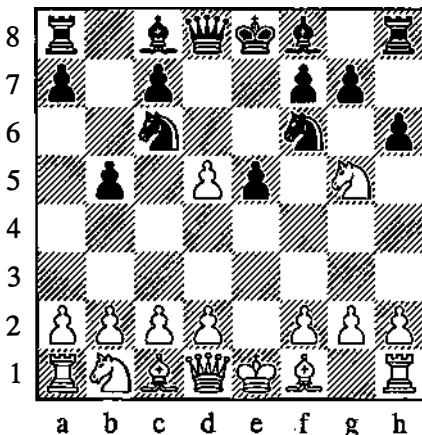
Aalborg 1994

1.e4 e5 2.Qf3 Qc6 3.Qc4 Qf6 4.Qg5 d5
5.exd5 b5?!

I am not that deep into this line, but I know that 5...Qa5! 6.Qb5† c6 has been the right way to play this position since forever.

6.Qf1 h6

6...Qd4 7.c3 Qxd5 is the crazy main line here, but I wanted to be imaginative and try this stupid idea I had seen.



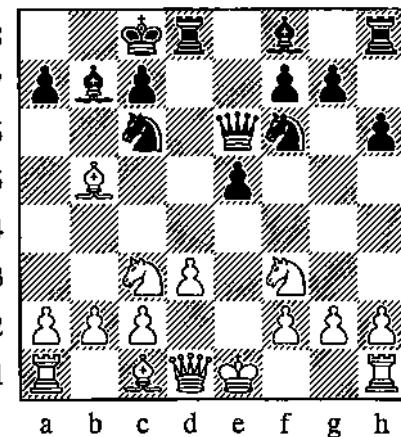
7.Qf3?!

Later on this entire variation was efficiently buried by English grandmaster James Howell with 7.Qxf7! Qxf7 8.dxc6 Qc5?! 9.Qe2 Qe4 10.0-0 and there was just no compensation to speak of in Howell – Volzhin, Calcutta 1996. I felt quite sad when I saw this game.

7...Wxd5 8.Qc3 We6 9.Qxb5

During the game I was concerned about 9.Qxb5, but after 9...We7! practice shows that Black has decent chances.

9...Qb7 10.d3 0-0-0

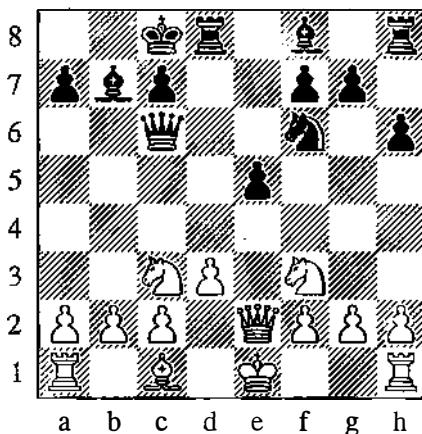


This is what I was aiming at. The main idea is ...Qd4.

11.Qxc6

As this variation is hardly critical for opening theory, it is not so important for us to know if Black has enough compensation after 11.0-0!N Qd4 12.Qc4 Wg4 13.Qe1 Wg6. It is not obvious to me, but I would have enjoyed playing this type of position, which is what really matters.

11...Wxc6 12.We2



12...e4!

At the time of the game I did not think this pawn sacrifice was correct, as I generally did not believe in gambits. I was young and knew very little. That is my excuse anyway.

13.dxe4

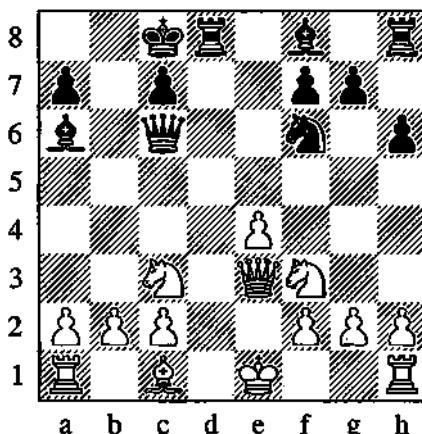
There were alternatives, but accepting the pawn is very principled and natural.

13...♝a6

13...♝b4 is objectively stronger, but it is hard to allow White to castle, when you have the chance to prevent it.

14.♛e3?

The computer points out that White had to play 14.♝e5! with the idea of ♜d3, when after 14...♝xc3†! 15.bxc3 ♛xe2 16.♝xe2 ♜e8 followed by ...♝xe4 Black is not worse.



14...♝c5??

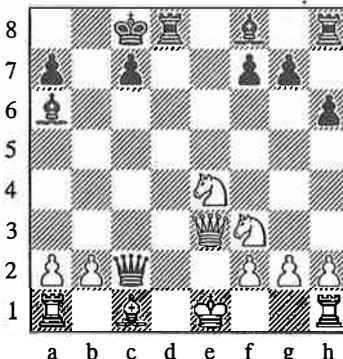
I am sure I made this move very quickly. What could be more logical? Bring in the remaining pieces with gain of tempo. But we have entered an alternative universe, where everything can only be explained afterwards, as the position is so chaotic it has a logic of its own.

It turns out that Black already has a stunning combination available:

14...♝xe4!!

I did sort of think of this move, but only with the idea of ...♝e8 in order to regain the piece. It felt as if the energy was draining out of my position.

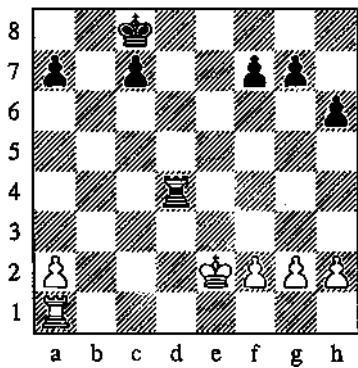
15.♝xe4 ♜xc2



The threats of ...♝b4† and ...♝e8 are deadly. Had I seen this, I am sure the game would have ended very quickly. A sample line where White is allowed to see the endgame could be the following:

16.♜d2 ♜e8 17.♝d4 ♜xb2 18.♜c3 ♜b4 19.♝d1

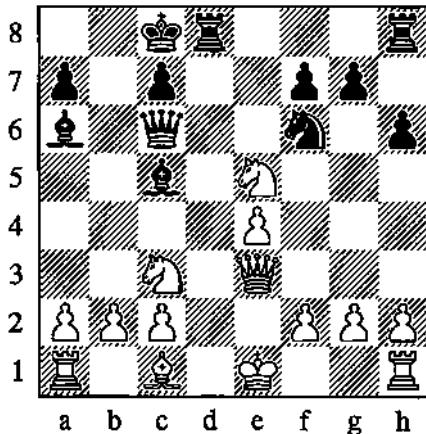
Who would plan on making such a move?
 19...♝xc3 20.♛xc3 ♜xc3 21.♝xc3 ♜d8
 22.♝ce2 ♜he8 23.♝e1 ♜xe2† 24.♝xe2 ♜xe2
 25.♝xe2 ♜xd4



White has some chances of holding this endgame of course, but with good technique, Black should win.

15. $\mathbb{Q}e5!$

I was only expecting 15. $\mathbb{W}f4$ $\mathbb{Q}he8$ when I expected the game to be over very soon.



At this moment, my first instinct was to put the queen on b6. It is a very natural move. But I did not want White to return the knight to d3 and thus came up with a, frankly, totally bonkers concept.

15... $\mathbb{W}d6!??$

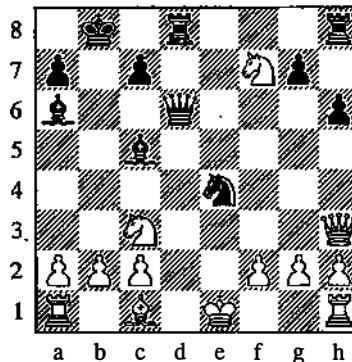
Objectively this does not work out, but it is only now, twenty years later, the engine is able to show a refutation of this move, which we shall see below.

Best would have been 15... $\mathbb{W}b6$ 16. $\mathbb{W}f3$ (16. $\mathbb{W}h3\#$ $\mathbb{Q}b8$ 17. $\mathbb{Q}e3$ fails to 17... $\mathbb{Q}xe4!$ 18. $\mathbb{Q}xe4$ $\mathbb{W}xb2$ and everything is hanging) 16... $\mathbb{Q}he8$ 17. $\mathbb{Q}d3$ $\mathbb{Q}d4$ 18. 0–0, where White is a bit better. Black has to justify the pawns deficit and this is not easy.

16. $\mathbb{Q}xf7!?$

Mikkel wanted to see the evidence; a very 19th-century attitude.

During the game I was trying to calculate the consequences of: 16. $\mathbb{W}h3\#$ $\mathbb{Q}b8$ 17. $\mathbb{Q}xf7$ $\mathbb{Q}xe4!?$



18. $\mathbb{Q}xd6$ $\mathbb{Q}xf2\#$ 19. $\mathbb{Q}d1$ $\mathbb{Q}xd6\#$ 20. $\mathbb{Q}d2$ $\mathbb{Q}xd2$
21. $\mathbb{Q}c1$ $\mathbb{Q}e8!$ Black has a lot of counterplay; ... $\mathbb{Q}e3$ is coming.

I could not work out if I had enough compensation and I am still not sure. I have analysed the position for a while and found draws for Black against the most challenging lines, but honestly I do not trust it. I am sure a refutation exists, probably starting with 22. a4!.

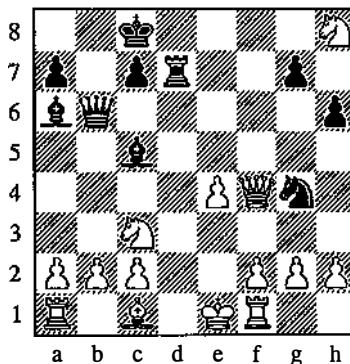
But I do not think this is so relevant. At the board my opponent would have struggled immensely to find good moves, as would I. The chaotic nature of the position would almost certainly have benefitted me and my style of play. And my general attitude on the day would almost certainly have been a major advantage.

In this line what I really feared was that he would play 17.♕d3, when it would be possible for him to castle on the next move. Black simply does not have enough compensation and will have to make something up quickly not to go down in flames.

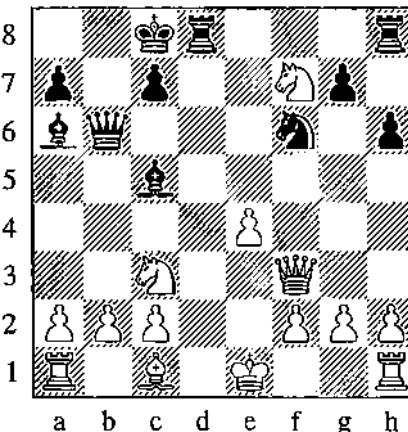
16...♝b6 17.♝f3?

I expected this move and Mikkel did not really hesitate making it. We both concluded that the check on h3 would add nothing to White's position, but possibly detract quite a bit.

It turns out that 17.♝f4! was a refutation of Black's combination. The key point is that after: 17...♜d7 18.♛xh8 ♛g4 19.♚f1!



The queen is defending the h2-square. If seeing this is like spotting a coin on the street, Mikkel and I were on the other side of the road, mindlessly stepping onto a bus taking us in an entirely different direction. Black can create some counterplay. A possible way to play the position is 17...♞g4?! 18.♛xg4† ♜d7 19.♝d2 ♜xf2† 20.♝d1 ♜d4 21.♝c1 ♜xd2† 22.♝b1 ♜d3 23.♝d1 ♜xc2† 24.♝xc2 ♜xc2† 25.♝xc2 ♜xf7, although White has good winning chances in the endgame.



The next move is one of the coolest I have played in my life. I was very proud of it at the time and I am very happy with it today.

17...♝d7!!

This is a double attack. It attacks the knight and prepares ...♞g4!. This sort of inspired move is easy to miss, especially for our opponents.

18.♛xh8?!

During the game, I was certain this was a losing mistake. It is not so, but it is a very impractical move, setting White up for a lot of challenges.

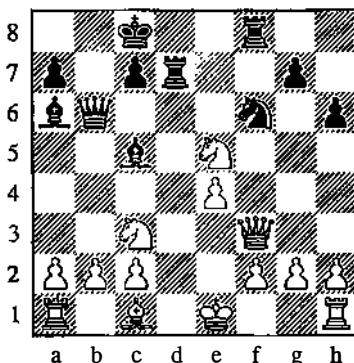
Obviously I was hoping he would take the rook, but deep inside I was certain he would try to bring the knight back to d3.

18.♞e5!

It is clear that if White is allowed to play ♜d3, he will castle and the attack will be over. Everything rests on two ideas: keeping the king in the middle and playing with as great energy as possible.

18...♝f8!

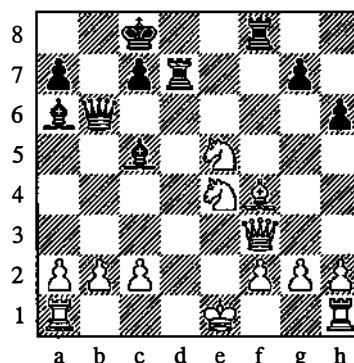
This was my plan, but honestly I felt rather nervous about the prospects. However, analysis shows that Black is doing well.



19.♘xd7

This is not a move I would intuitively like to make with White. The most active piece is exchanged and the opponent is allowed to do exactly what he was hoping to do. But nothing else really works, so it has to be played.

- a) 19.♗f5? is something I actually saw at the time. Black wins with 19...g6! on account of 20.♘xg6 ♘g4! and everything works.
- b) 19.♗f4? is not something I had under control. Black wins with a fine combination: 19...♗xe4!! 20.♗xe4



20...♗xf4! 21.♗xf4 ♗b4† 22.c3 ♗xb2 and the extra rook is pointless. White is stuck in the middle and about to die.

- c) 19.♘d3? Black has a lot of attractive options here, but the best one is also the most elegant. 19...♘h7! 20.♗f4 ♘g5 21.♗g3 (21.♗g4 ♘xf2†! 22.♗xf2 ♗xb2 and Black wins) 21...♘xd3 22.cxd3 ♘e6

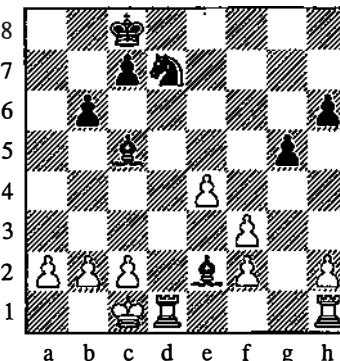
Sometimes it is the simple moves that are the most effective. 23.♔e3 ♗xb2 and Black wins a piece.

d) 19.♗d2?! ♘xf2†! 20.♗xf2 (20.♗d1?! ♘dd8! 21.♗d3 ♘g1! Black is disrupting the white pieces' coordination and taking his time to build up his attack all over again. 22.♗e2 ♘d7 and Black's attack is very strong.) 20...♗xf2† 21.♗xf2 ♘xd2† 22.♗e3 ♘xc2† This is very unpleasant for White, but not entirely over.

19...♘xd7 20.♗f4

Black is able to force a draw or go for more:
20...♗xb2

My original notes mention: 20...g5
21.0–0–0 ♘xf4 22.♗d5! ♘xf3 23.♗xb6†
axb6 24.gxf3 ♘e2



When I analysed this game back in the 1990s, I believed Black had a big advantage. Stockfish 8 thinks White is a little better after 25.f4... I believe the correct evaluation is "with unclear play". In practical terms, you would have to be some Terminator in order to reach this position with White with confidence.

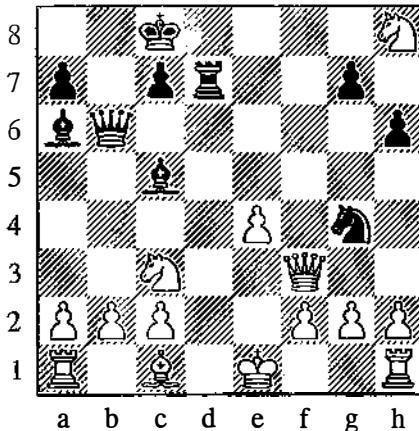
21.♗b1 ♗xc2 22.♗c1 ♗b2 23.♗b1 ♗a3??

Black can try to evade the repetition, but there is no advantage to be found.

24.♗b3 ♗a5 25.e5 ♘b4 26.e6! ♘b6 27.e7
♗e8 28.♗d1 ♘c4 29.♗xb4 ♗xb4 30.♗e1 ♗xe7
31.♗xe7 ♗xe7

With a likely draw.

18... $\mathbb{Q}g4!$

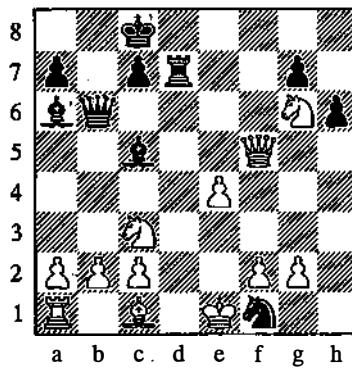


It seems like a miracle when you look at the game with a computer, but at the time I was not surprised at all to be able to execute this idea on the board. It was the reason I played 15... $\mathbb{W}d6$ after all.

19. $\mathbb{A}d2?$

I was surprised when my opponent played this move. I am not really sure I had even paid attention to it. But the idea is not so stupid, of course. White wants to run to the queenside with the king, which makes a lot of sense.

19. $\mathbb{W}f1?!$ loses to 19... $\mathbb{Q}xh2$ 20. $\mathbb{W}f5$ $\mathbb{Q}xf1$ with a decisive attack. There are many possible lines, but the one I want to point out is a very beautiful tactical idea: 21. $\mathbb{Q}g6?!$

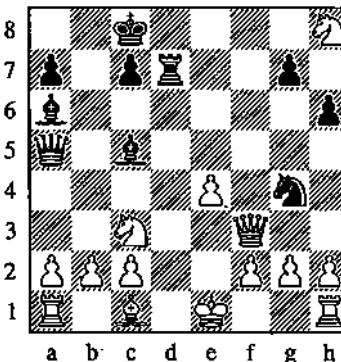


Black is desperately looking for an active move. All his pieces are active, but apparently they cannot do anything? 21... $\mathbb{Q}g3!!$ A fantastic idea! 22. $f\text{xe}3$ $\mathbb{Q}b4$ The threat of ... $\mathbb{W}g1\#$ is overpowering. White can only resign, as 23. $\mathbb{W}f2$ $\mathbb{E}d1\#$ ends the game immediately.

19. $\mathbb{Q}d1?$ was something I was thinking he might do during the game.

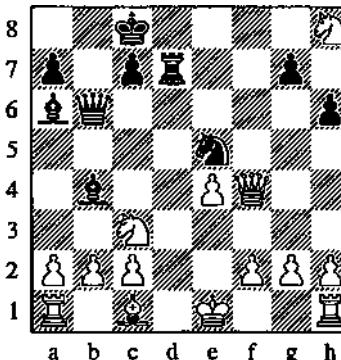
I was planning on playing 19... $\mathbb{Q}b4\#$ with the idea 20.c3 $\mathbb{Q}e5!?$

The main concept was correct, but the correct execution was 19... $\mathbb{W}a5\#$, where White is also forced to return with the knight. But after 20. $\mathbb{Q}c3$ Black has a basic combination:



20... $\mathbb{A}xf2\#$ 21. $\mathbb{W}xf2$ $\mathbb{E}d1\#$ winning the house.

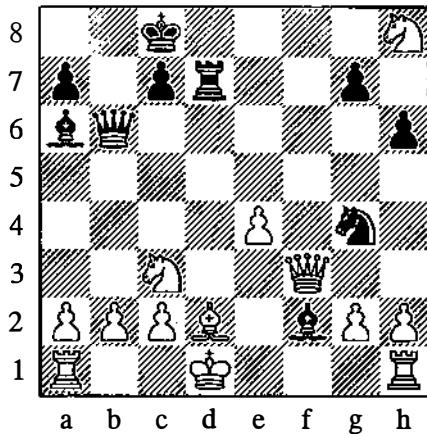
It turns out that there is a different win after 19. $\mathbb{Q}d1?$, which you have to think in ones and zeros to find, I think. But it is very instructive, so I want to include it all the same: 19... $\mathbb{Q}e5!?$ 20. $\mathbb{W}f4$ $\mathbb{Q}b4\#$ 21. $\mathbb{Q}c3$



21... $\mathbb{W}b5!$ 22. $\mathbb{W}e3$ $\mathbb{W}a4!!$ 23. $\mathbb{W}xa7$ $\mathbb{B}d6$ White has no defence against ... $\mathbb{W}xc2$ with a winning attack. White has to give up the queen to get his king to safety.

The only move was 19. $\mathbb{Q}d5!$, and this was indeed what I was expecting. After 19... $\mathbb{Q}xf2\#$ 20. $\mathbb{Q}d1$ $\mathbb{W}d4\#$ 21. $\mathbb{Q}d2$ $\mathbb{Q}e3$ we would have transposed to the variation starting with 21. $\mathbb{Q}d5$ below.

19... $\mathbb{Q}xf2\#$ 20. $\mathbb{Q}d1$



I do not really care which model you use to explain what is happening here.

You can use the calculation model, calling this a critical moment. After all, pieces are hanging and Black has sacrificed a rook.

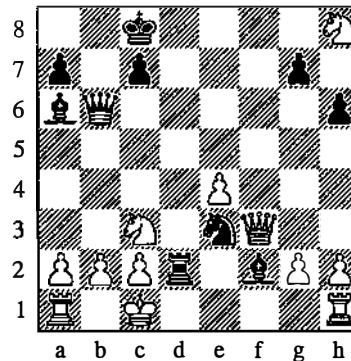
Or you could choose to look at it through the prism of evolution/revolution. In that case, we can see that all of the black pieces are active and that it is important to strike now, otherwise the attack would diminish in strength. Or you could choose an entirely different prism, say candidates.

Whatever the case, we will arrive at the same conclusion; that Black has a big moment and should carefully work out how to continue the game.

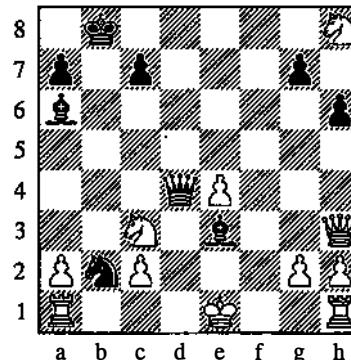
20... $\mathbb{W}d4?$

I made this move quickly and confidently; but it is a really bad move. Obviously, I did not follow my own advice, but then, I had not given it yet. What probably was happening to me was that at move 19 I had planned to go into this line by transposition and now I just went for it. It is not a great excuse, but it is an explanation.

The win is not too difficult to find once you start looking for it: 20... $\mathbb{Q}e3\#$ 21. $\mathbb{Q}c1$ $\mathbb{W}xd2!$



22. $\mathbb{W}h3\#$ Getting the queen away from potential discovered checks with the knight. There are other moves, but nothing that offers real resistance. 22... $\mathbb{B}b8$ 23. $\mathbb{Q}xd2$ $\mathbb{Q}c4\#$ 24. $\mathbb{Q}e2$ There are no other squares. 24... $\mathbb{Q}xb2\#$ 25. $\mathbb{Q}d2$ $\mathbb{Q}e3\#$ 26. $\mathbb{Q}e1$ $\mathbb{W}d4!$



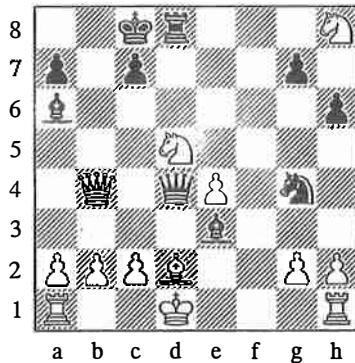
Checkmate is imminent.

21. $\mathbb{Q}c1?$

21. $\mathbb{Q}d5$

This was necessary. I had no control over what was happening during the game. It is only now that a computer will kindly tell me that the critical line goes like this:

21... $\mathbb{Q}e3$ 22. $\mathbb{W}f8\#$ 23. $\mathbb{W}b4$

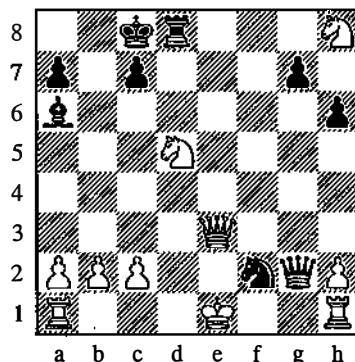


23... $\mathbb{Q}f2\#$ 24. $\mathbb{Q}e1$ $\mathbb{Q}xd2\#$ 25. $\mathbb{W}xd2$ $\mathbb{W}xe4\#$

26. $\mathbb{W}e3!$

26. $\mathbb{Q}xf2?$ $\mathbb{Q}xd5$ is surprisingly just over. White cannot defend his king with three of his pieces stuck in the corners. 27. $\mathbb{W}c3$ $\mathbb{Q}f5\#$ 28. $\mathbb{Q}g1$ $\mathbb{Q}b7$ 29. $\mathbb{W}d2$ $\mathbb{Q}g5$ is one example of this.

26... $\mathbb{W}xg2$



Black's position looks entirely overwhelming. But things are not that simple.

27. $\mathbb{Q}g6!$

Save what you can save! The knights will keep White in the game; the rooks are a lost cause.

27... $\mathbb{W}xh1\#$ 28. $\mathbb{Q}xf2$ $\mathbb{W}xh2\#$!

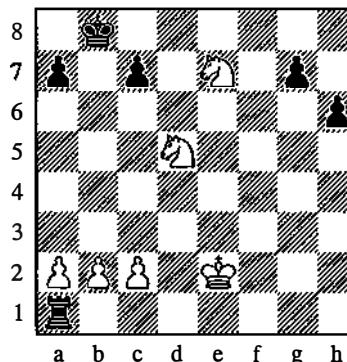
28... $\mathbb{W}xa1?$ 29. $\mathbb{Q}ge7\#$ is a transparent disaster. The forced line is 29... $\mathbb{Q}d7$ 30. $\mathbb{W}h3\#$ $\mathbb{Q}e8$ 31. $\mathbb{W}h5\#$ $\mathbb{Q}d7$ 32. $\mathbb{W}f5\#$ $\mathbb{Q}e8$ 33. $\mathbb{W}g6\#$ $\mathbb{Q}f8$ 34. $\mathbb{W}xa6$ and it is White who enjoys winning chances.

29. $\mathbb{Q}e1$



If I had had this position in the game, or at any other time in my career, I would probably have taken a perpetual here. But the engine comes up with this really elaborate non-human way of playing for a win:

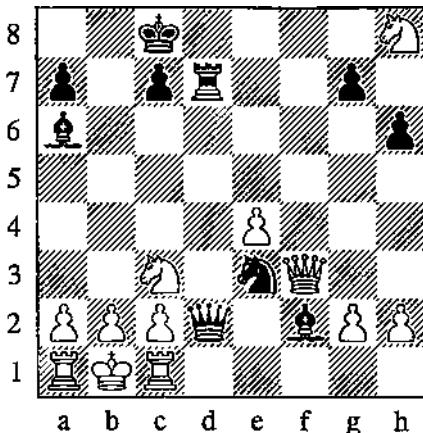
29... $\mathbb{Q}b8?!$ 30. $\mathbb{Q}ge7$ $\mathbb{Q}b7!$ 31. $\mathbb{W}e6$ $\mathbb{Q}f8$ 32. $\mathbb{W}c6\#$ $\mathbb{Q}b8$ 33. $\mathbb{W}xa6$ $\mathbb{W}f2\#$ 34. $\mathbb{Q}d1$ $\mathbb{W}f1\#$ 35. $\mathbb{W}xf1$ $\mathbb{Q}xf1\#$ 36. $\mathbb{Q}e2$ $\mathbb{Q}xa1$



Black can still play for a win, but with accurate defence, one would assume that White holds.

The next few moves came easily.

21... $\mathbb{W}xd2\#$ 22. $\mathbb{Q}b1$ $\mathbb{Q}e3$ 23. $\mathbb{B}c1$



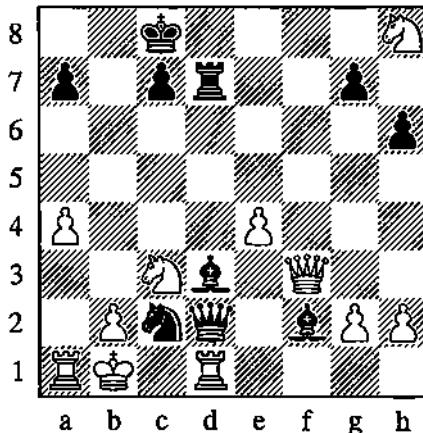
23... $\mathbb{Q}d3!$

This is the type of tactic fit for our level!

24.a4 $\mathbb{Q}xc2$

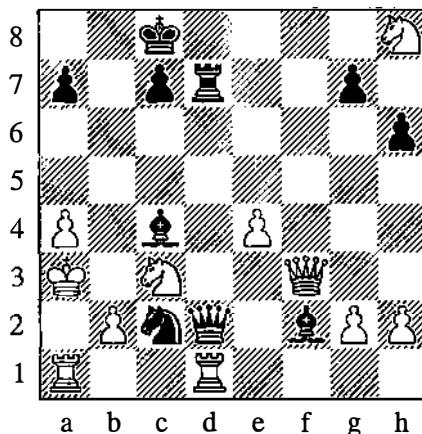
This was a very natural move and I cannot really say that I calculated or expected anything.

25. $\mathbb{B}d1$



I had entirely missed this, but fortunately it changes nothing.

25... $\mathbb{Q}e3\#$ 26. $\mathbb{Q}a2$ $\mathbb{Q}c4\#$ 27. $\mathbb{Q}a3$ $\mathbb{Q}c2\#$



This game was awarded the prize for the most beautiful game at the 1994 Danish Championship. I do not think “Best Game” would be an accurate description, but it was certainly fun to play.

Learning logic

A lot of my non-chess playing friends know me as a very logical person. And it is accurate to some degree; I have certainly learned how to use logic through chess, although I still come to most conclusions intuitively and then investigate their validity logically, using the various thought processes described in this book.

But thinking in the way I describe in Chapters 6 and 11 took a long time to learn. While I am a firm believer in the value of logic and I try to work systematically, it is not a natural skill for me and I have to keep an eye on myself to make sure I apply it. I guess this is one of the reasons why I am fond of strategic concepts, while others, with a less intuitive approach to chess, will find less attraction to them.

Make strengths out of your strengths

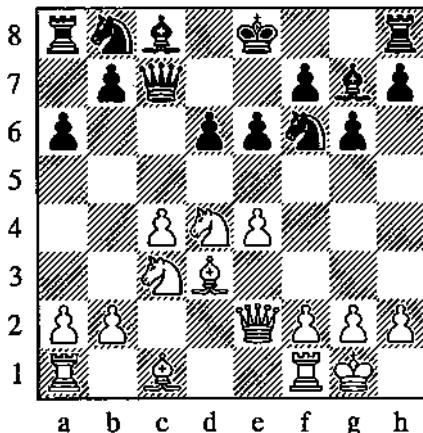
On page 325 I encourage you to turn your weaknesses into strengths, but this should not cloud our minds. Our natural strengths are still the place we are most likely to achieve greatness. There will be parts of the game that you naturally are attracted to. Those are likely to be your strength and where your play has the greatest potential. In my case, this has always been imaginative chess and my best results have come in connection with my playing original chess when possible and logical chess when necessary.

The following game was played in a Glasgow weekend tournament and as such is not an important milestone in my career, but it shows quite well how I was able to create something really interesting on the board and how this helped me to win games.

Jacob Aagaard – Patrick Coffey

Glasgow 2006

1.e4 c5 2.♘f3 e6 3.d4 cxd4 4.♘xd4 a6
 5.♗d3 ♖c7 6.0–0 ♘f6 7.♗e2 d6 8.c4 g6
 9.♗c3 ♗g7

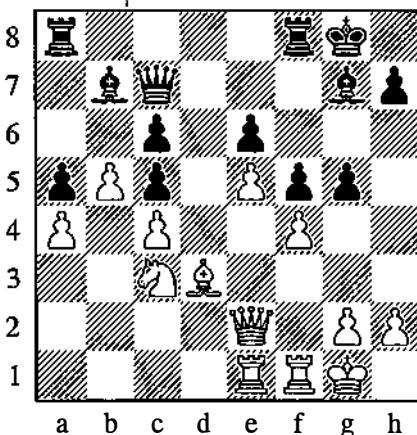


This is a very common position, reached 1478 times in the database. No one played what I did, which surprised me.

10.a4!?

I am not trying to be theoretical, I just wanted a game with a touch of original flavour. This is of course not the best move, but it is also not entirely stupid. The big upside to it is that we get a totally independent game, where the problems will be original.

10...0–0 11.♗e3 ♗c6 12.♘xc6 bxc6 13.b4
 a5 14.b5 ♘d7 15.♗ac1 ♗c5 16.f4 f5
 17.♘xc5 dxc5 18.e5 g5 19.♗ce1 ♘b7

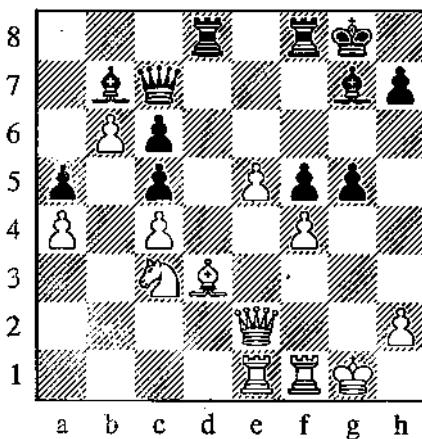


At this point, with all my pieces developed, I decided to press the chaos button.

20.g4!?

This is obviously an insane move. But it totally changes the nature of the game. I did not for one moment believe that it was the best move in the position, but I gathered that we would continue the game on my terms. Those terms were also Pat's, so I am sure he did not mind.

20...♗ad8 21.gxf5 exf5 22.b6!



This move came naturally to me. It blocks in the bishop and creates a passed pawn for later.

22... $\mathbb{W}d7!$

Pat found the best move.

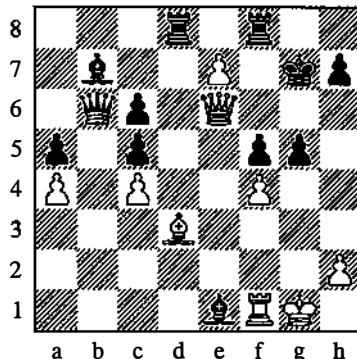
22... $\mathbb{W}e7$ 23.fxg5 $\mathbb{W}xg5\#$ 24. $\mathbb{Q}h1$ would give White a serious attack down the b-file.

22... $\mathbb{W}xb6?!$ 23.e6

This is very unpleasant for Black. The following variation is very impressive.

23... $\mathbb{A}de8$

Another forcing variation goes: **23... $\mathbb{A}xc3$ 24.e7 $\mathbb{A}xe1$ 25. $\mathbb{W}e6\#$ $\mathbb{Q}g7$**



26.fxg5! $\mathbb{W}c7$ 27. $\mathbb{A}xf5$ $\mathbb{A}xf5$ 28. $\mathbb{A}xf5$ $\mathbb{Q}c3$ 29. $\mathbb{W}h6\#$ $\mathbb{Q}f7$ 30. $\mathbb{W}xh7\#$ $\mathbb{Q}e8$ 31. $\mathbb{A}g6\#$ $\mathbb{Q}d7$ 32.e8=Q# and so on.

24.fxg5! $\mathbb{A}xc3?!$

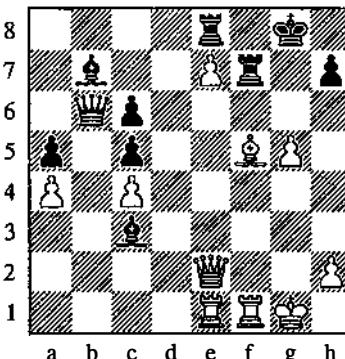
The critical try.

Black should probably play 24... $\mathbb{W}d8$, but White is better after the trivial 25.e7 $\mathbb{A}xe7$ 26. $\mathbb{W}xe7$ $\mathbb{A}xd3$ 27. $\mathbb{Q}e2$.

25.e7 $\mathbb{A}f7$

The engine prefers other moves, but this is the only one we need to know about.

26. $\mathbb{A}xf5!$



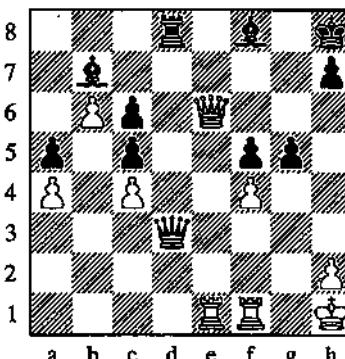
White has an overwhelming attack.

For example: **26... $\mathbb{A}xe7$ 27. $\mathbb{A}e6$ $\mathbb{A}xe1$ 28. $\mathbb{A}xf7\#$** leads to mate.

And after **26... $\mathbb{A}fxe7$ 27. $\mathbb{W}h5!$ $\mathbb{A}e1$ 28. $\mathbb{A}xh7\#$ $\mathbb{Q}g7$ 29. $\mathbb{W}h6\#$ $\mathbb{Q}h8$ 30. $\mathbb{A}c2\#$ $\mathbb{Q}g8$ 31. $\mathbb{W}g6\#$ $\mathbb{Q}h8$ 32. $\mathbb{A}f7$ Black is mated. In both lines White is also winning after 27. $\mathbb{W}xe7$, but this is less intuitive.**

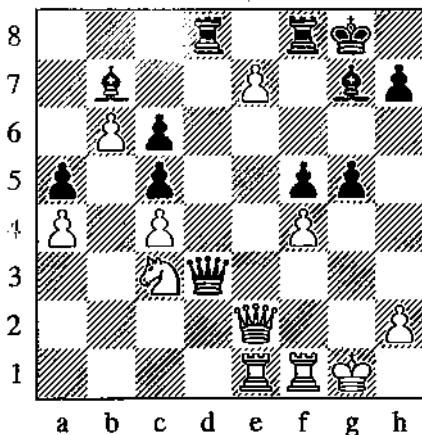
23.e6! $\mathbb{W}xd3!$

23... $\mathbb{W}d4\#?$ 24. $\mathbb{Q}h1$ $\mathbb{W}xc3$ is worse: 25.e7 $\mathbb{W}xd3$ 26.exf8= \mathbb{W} $\mathbb{A}xf8$ 27. $\mathbb{W}e6\#$ $\mathbb{Q}h8$



White has 28.♗d1! ♜xd1 29.♗xd1 ♜xd1† 30.♔g2. Soon he will claim the b7-bishop and have serious winning chances in the endgame, although it is not settled yet.

24.e7

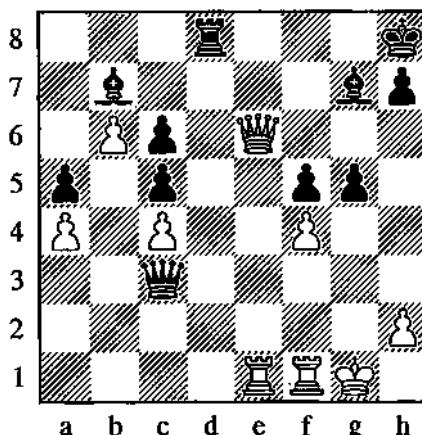


24...♜xc3?

Pat overplays his hand. He believed he was on his way to winning the game. He missed my 27th move.

Otherwise he would have played 24...♝xc3!, which we both had evaluated as equal after 25.exf8=♛† ♜xf8 26.♛e7† ♜g8 27.♛xb7 ♜xe1 28.♜xe1 ♛f3 and Black has a perpetual check.

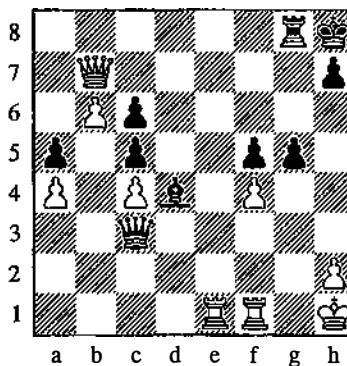
25.exd8=♛ ♜xd8 26.♛e6† ♜h8



27.♛f7!

This is the winning move, which my opponent had entirely missed. Although I had calculated lines and was happy with this coming up, I want to underline that I to some degree “saw” it rather than “found” it. I did not overcome resistance (page 193) by searching for a path. The branches in the variation tree opened up for me and I was able to see them in seconds. On this occasion I was lucky that my intuition was right.

Pat had only seen 27.♛e7?, against which he had prepared: 27...♜g8 28.♛xb7 ♔d4† 29.♝h1



29...♝f2!! and Black wins. I had not seen this variation; but then I did not have to.

27...♔d4† 28.♝h1 gxsf4

There is nothing else. 28...♝f2 29.♛e8† wins easily and 28...♝a6 29.♛e8† also claims the life of the a6-bishop. The path to the win is a bit longer, but it is rather straight and easy to follow.

29.♛e8† ♜xe8 30.♛xe8† ♜g7 31.♛e7† ♜g8
32.♛d8† ♜g7 33.♛c7† ♜g8 34.♛b8† ♜g7
35.♛xb7† ♜g6 36.♛xc6† ♜g5 37.b7
1–0

From imagination to accuracy

One thing I learned the hard way is that, the same way you cannot feel your way through a maths problem, you cannot feel your way through a critical moment. You need accuracy. The way to develop this is through systematic work on your calculation. With some of my students the work is very focused on this, while with others I work on developing a feeling for the placement of the pieces. There are those who say, like Spielmann, that they can find Alekhine's combinations, but not get his positions. But in my experience, those who can get Alekhine's positions but not find his combinations are in the majority.

When you get the combination of activism and accuracy going, you can play some amazing games. The following game was accurate until the moment where everything was winning.

Jacob Aagaard – Stefan Djuric

Porto Mannu 2007

**1.e4 d6 2.d4 ♜f6 3.♘c3 ♜bd7 4.♘f3 e5
5.g4!?**

I thought for some time before deciding to go for this. Basically, I was a little afraid he was prepared, but decided not to be restrained.

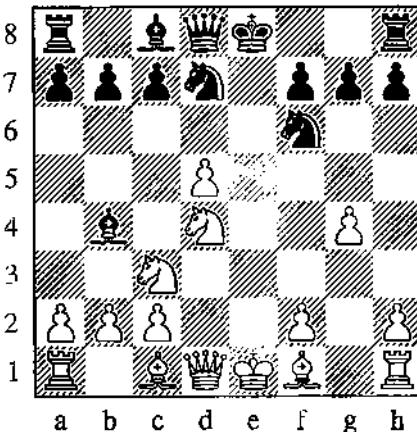
5...exd4?!

5...♜xg4 is the critical move. I was not very familiar with the theory, but neither was Djuric.

6.♘xd4 d5

Stefan played this on principle. It almost works, but not quite. It would work if Black got time to castle.

7.exd5 ♜b4



8.♗e2† ♜f8

Played instantly. To be honest, I had not seriously considered it.

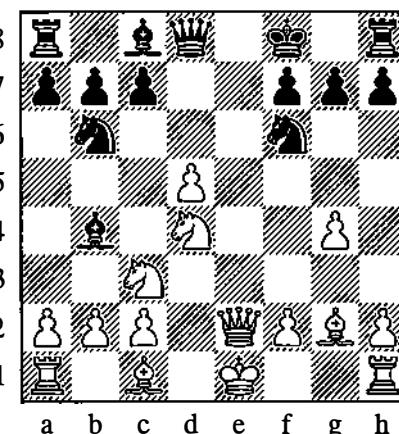
8...♝e7 9.♝xe7† ♜xe7 10.♗g2 is very pleasant for White; so is 10.d6†?! cxd6 11.♗d2, which was my idea at the board.

9.♗g2

I had a clear strategy here. I wanted to develop quickly and attack his queenside, especially b7. In the game this succeeded perfectly.

9...♝b6

I had completely missed 9...♞xd5, but after 10.♗xd5 ♜f6 11.♗e6† ♜xe6 12.♗xe6 ♜xc3† 13.bxc3 fxe6 14.♗xe6± I am happy, though the edge is minor.



10.g5!

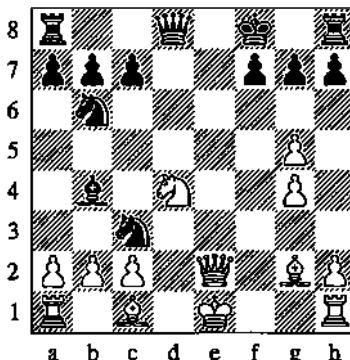
I was thinking that the difference between this and 10.h3 was that this forces him to capture with the knight I wanted him to capture with.

10... $\mathbb{Q}fxd5$

At the board, I was afraid of 10... $\mathbb{Q}g4$.



The computer comes up with a suggestion I was nowhere near to seeing: 11.f3! (instead I was planning 11. $\mathbb{W}d3\pm$) 11... $\mathbb{Q}fxd5$ 12.fxg4 $\mathbb{Q}xc3$



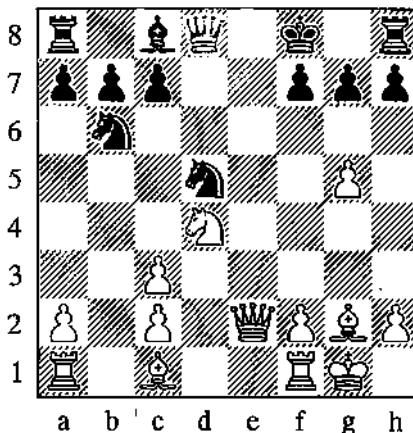
13. $\mathbb{Q}e6\#$!! I missed this check in all variations during the game. 13... $\mathbb{Q}g8$ 14. $\mathbb{Q}xd8$ $\mathbb{Q}xe2\#$ 15. $\mathbb{Q}xe2$ $\mathbb{Q}xd8$ 16. $\mathbb{Q}xb7$ with a big advantage for White.

11.0–0 $\mathbb{Q}xc3?$

Not the only move and not one that works out, but the position is poor no matter what.

12.bxc3

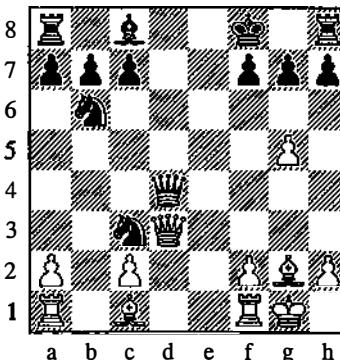
The two bishops are good, and the pawn on g5 more strong than weak.

**12... $\mathbb{Q}xc3$**

Based on an oversight, but there really is nothing else available.

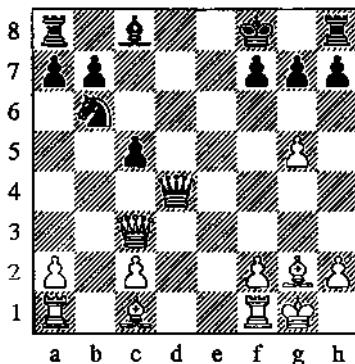
13. $\mathbb{W}d3$ $\mathbb{Q}ba4$

Stefan almost played 13... $\mathbb{W}xd4$, thinking I had missed something.



On the contrary, I had prepared 14. $\mathbb{Q}a3\#$ $\mathbb{Q}g8$ 15. $\mathbb{Q}ae1$! with a threat of mate and defence of the e2-square. White is completely winning. This combination of a sense of dynamics and accurate calculation at move 10 essentially won the game.

Having realized he could not take the knight on d4, Stefan needed to find something else and did not do well. I believed 13...c5 to be the best defence: 14.♘xc3 ♘xd4



I had planned 15.♗xd4 cxd4 16.♗d1 with a large advantage in the endgame.

I can now see that 15.♗g3! is even stronger. White's attack is terrifying and after 15...♗xa1?!, White plays 16.♗d6† ♕e8 17.♗xc5 with a winning attack.



14.♕a3† ♔g8 15.♗fe1

White is winning. Black has no way to mobilize his forces.

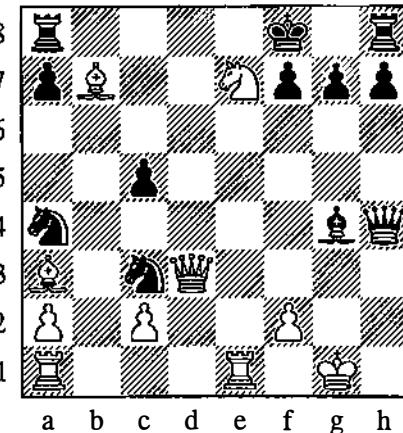
15...♗g4 16.♗xb7

White is eager to play ♜c6.

16...c5 17.♗c6 ♘xg5

A funny line is 17...♗xd3 18.cxd3 ♘f8 19.♗e7#.

18.h4 ♘xh4 19.♗e7† ♔f8



20.♗d6

You only need one win, so I only looked at taking the rook on the previous move and did not see 20.♗xa8 g6 21.♗d8† ♔g7 22.♗f5†.

20...♝b5

I suspected that 20...♗f6 was the best defence. I was happy to get the queens off. 21.♗xf6 gxf6 22.♗xa8 ♜e2† 23.♗g2! ♘xe7 24.♗f3 and White is a rook up.

21.♗g6† ♔g8 22.♗xh4 ♜xd6 23.♗xa8 g5

24.♗c6

1-0

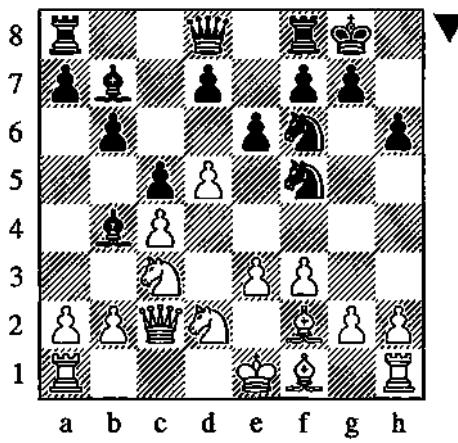
Who are you? Once you know, you will know which weaknesses you need to work on and which strengths to amplify.

Chapter 4

Decision Making

Nick Pert – Jacob Aagaard

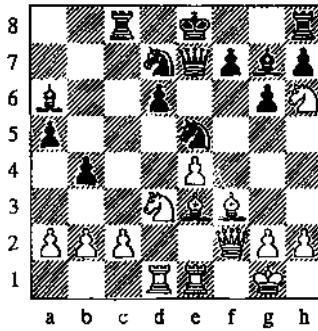
Great Yarmouth 2007



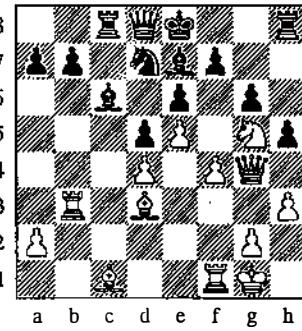
Maybe the peak of my chess playing career. Having entirely missed my opponent's move, I have to find a way to continue the game without being overrun on the kingside with a pawn storm. I have shown this to a number of people and they all come up with the move I played, which suggests it was inevitable?

Test yourself against the book

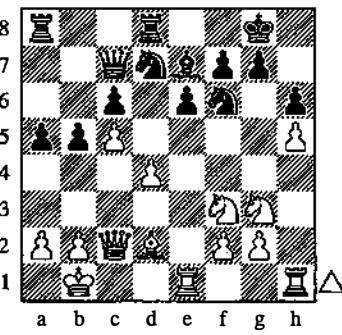
This book is not an exercise book, but an experienced trainer can always find interesting moments in games that can be more effective for the student if he thinks about them first. On this page, I have included a few positions from this chapter that you can look at, should you feel so inclined. As long as it does not make you put off reading the chapter!



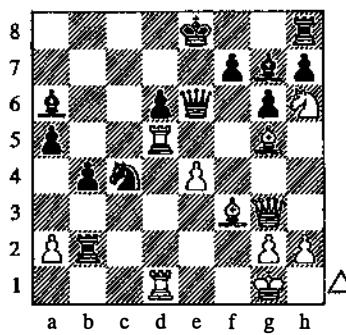
Black needs to be careful.
But how?
(see page 93)



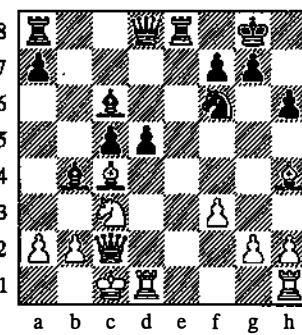
Talk about a provocation!
(see page 97)



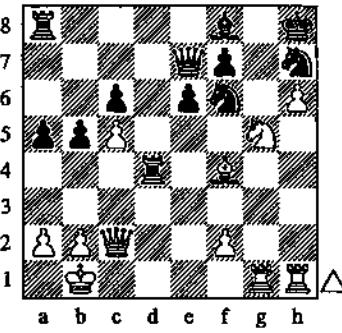
Play in the style of Tal
(see page 88)



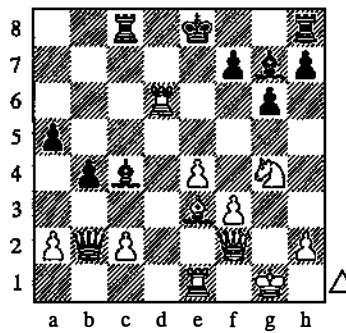
White has a sensational, but
also rather difficult, path to win
the game (see page 93)



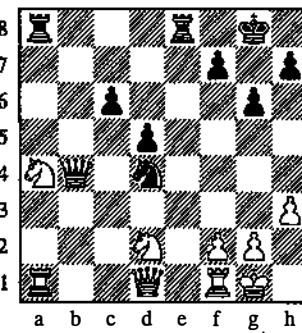
What had I prepared?
(see page 103)



A small combination
(see page 89)



White to play
(see page 94)



How can White save the game?
(see page 109)

The purpose of calculating, feeling your intuition, thinking abstractly, remembering theory – opening or endgame – is always the same. Making decisions; quickly and to a high standard. As such, every chapter in this book is dealing with decision making, from different angles.

In this chapter I want to make the general point about decision making. We calculate, think abstractly, use opening preparation, strategic concepts or whatever, in order to decide what to play on the next move. Nothing else. As with everything I try to teach, this is very simple, but not easy to do. This chapter will include my own journey from realizing this to doing it. It was short and made all the difference.

Certainty

I often face students who try to solve the whole game at any given point. They calculate long variations, which can only be a result of subconsciously trying to create a feeling of control. Why else would you want to calculate the game till the end at a moment where it will not change your choice of move?

There are also those who spend twenty minutes trying to decide between two moves that seem relatively equal in value. As John Nunn pointed out, this will probably not decide the result of the game, while the piece you blunder in time trouble definitely will. Again, I see it as a case of trying to feel in control. And as a failure to understand which type of certainty chess has to offer us, which is the following: **the best we can do is to understand what type of decision we should make and then make it as quickly as is appropriate.** For example, simple decisions should be made in a few minutes at most, while critical and strategic moments put further requirements on us. We should know when we can calculate something to the end and when we cannot. It will be different for each player, even at the same rating.

The only certainty you get in life is that you should act in accordance with your beliefs and principles to the best of your ability. And this is the case in chess as well. The certainty I found for myself and that I offer you is that you will be doing the best you can if you approach the game with this attitude. There is no better way to play chess – or live your life for that sake. We should learn from our mistakes, analyse our games and think about our decisions. But we should not believe that we can act today on what we will not know till tomorrow. There is an immense confidence and peace to be found in knowing that you are doing the best you can do, and that this is exactly what you should be doing!

Uncertainty

I made three grandmaster norms in four tournaments across 2004. The fourth tournament was a tough one, but did include my chance to play the future World Champion. I was the only non-GM in the tournament and made six draws and lost three games (against Beliavsky, Rozentalis and Hector), while I drew against Curt Hansen, Peter Heine Nielsen, Nick de Firmian, Tiger Hillarp Persson, Evgeny Agrest and Magnus Carlsen. Not a result I was overly happy with, but certainly not a disappointment either.

Then came Cappelle-la-Grande 2005. I started out all right, but then had some horrible games. Especially two games against low-rated French juniors were upsetting. I was gifted a draw by reputation in one of them and unceremoniously ripped apart in the other. It was only a few years

later I realized that this can happen when you play against Romain Edouard and Sebastian Feller on their way up... Short term it had a ridiculous effect on my confidence. I won the Scottish Championship with 8/9 that summer (no draws!), but in general my chess did not progress much. I did a lot of thinking.

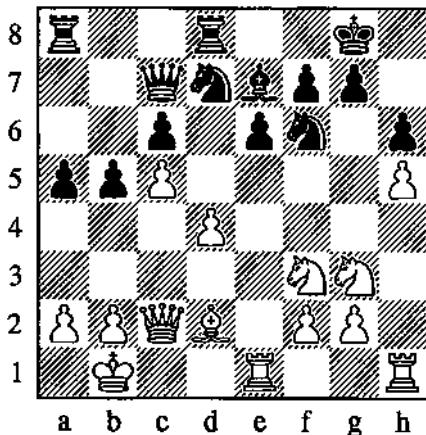
My next big run started in 2006, but it was really with the 2007 Porto Mannu tournament in Sardinia, Italy that I made another run for it. I had decided before the tournament to play games worth analysing, which meant playing interesting games, and not to care about the result. After the tournament, I had some training sessions planned with Artur Yusupov, to go over my games.

The most important game from the tournament happened in Round Four.

Jacob Aagaard – Hedinn Steingrimsson

Porto Mannu 2007

1.e4 c6 2.d4 d5 3.Qc3 dxe4 4.Qxe4 Qf5
 5.Qg3 Qg6 6.h4 h6 7.Qf3 Qd7 8.h5 Qh7
 9.Qd3 Qxd3 10.Wxd3 e6 11.Qf4 Wa5†
 12.Qd2 Qb4 13.c3 Qe7 14.c4 Wc7 15.0–0–0
 Qgf6 16.Qb1 0–0 17.Qdel b5 18.c5 Qfd8
 19.Wc2 a5

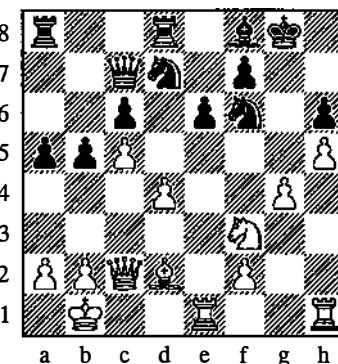


This is by all accounts the pivotal moment of the game. At this point I thought for a long time. I had recently analysed a rapid game between Vescovi and Karpov in this variation, in which I had found a really attractive piece sacrifice.

20.Qf5 Qf8

This was the only move I considered seriously. It is possible that 20...exf5 21.Qxe7 Qd5 22.Qe1 f4 is a better choice and probably fully playable. I did not think a lot about it, as I would have been quite happy to play such a double-edged position with chances on the kingside.

21.Qxh6! gxh6 22.g4

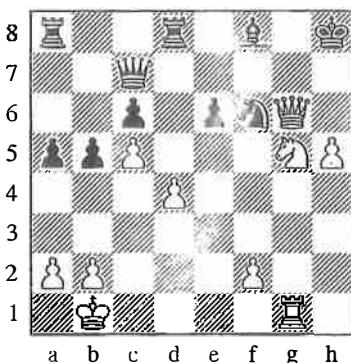


This was my idea. The centre is closed and Black has problems getting his pieces to the kingside. I really fancied playing like this, but decided to calculate further. I am not sure why. Later on, I have analysed different moves in this position, but none of them are better than what I looked at during the game.

22...Qh7 23.g5 hxg5 24.Qxg5!?

This is the only move I calculated. We will look at the knight capture below.

24...Qxg5 25.Qxg5 Qf6 26.Qhg1 Qh8
 27.Qxe6 fxe6 28.Wg6



I had calculated this and for a glorious moment, I believed that my attack was very dangerous. I was aware that this was not all forced, I think, but it showed the potential of the position. Here I was first looking at 28... $\mathbb{Q}g7$ 29.h6 and White wins.

Then I saw it:

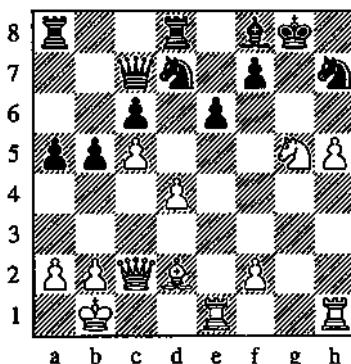
28... $\mathbb{W}g7!$

White only has a perpetual check.

Having already spent a lot of time, I started thinking really silly things. I was playing on Board One of the tournament with 3/3. Yuri Garrett had personally invited me; I did not feel I could make a draw in an hour, no matter how many pieces were sacrificed to get there; and similar total nonsense.

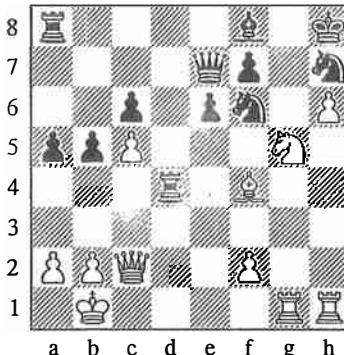
None of it was about the only thing worth thinking about when you play chess: *what should I play?*

Later, analysing with Artur, it turned out that 24. $\mathbb{Q}xg5!$ was stronger.



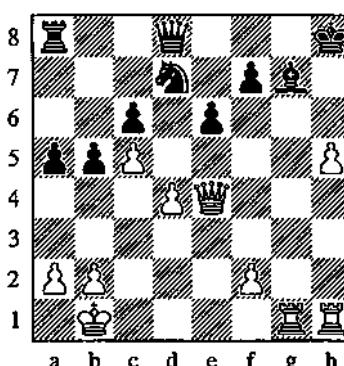
There are two possible lines here:

24... $\mathbb{Q}df6?$ is the inferior option. 25. $\mathbb{R}eg1$ $\mathbb{Q}h8$ 26. $\mathbb{Q}f4$ $\mathbb{W}e7$ 27.h6 Black is totally lost. White is threatening $\mathbb{Q}e5$, which just wins. And after 27... $\mathbb{R}xd4$ White has:



28. $\mathbb{Q}d6!$ $\mathbb{R}xd6$ (28... $\mathbb{W}d7$ 29. $\mathbb{Q}xh7$ $\mathbb{Q}xh7$ 30. $\mathbb{Q}e5\#$ f6 31. $\mathbb{W}g6$ and mate) 29.cxd6 $\mathbb{W}d7$ 30. $\mathbb{W}xc6$ $\mathbb{Q}xg5$ 31. $\mathbb{W}xa8$ $\mathbb{Q}gh7$ 32. $\mathbb{W}xa5$ with an easily winning position according to the computer, and a very likely win according to this less certain human.

So Black should take on g5. 24... $\mathbb{Q}xg5$ 25. $\mathbb{Q}xg5$ $\mathbb{Q}h8$ The attack is coming quickly; Black has to hurry the king to safety. 26. $\mathbb{R}eg1$ $\mathbb{Q}g7$ (26...f6? 27. $\mathbb{Q}c1$ weakens more than it defends) 27. $\mathbb{Q}xd8$ $\mathbb{W}xd8$ 28. $\mathbb{W}e4$



28... $\mathbb{Q}h6!$ (28... $\mathbb{R}c8$ 29.h6 $\mathbb{Q}f6$ 30. $\mathbb{W}g4$ would give Black no defence against $\mathbb{W}g7\#$ with mate

to follow.) 29. $\mathbb{W}xc6$ $\mathbb{Q}f6$ 30. $\mathbb{W}b7$ $\mathbb{W}e8$ 31. $\mathbb{W}c7\pm$
The game goes on, but White is better.

Eventually, I decided to prepare g2-g4 by other means, without really looking at it. The rest of the game is rather poor, but has one entertaining moment.

20. $\mathbb{Q}e2?!$

This move is wrong mainly because it held no great inspiration to it.

20... $\mathbb{Q}g4!?$

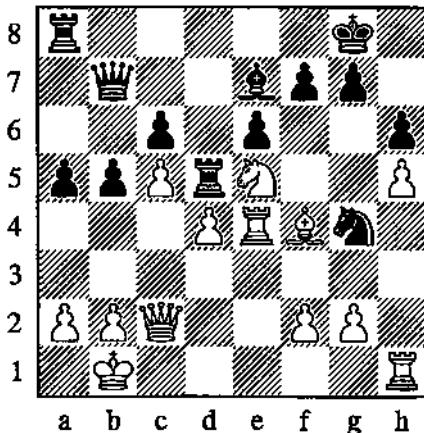
Preventing my idea. I had completely lost my way.

21. $\mathbb{Q}f4$

21. $\mathbb{Q}h3!$ is best apparently. Not an easy move to see, but quite an attractive one.

21... $\mathbb{W}b7$ 22. $\mathbb{Q}g3$ $\mathbb{Q}df6$ 23. $\mathbb{Q}e4$ $\mathbb{Q}xe4$
24. $\mathbb{Q}xe4$ $\mathbb{Q}d5$ 25. $\mathbb{Q}e5?$

25. $\mathbb{W}e2$ was better, though White still has problems.



25... $\mathbb{Q}xe5?$

As already said, the quality of the rest of the game was low; 25... $\mathbb{Q}f6!$ would have won more or less on the spot.

26. $\mathbb{Q}xe5$ $f6$ 27. $\mathbb{Q}g3$ $\mathbb{W}d7$ 28. $\mathbb{W}e2$ $\mathbb{Q}f8!$

I simply did not see this. My understanding of the position here was clearly inferior.

29. $f3$ $a4!$

I also had not seen this. I was completely into forced thinking, believing at first that he had to take on d4, and then when he did not, that this was his sole objective. After this move I understood that I was in deep trouble.

30. $a3$ $b4$ 31. $axb4$ $a3$ 32. $\mathbb{Q}el$

32. $\mathbb{Q}f2?!$ loses to quite a clever tactic:
32... $\mathbb{Q}xc5!!$ 33. $bx $$ c5$ $\mathbb{Q}b8$

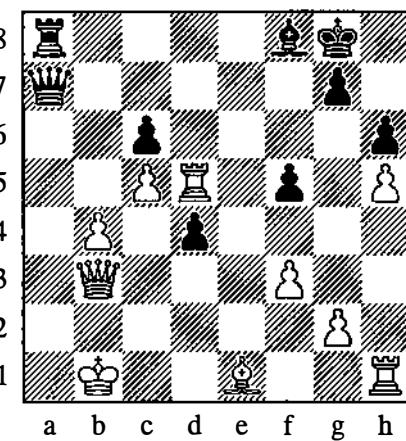
32... $axb2$ 33. $\mathbb{W}xb2$ $f5!$ 34. $\mathbb{Q}e3$ $e5!?$ 35. $\mathbb{W}b3$

I thought this was the end, so I tried a cunning trap.

35... $exd4$

35... $\mathbb{W}a7!$ would have cut the game short.

36. $\mathbb{Q}e5$ $\mathbb{W}a7$ 37. $\mathbb{Q}xd5$



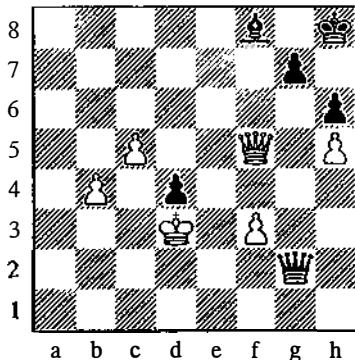
37... $cx $$ d5$

He spotted my trap: 37... $\mathbb{W}a1\#$ 38. $\mathbb{Q}c2$ $\mathbb{Q}a2\#$
39. $\mathbb{Q}d3$ $\mathbb{Q}a3$ Seemingly Black wins everything, but 40. $\mathbb{Q}c3!!$ turns the tables and it is White who is close to taking the full point.

38. $\mathbb{Q}c1??$

A horrible move, but in my time trouble and the general depression caused by how little I was seeing or understanding, I did not have the imagination to think about the position after:

38.♕c2 ♕a1 39.♕d2 ♕a2† 40.♕d3 ♕xd2†
 41.♕xd2 ♕xh1 42.♕xd5† ♕h8 43.♕xf5
 ♕xg2† 44.♕d3



White is not going to lose.

38...♕h8 39.♕d2 ♕xc5!

39...♕a1† 40.♕b1 d3 41.♕e1 ♕d4! is another route to victory.

40.♕e1 ♕b8?!

40...♕e7 and a few other moves were more decisive, but I was about to blunder anyway.

41.♕e5? ♕xb4 42.♕xd5 ♕xd2† 43.♕xd2 ♕b2† 44.♕d3 ♕a3† 45.♕xd4 ♕d2† 46.♕c4 ♕a2† 47.♕c5 ♕xd5† 48.♕xd5 ♕xg2†
 49.♕xf5 ♕c2†

0–1

I spent at least an hour and a half discussing what happened on move 20 with Artur Yusupov. To start out I really had no clue what to make of it, and neither did Artur. He kept asking me such questions as: “Jacob, you are a trainer yourself, what would you make of it?” which was very Freudian of him and exactly what I needed to do; to own my own decisions.

Artur assured me that Mikhail Tal, the

patron saint of the piece sacrifice, would never calculate such long variations as I had done, at least not with the intention of making a definitive conclusion, such as I had done. We saw how 24.♕xg5 was stronger and Artur reminded me that there are always things we do not see, so we should not calculate decisions we do not yet have to make.

More importantly, we talked about how I had a tendency to get in to triggers that would cause me to make moves too quickly; so quickly it would only take seconds to regret them. Artur is a big coffee drinker and suggested that I should replace my action in such a moment by stirring my coffee, just as Tony Miles always did. I don’t drink coffee, but I got the idea.

But the most important realization was one I made almost on my own. There were moments when I realized which moves I wanted to make and then kept on thinking! Against Steingrimsson, I wanted to sacrifice this piece and it was rather interesting to do so. But I kept on thinking, eventually talking myself out of it, playing a really bad – and what is worse – soulless move, instead. With this realization, I went to Spain a few weeks later to play a five round closed grandmaster tournament; or as some would call it, Board Three in the top section of the Spanish league. The first two games ended in draws. The second-round game is included on page 186.

In Round Three I faced the greatest ever Spanish player. Before the game, I asked our Board One, grandmaster Mihail Marin for advice. He reminded me that my opponent, although a great player, is just a fellow human who also makes mistakes. Play one move at a time and I would be all right.

Jacob Aagaard – Francisco Vallejo Pons

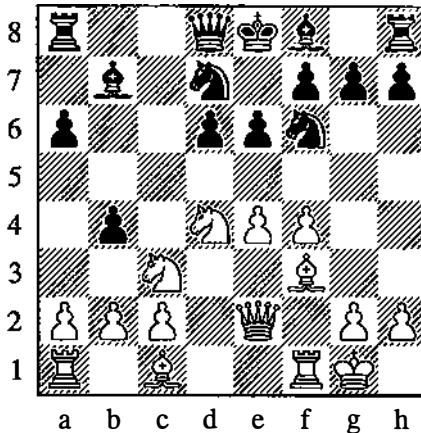
Torrelavega 2007

1.e4 c5 2.♘f3 e6 3.d4 cxd4 4.♘xd4 ♘f6
5.♕c3 d6 6.♗e2 a6 7.0–0 ♗bd7 8.f4?!

At this point I overrode my intuition, which said I should play 8.a4 with a normal position.

8...b5 9.♘f3 ♘b7 10.♗e2 b4

By now I already felt that things had gone wrong.



11.♘d1!

Live to fight another day!

11.♘d5?! exd5 12.exd5† ♘e7 13.♗e1 has been tried out in a game, but after 13...♗f8?N I do not believe White will have enough compensation for the piece.

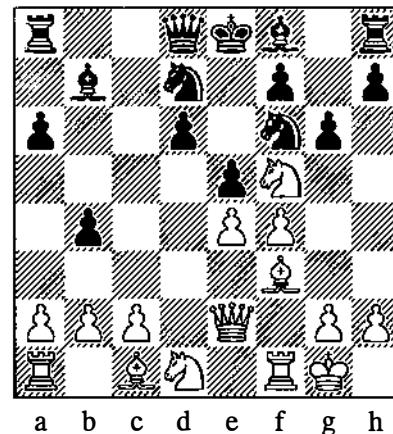
11...e5?!

Vallejo decides that his time has arrived and goes on the attack. I think he overestimated the value of his position. The engine will tell you this is the best move in the position and that Black is better. But I think that after this move Black's position becomes more difficult to play, and I seriously dispute the idea that he should have an advantage. Yes, the knight retreated to d1, but it will be fine on f2 and potentially

d3. Black on the other hand has not completed his development; and after the choice Vallejo made at this point, he never will.

12.♘f5 g6

A further compromising move. But already there is no easy way to deal with the knight on f5. Something will have to be done sooner or later.



13.fxe5 ♘xe5 14.♗h6

To me this would now be characterized as a simple decision. The knight is being kicked around and is not necessarily stable on h6. But at least Black will have difficulties castling. On g3 the knight would just be awkward, with no upsides.

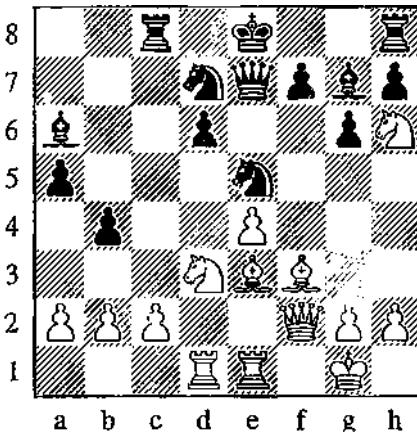
14...a5 15.♗f2

Again, a simple move. In this part of the game I played well, but then my moves were very easy.

15...♗a6 16.♘d3 ♘fd7 17.♗e3

The engine now tells me that after 17.♗f2!, White is slightly better, somehow. One of the points is that 17...♗xd3 18.cxd3 ♘xd3 is too greedy. After 19.♗d4 ♘e5 20.♗g4! Black is under heavy attack.

17...♗g7 18.♗ad1 ♘e7 19.♗f2 ♘c8 20.♗fe1



20... $\mathbb{Q}f6?$

20... $\mathbb{Q}f8!$ with a complex game was the right move. Black cannot solve his problems as long as the knight is on h6.

21. $\mathbb{Q}xe5 \mathbb{Q}xe5$ 22. $\mathbb{Q}g4?$

During the game I was really happy with this move, as I did not think Black would be doing well in the endgame. Also, I would have been happy with a draw, as 22... $\mathbb{Q}e7$ 23. $\mathbb{Q}h6$ could lead to.

22. $\mathbb{Q}g3!?$ was more dangerous, I know now. The key justification for this move is that 22... $\mathbb{Q}xc2?$ can be met with 23. $\mathbb{Q}d5!$ with a very complicated position.

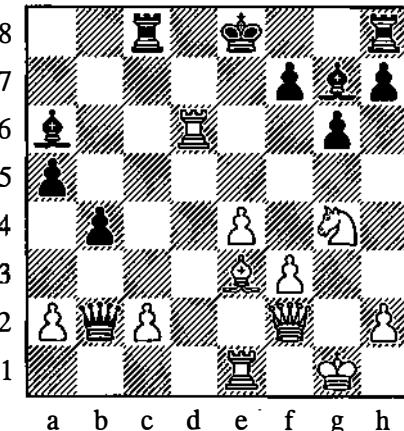


26. $\mathbb{Q}g4!$ (26. $\mathbb{Q}xd6?$ $\mathbb{Q}xd6$ 27. $\mathbb{Q}xd6$ $\mathbb{Q}b1\#$ 28. $\mathbb{Q}d1$ $\mathbb{Q}c8!\#$ does not work) 26... $\mathbb{Q}xe4$ 27. $\mathbb{Q}f3!$ $\mathbb{Q}e6$ 28. $\mathbb{Q}xd6$ $\mathbb{Q}xd6$ 29. $\mathbb{Q}xd6$ $\mathbb{Q}b1\#$ 30. $\mathbb{Q}d1$ and White wins. This time 30... $\mathbb{Q}c8$ is mate in three after 31. $\mathbb{Q}e3\#$. Chess is a beautiful game.

22... $\mathbb{Q}xf3\#$

Vallejo is still combative and there is nothing objectively wrong with this move. However, I still think retreating with the queen would have been a more pragmatic decision. But in chess we take chances and we should not second-guess them too often, which we will discuss in the next game.

23.gxf3 $\mathbb{Q}xb2$ 24. $\mathbb{Q}xd6$

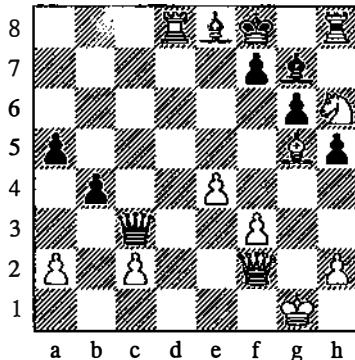


The tactical justification is 23... $\mathbb{Q}xb2?$ 24. $\mathbb{Q}g5!$ $\mathbb{Q}e6$ 25. $\mathbb{Q}ed1$ and Black is collapsing. But only because of a really fantastic tactical sequence: 25... $\mathbb{Q}c4$

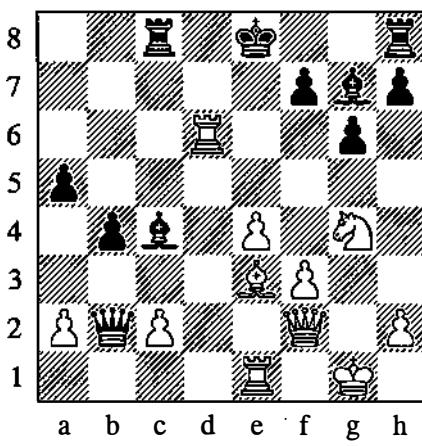
24... $\mathbb{Q}c4?$

This is a very natural-looking move. The bishop was hanging and from c4 it is ready to retreat to e6 or maybe even take the pawn on a2.

Analysis shows that Black could have held the balance with some very accurate moves: 24... $\mathbb{h}5$! 25. $\mathbb{Q}h6$! $\mathbb{Q}b5$! (25... $\mathbb{Q}xh6$?! 26. $\mathbb{Q}d4$ does not offer enough compensation for the exchange) 26. $\mathbb{Q}e1$! $\mathbb{W}c3$! Good luck finding this move. 27. $\mathbb{Q}g5$ $\mathbb{Q}f8$ 28. $\mathbb{Q}d8\#$ $\mathbb{Q}xd8$ 29. $\mathbb{Q}xd8\#$



This position looks very dangerous for Black, but there is no win for White and if he hesitates, ... $\mathbb{Q}f6$! would give Black a winning position. Therefore White should play something like 30. $\mathbb{Q}xf7$! $\mathbb{Q}xf7$ 31. $\mathbb{W}a7\#$ $\mathbb{Q}g8$! 32. $\mathbb{Q}xe8\#$ $\mathbb{Q}h7$ with chances for both sides.



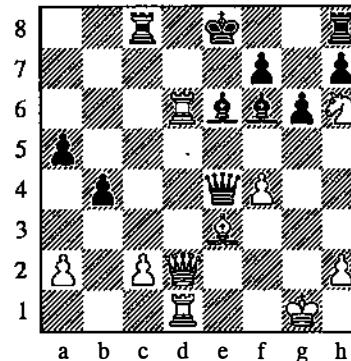
To many this would have been a moment to invest half an hour. I quickly realized that there was only one sensible move. If Black manages to castle, I will simply be worse. So I spent about three minutes before returning the knight to where it belongs.

25. $\mathbb{Q}h6$! $\mathbb{Q}e6$ 26. $\mathbb{Q}ed1$

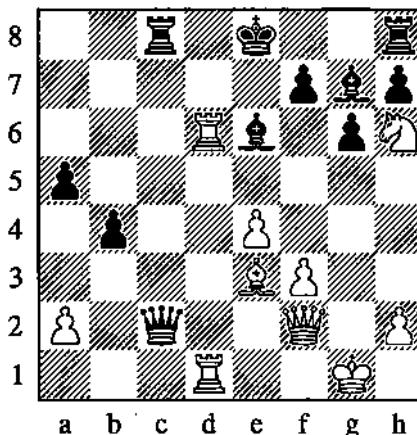
This was also a simple move for me to make. The rook does nothing on e1 and clearly belongs on d1. I did not spend long on it.

26... $\mathbb{W}xc2$

26... $\mathbb{W}e5$ would have offered more resistance, but I actually believe that I for once would have found the winning line: 27. $\mathbb{W}d2$ $\mathbb{Q}f6$ 28. $f4!$ $\mathbb{W}xe4$



29. $f5$! $\mathbb{gxf5}$ 30. $\mathbb{Q}g5$ $\mathbb{W}e5$ 31. $\mathbb{Q}xe6\#$! $\mathbb{W}xe6$ 32. $\mathbb{Q}xf6$ $\mathbb{W}xf6$ 33. $\mathbb{W}d7\#$ $\mathbb{Q}f8$ 34. $\mathbb{W}xc8\#$ $\mathbb{Q}g7$ 35. $\mathbb{Q}xf5\#$ $\mathbb{Q}g6$ and either the engine move 36. $\mathbb{W}c4!$ or the human move 36. $\mathbb{W}c6$ wins the game.



At this point I had the feeling that I had an opportunity. Vallejo was low on time, as always, and all of my pieces were well placed. According to my theories of the attack, this is the moment to do something.

So I was looking for options and found an idea that looked promising. Then another idea that looked even more promising! I calculated it very slowly and found no defence against it.

27. $\mathbb{W}xc2 \mathbb{B}xc2$ 28. $\mathbb{A}g5!$

Vallejo thought for a few minutes, then stopped the clock as his flag fell. There is no defence.

1–0

This is the greatest victory in a single game any Scottish player has ever had. When Jonathan Rowson won against Vallejo, he was rated a few points lower than at the time of this game.

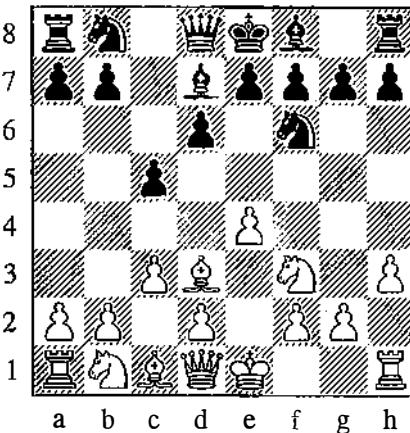
When I arrived in Torrelavega on the first night and plugged my laptop adaptor into the wall, it made a small jump and the power was cut off on the entire third floor of the hotel. By Round Four, I had no power left and decided to avoid opening theory entirely for the next game, after checking my opponent's games for ten minutes on Marin's laptop, while he was at breakfast. Once again, the new determination to focus on decision making came in handy.

Jacob Aagaard – Elizbar Ubilava

Torrelavega 2007

1. e4 c5 2. $\mathbb{Q}f3$ d6 3. c3 $\mathbb{Q}f6$ 4. h3 $\mathbb{Q}d7$ 5. $\mathbb{Q}d3$

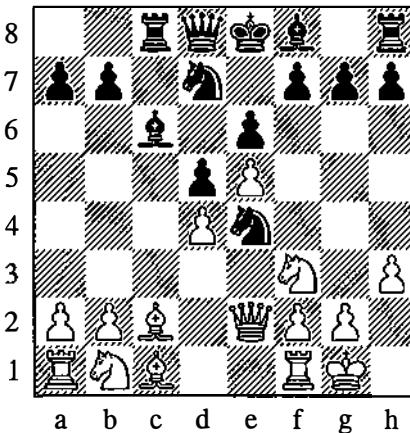
This system is popular in the lower echelons of Scottish chess, and is known as the Kopec System. It cannot really be any good; certainly not as great as it turns out in this game. But I had seen that Malakhov played it, so I decided to give it a go. Amusingly, Malakhov came over to look a number of times during the game.



5... $\mathbb{Q}c6$ 6. $\mathbb{W}e2 \mathbb{Q}bd7$ 7. $\mathbb{Q}c2 \mathbb{B}c8$ 8. 0–0

After the game I suggested to my opponent that I should have played 8. d4 cxd4 9. cxd4, when he suggested that 9... $\mathbb{Q}xe4$ would have been a good move.

8... e6 9. d4 cxd4 10. cxd4 d5 11. e5 $\mathbb{Q}e4$



12. $\mathbb{Q}c3!$

I decided on this move and the accompanying pawn sacrifice because Ubilava, with only 60 rating points more than me, was the second lowest-rated player on Board Three. I admit I saw him as a target, so pumped was my confidence after the win on the previous day.

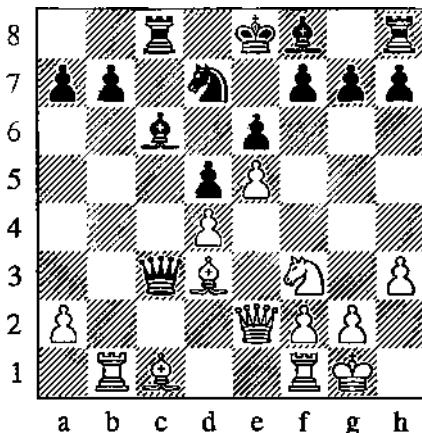
I did not want to play 12. $\mathbb{Q}bd2 \mathbb{Q}xd2$ 13. $\mathbb{Q}xd2$ $\mathbb{W}b6$ 14. $\mathbb{Q}c3 \mathbb{Q}b5$. It was too flat for my liking.

12... $\mathbb{Q}xc3$ 13.bxc3 $\mathbb{W}a5$ 14. $\mathbb{Q}d3!$

This was the planned pawn sacrifice.

14. $\mathbb{Q}d2?$ $\mathbb{Q}b5$ is not what White is aiming for.

14... $\mathbb{W}xc3$ 15. $\mathbb{Q}b1$



I was not after immediate compensation, but just wanted to be active and make it hard for him to get coordinated. My structure in the centre is solid and the pawn will not count for many moves to come.

When I discussed this with Yusupov after the tournament, I expressed concern that the compensation was insufficient. Artur saw it differently; he believed that the practical aspect was just as important. I changed the nature of the game in a way that supported my strengths and I have long-term compensation, even if it may not be enough.

In an interesting twist of events, Stockfish 8 thinks White has a slight advantage here.

15... $\mathbb{Q}e7$

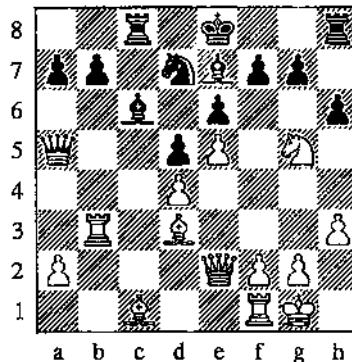
15...h6!? was an interesting post-mortem suggestion by my opponent.

16. $\mathbb{Q}b3$ $\mathbb{W}a5$ 17. $\mathbb{Q}g5!$

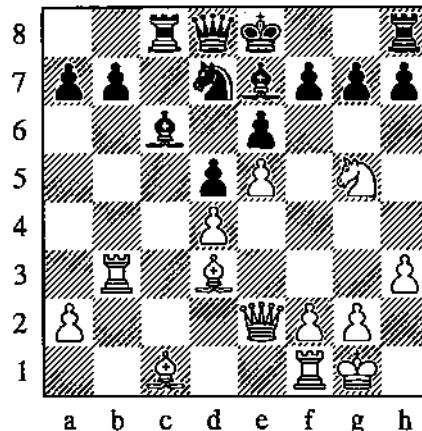
White enjoys the open files on the queenside, but must seek his fortune on the kingside.

17... $\mathbb{W}d8$

17...h6 does not work.



I did not see 18. $\mathbb{Q}xf7!!$ $\mathbb{Q}xf7$ 19. $\mathbb{W}h5\#$ $\mathbb{Q}g8$ 20. $\mathbb{Q}g6$ $\mathbb{Q}f8$ 21. $\mathbb{W}g4$ $\mathbb{Q}f5$ 22. $\mathbb{Q}xf5$ $\mathbb{Q}exf5$ 23. $\mathbb{W}xf5$ $\mathbb{W}d8$ 24.f4 and White enjoys an initiative.



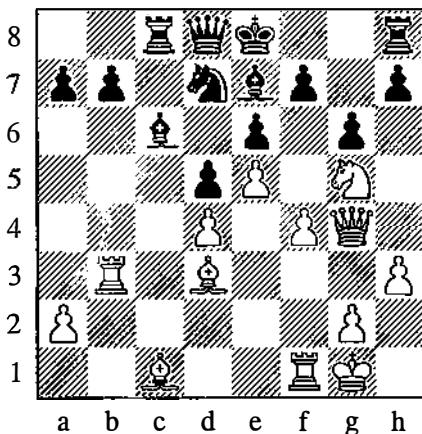
At this point I saw an idea and calculated it accurately.

18.f4?

After 18. $\mathbb{Q}xe6!$ $\mathbb{Q}xe6$ 19. $\mathbb{W}h5\#$ $\mathbb{Q}f8$ I quickly found 20. $\mathbb{Q}g6!!$, forcing Black to give up material. The line continues 20...hxg6 21. $\mathbb{W}xh8\#$ $\mathbb{Q}f7$ 22. $\mathbb{Q}f3\#$ $\mathbb{Q}f6$ 23. $\mathbb{W}h4\pm$, but here I made a rather elementary mistake. I missed that I was emerging an exchange ahead in this position! Not noticing this, the line does not make sense.

18...g6 19.Qg4!

Here I was just plain fishing. I was finding it hard to justify my pawn sacrifice. My evaluation of the position was probably just entirely wrong.



In 2007 I wrote in my annotations that 19...Qa5? looked good. With a 2017 engine, it does not. After 20.f5! White crashes through: 20...gxf5 21.Qxf5 exf5 22.Qxf5 Qf8 23.Qxf7 Other moves win as well. 23...Qxf7 24.Qxf7† Qd8 25.e6 Qb6 26.Qg3 with a winning attack.

19...Qf8! is the best defence. During the game I thought it could end with a draw after 20.Qe2?! Qd7, but this was misguided thinking. Realistically, I should go for the attack with 20.f5! gxf5 21.Qh5 Qxg5 22.Qxg5 Qd7 23.Qfb1 with long-term compensation.

However, Ubilava reached for the h-pawn. I was surprised at first, as I did not anticipate this move at all. Then he hesitated and thought for more than a minute; then proceeded to move the h-pawn anyway.

19...h5?

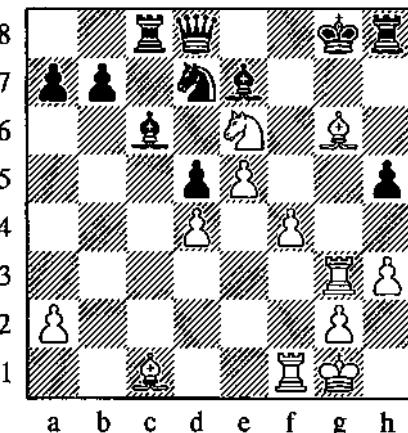
I quickly spotted what it was Ubilava had seen. But why had he decided that he was not afraid of the sacrifice? I soon realized that it

was 23...Qh4 he was relying on. I immediately saw the refutation. Then I looked for other problems for about a minute. I did not see any. I then decided that such a rare chance, to sacrifice a queen for a few pawns against a grandmaster, had to be taken, and it was certainly a move that fitted my style. I think I spent three minutes or less in total to decide to go for it.

20.Qxe6!

I was thinking of the Steingrimsson game when I played this. I felt incredibly alive.

20...fxe6 21.Qxg6† Qf8 22.Qxe6† Qg8
23.Qg3



I played all of this quickly. The time for calculation was later, I decided. Ubilava took a long think.

23...Qh6

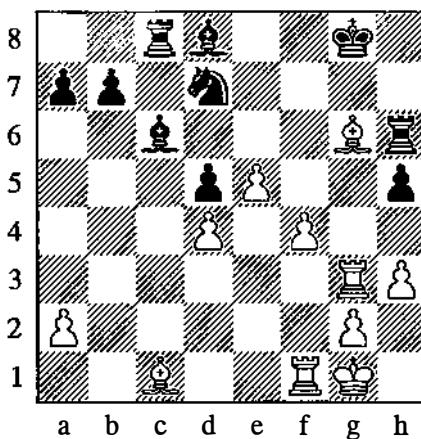
The planned 23...Qh4 does not work on account of 24.Qh7†!, when the following line is rather forced: 24...Qxh7 25.Qg7† Qh6 26.f5† Qg5 27.Qg6† Qh7 28.Qxg5 Qf8 29.Qd2 Qg8 30.Qxf8† Qxf8 31.Qh6† Qg7 32.Qf3 White will win back his piece very quickly and have a lot of connected passed pawns to win the game with.

23... $\mathbb{h}4$ is even worse: 24. $\mathbb{h}7\#$! $\mathbb{xh}7$ 25. $\mathbb{g}7\#$ $\mathbb{h}6$ 26. $f5\#$ $\mathbb{g}5$ 27. $\mathbb{g}6\#$ $\mathbb{h}7$ 28. $\mathbb{xg}5$ $\mathbb{w}f8$ 29. $\mathbb{f}4$ Black is mated.

23... $\mathbb{w}a5$ 24. $\mathbb{c}2\#$ is mate in three.

The best chance is probably 23... $\mathbb{h}7$, although White is winning after 24. $\mathbb{d}xd8$ $\mathbb{xd}8$ 25. $f5$ if he shows decent technique.

24. $\mathbb{d}xd8$ $\mathbb{xd}8$



25. $\mathbb{h}xh5\#$?

Although I played at a 2700 level in this championship, my calculation was not great and my resilience low. At this moment, I felt a strong need to calculate everything till the end, but instead went with gut feeling.

25. $f5!$ was what I wanted to play, but I was concerned about 25... $\mathbb{h}4$. However, a bit of calculation would have revealed that 26. $\mathbb{xh}6$ $\mathbb{xg}3$ 27. $f6!$ (27. $\mathbb{xh}5$ is also enough and a better version than the game) 27... $\mathbb{f}8$ 28. $f7\#$ $\mathbb{h}8$ 29. $\mathbb{f}5$ followed by 30.e6 is winning. There is nothing difficult in this variation.

25... $\mathbb{h}8$ 26. $\mathbb{e}2$

I still have a big advantage here and managed to win the game in a shaky, uncomfortable manner.

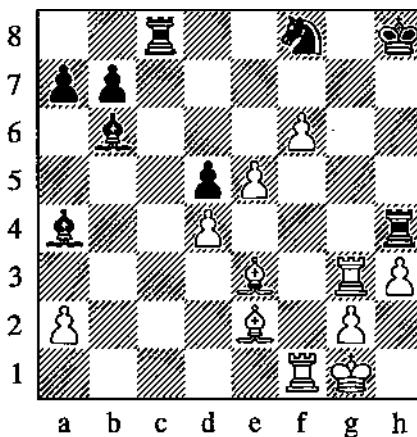
26... $\mathbb{b}6$ 27. $\mathbb{e}3$ $\mathbb{a}4$ 28. $f5!$

Finally, I started to play energetically again.

28... $\mathbb{h}4$ 29. $f6!$ $\mathbb{f}8?$

Blunders come easily in bad positions.

During the game I feared 29... $\mathbb{c}3$, thinking I only had a draw. But White is still winning after 30. $f7$ $\mathbb{xe}3$ 31. $f8=\mathbb{w}\#$ $\mathbb{xf}8$ 32. $\mathbb{xf}8\#$ $\mathbb{h}7$ 33. $\mathbb{e}3$ $\mathbb{xd}4$ 34. $\mathbb{ff}3$ with an extra pawn. I was worried about 34... $\mathbb{e}4?$, but then White has 35. $\mathbb{d}3$, winning on the spot.



30. $f7!$

The winning move.

30... $\mathbb{c}2$ 31. $\mathbb{g}8\#$ $\mathbb{h}7$ 32. $\mathbb{c}1$

An unpleasant move to face in time trouble. However, 32.e6 was more convincing.

32... $\mathbb{c}3$

Also after 32... $\mathbb{xd}4$ 33. $\mathbb{xd}4$ $\mathbb{xd}4$ 34.e6 $\mathbb{e}4$ 35. $\mathbb{g}4$ White wins easily.

33. $\mathbb{xf}8$

Simple chess.

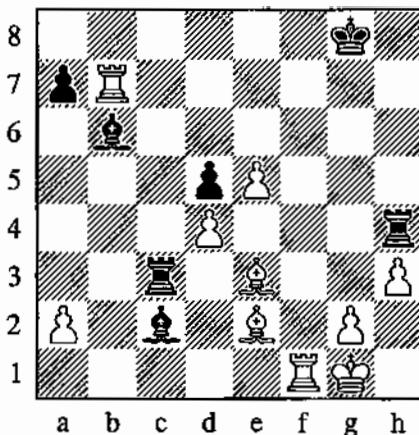
The computer points out a very nice tactic:

33. $\mathbb{d}3\#$! $\mathbb{xd}3$ 34. $\mathbb{xf}8$ $\mathbb{g}7$



35.e6! ♖xf8 36.♖xc2 and wins.

33...♔g7 34.♗b8 ♔xf7 35.♗f1† ♔g7
36.♗xb7† ♔g8



37.e6 ♗xe3 38.e7 ♗xe7 39.♗xe7 ♗xd4
40.♔h1 ♗d2 41.♔g4 ♗f2 42.♔e6† ♔h8
43.♗xd5

1–0

The final game in this trilogy of successful applications of this lesson in decision making was the greatest of them all. It was played on Board One in the fifth round of the British Championship. Both my opponent and I had won our first four games.

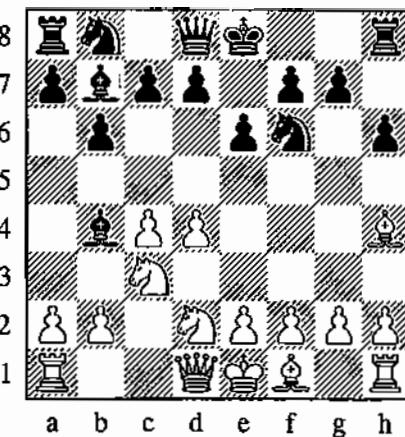
Nick Pert – Jacob Aagaard

Great Yarmouth 2007

1.d4 ♜f6 2.♘f3 e6 3.c4 b6 4.♘c3 ♜b4
5.♕g5 ♜b7 6.♘d2

During the tournament, I was helped by Grandmaster John Shaw on the phone from Glasgow. For this game he suggested that I played a line that had recently been successful in a few games.

6...h6 7.♔h4



7...♘c6!?

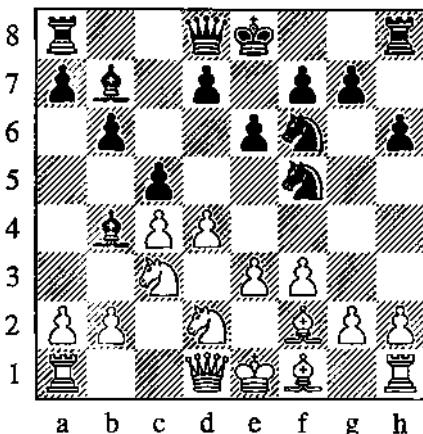
This idea instantly appealed to me. It is dynamic and simple to understand.

8.e3 ♘e7 9.f3

This had been played most often prior to this game, but it is not the right move. The weakening of the dark squares gives Black a good game.

9.♗xf6! is more dangerous and is what Pert played in later games.

9...♘f5 10.♗f2 c5



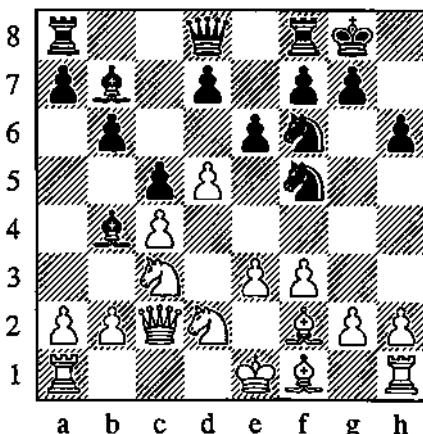
Pert was not familiar with this line and here went for a medium-length think, coming up with a decent-looking move.

11.Wc2!?

In a previous game Black got a good position after: 11.Qd3 cxd4 12.exd4 0–0 13.Wb3 Qxc3 14.bxc3 d5 Markos – Balogh, Turin (ol) 2006.

I thought for a few minutes before deciding that White had no special ideas and I should just complete my development.

11...0–0 12.d5



Pert played this rather quickly. It came as a complete shock to me. I immediately started

seeing scenarios where White would castle queenside and roll the pawns forward on the kingside, causing me to lose in a miniature. I had after all lost in 12 moves to Pert in the same variation, the previous time we had met. I started thinking, maybe I would play 12...We8 13.0–0–0 Qxe3 14.Qxe3 exd5. No, it is not working... Oh, no, I have done it again. I looked into the camera that was placed less than a metre from my head, then at the boy moving the pieces on the big demo-board; a small Scottish boy who serviced my demo-board throughout the tournament. I looked at the sacrifice once again, then thought of my friends and family, sitting at home following the game by my facial expressions.

I looked at the sacrifice again, and then I realized that I could reverse the move order. I only thought for a minute or two before I realized that this was the right move for me and a much better outlook than being overrun by pawns on the kingside.

12...Qxe3!

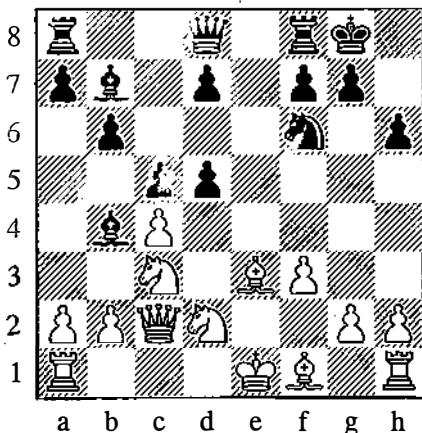
An objective evaluation of this sacrifice is almost beside the point. It immediately changed the character of the game.

In the commentary room, books donated by various chess publishers were handed out in guessing competitions. It took 24 guesses before someone came up with this move. This did not break the record, which was, I think 29 guesses. But was the move which took 29 guesses also the best move in the position?

I have later given this position to three students, all of whom found the knight sacrifice quickly. They all argued that there were simply no other moves they came close to liking, so the decision was really easy. Be careful when you show your best games to others; they might deprecate in value when you do so.

When Pert returned to the board, he looked at the position with a puzzled look. He sat down and thought for about half a minute before taking the knight.

13. $\mathbb{Q}xe3$ exd5



But at this point he really started thinking. I walked around, energized by the way the game had changed. I did not calculate variations; I was happy to have posed great practical problems for my opponent. After half an hour, he came up with not very much.

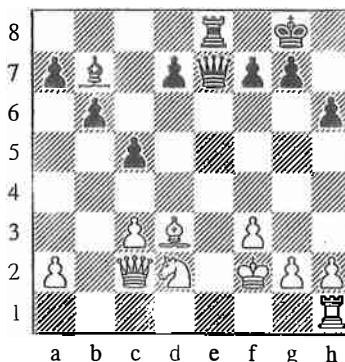
14. $\mathbb{Q}f2?$

This is a big concession, deciding that it is better to have a horrible position than to risk losing in the critical variation.

I have since learned that in this type of position, the overwhelmingly best chance is to go for the critical line if you cannot see a reason why it is bad, and see what happens.

I am not sure what Pert thought would happen in the game if he took on d5, but I was personally thinking that it gave me compensation, and I would just see what he did and react to it. 14.cxd5 is the only line that is not clearly bad for White. The critical line runs like this: 14... $\mathbb{Q}xc3$ 15.bxc3 $\mathbb{Q}xd5$

16. $\mathbb{Q}f2$ $\mathbb{E}e8$ 17. $\mathbb{Q}e1$ $\mathbb{Q}xe3$ 18. $\mathbb{Q}xe3$ $\mathbb{E}e3$
19. $\mathbb{Q}xe3$ $\mathbb{W}e7\#$ 20. $\mathbb{Q}f2$ $\mathbb{E}e8$ 21. $\mathbb{Q}d3$



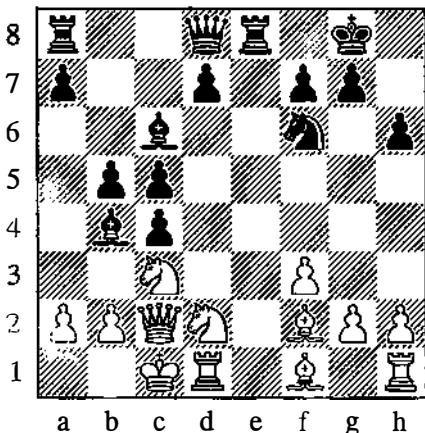
This is certainly a scary prospect for White, and not necessarily something he would have survived in practice. You could easily imagine a correspondence game continuing 21... $\mathbb{W}e3\#$ 22. $\mathbb{Q}g3$ d5 23. $\mathbb{Q}d1$ $\mathbb{W}g5\#$ 24. $\mathbb{Q}f2$ c4 25. $\mathbb{Q}f1$ $\mathbb{W}e3\#$ 26. $\mathbb{Q}g3$ $\mathbb{E}e5$ 27. h4 g5 28. $\mathbb{Q}h2$ gxh4 29. $\mathbb{Q}b1$ h3 30. $\mathbb{W}d2$ hxg2 31. $\mathbb{Q}xg2$ $\mathbb{E}h5\#$ 32. $\mathbb{Q}g3$ $\mathbb{W}e5\#$ 33. $\mathbb{Q}f2$ $\mathbb{E}g5$ 34. f4 $\mathbb{Q}f5$ 35. $\mathbb{W}e3$ $\mathbb{Q}xf4\#$ 36. $\mathbb{Q}f3$, where White has made a lot of only moves to finally arrive at the holy grail of modern analysis, a “zero dot zero zero” evaluation from Stockfish. I have yet to see if any of my students are able to work this out for themselves, but my guess is that when I put two of them against each other, Black will score about 60-40 over a lifetime of games.

14... $\mathbb{E}e8\#$ 15. $\mathbb{Q}e2$ dxc4 16. 0–0–0 b5 17. $\mathbb{Q}c3$ $\mathbb{Q}c6$

This might look a little bit artificial, but I wanted to defend my pawn.

I had quickly realized that Pert wanted to play 17... $\mathbb{W}b6$? 18. $\mathbb{Q}xb5$ $\mathbb{W}xb5$?! 19. $\mathbb{Q}xc4$, when White looks no worse.

But maybe it was simpler to play 17... $\mathbb{Q}xc3$?! 18. $\mathbb{Q}xc3$ $\mathbb{W}b6$ as suggested by my opponent. Black has an overwhelming advantage.



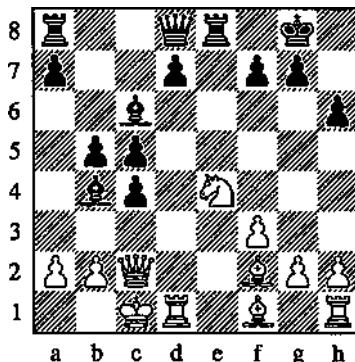
18. $\mathbb{Q}xc4?$

Pert decided to give up a piece so as not to go down without a fight. Based on the decision he made on move 14, I think this is the wrong choice.

18. $\mathbb{Q}de4$

This was better. I am not sure what I would have played. The strongest seems to be:

18... $\mathbb{Q}xe4$ 19. $\mathbb{Q}xe4$



19...d5!!

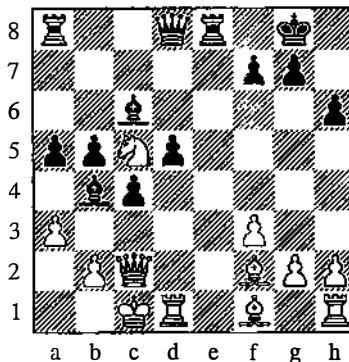
19... $\mathbb{Q}xe4$ 20. $fxe4$ $\mathbb{Q}g5\#$ 21. $\mathbb{Q}b1$ $\mathbb{Q}e8$ is also compensation.

20.a3 a5!

The following line is elegant:

21. $\mathbb{Q}g3$

21. $\mathbb{Q}xc5$ can be directly refuted:

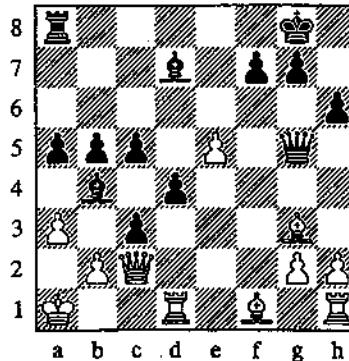


21... $d4!!$ 22. $\mathbb{Q}e4$ $\mathbb{Q}xe4$ 23. $fxe4$ $d3$ 24. $\mathbb{Q}xd3$ $\mathbb{Q}g5\#$ 25. $\mathbb{Q}b1$ $cxd3$ 26. $\mathbb{Q}xd3$ $\mathbb{Q}f8$ The position we have reached has randomly ended up with even material, but with a tremendous position for Black. It is not entirely winning, but it is very close.

21... $\mathbb{Q}xe4??$

21... $\mathbb{Q}e7$ 22. $\mathbb{Q}d6$ $\mathbb{Q}ed8$ might be stronger. Black has a lot of tempting options.

22. $fxe4$ $\mathbb{Q}g5\#$ 23. $\mathbb{Q}b1$ $d4!!$ 24. $e5$ $\mathbb{Q}d7$ 25. $\mathbb{Q}a1$ $c3$



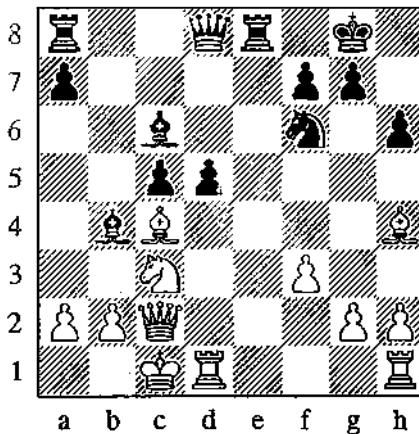
Black has a fantastic attack, though the position is of course not entirely clear yet.

18... $bxc4$ 19. $\mathbb{Q}xc4$ $d5!!$

At this point Pert made a quick move, as he said, in order to save time. He had spent quite a lot of time up to this point and wanted to catch up. Unfortunately, he fell for a small trap.

20.♗h4?!

The position is of course lost anyway. Against 20.♗b1 I had planned 20...♝xc3 21.♛xc3 ♜b6, although 20...d4 might be simpler.

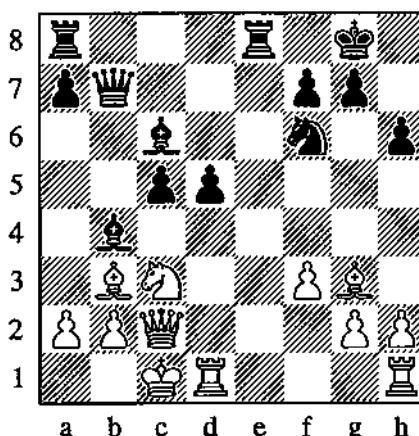


20...♜b8! 21.♝g3

A sad necessity.

My trick was that after 21.♝xf6 ♜f4† 22.♗b1 ♜xc4 the bishop on f6 is trapped.

21...♜b7 22.♝b3



At this point of the game I thought that there were things I could do immediately, but I decided to include the last piece in the attack before I did anything.

22...♝ac8

There were also direct wins, but it is a good habit to include all the pieces in the attack if possible. It was; and I did.

23.♗h4

At this point it was time to do something. It did not take me a long time to find the winning line.

23...♝xc3

It was perhaps more accurate to play 23...c4 first.

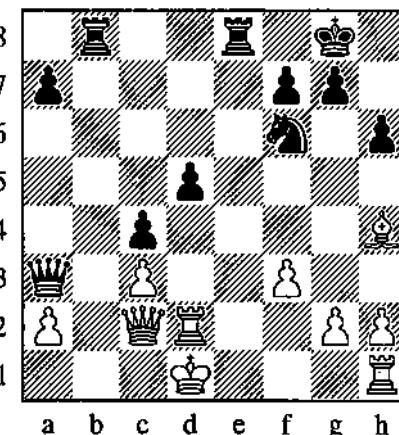
24.bxc3

Against 24.♛xc3 I had planned 24...d4 25.♛c2 ♜d5 26.♝xd5 ♜xd5, when I was uncertain how great the advantage was. I liked my position and then there is also the extra pawn. I was happy to play this, but I did not pick up on just how over it is. Against 27.♗b1 there are many winning moves. The most human is 27...♝e6 in order to transfer the rook to a6 with a deadly attack. The game will be very short.

24...c4!

This forcing line was easy to calculate.

25.♝a4 ♜xa4 26.♛xa4 ♜b8 27.♛c2 ♜e7
28.♝d2 ♜a3† 29.♝d1



Everything wins of course, but I was quite happy with the final twist.

29...d4! 30.cxd4 ♖d5

The worst piece became the best piece, deciding the game.

0–1

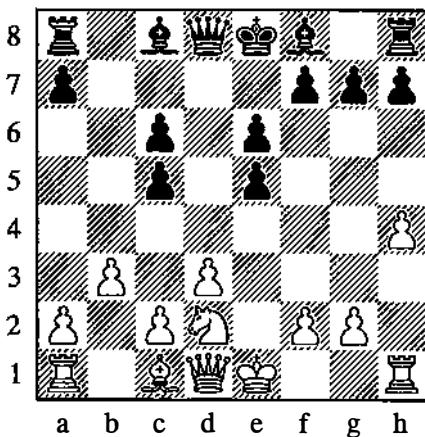
Necessary evil

One thing that takes a long time to learn is that there are moments when we have to stick with it until we find a way. We have to make something work, because the alternatives simply do not. I remember discussing the 12th game of the 2012 World Championship match with Boris Gelfand.

Viswanathan Anand – Boris Gelfand

Moscow (12) 2012

1.e4 c5 2.♘f3 ♗c6 3.♗b5 e6 4.♗xc6 bxc6
5.d3 ♗e7 6.b3 d6 7.e5 ♗g6 8.h4 ♗xe5
9.♗xe5 dxe5 10.♘d2



I was in Moscow during the match and talked to Anand's chief second, grandmaster Peter Heine Nielsen, after the game. He had been very excited when they had been able to get in this preparation. Black is a pawn up, but

every move will be difficult, while White will find every decision incredibly easy.

Boris spent more than 50 minutes on his next move and decided on first returning the pawn and then sacrificing one more, to activate his bishops. I asked him if he felt he had spent too much time on this move, to which he said that it was necessary. If he had not found this move, he had a feeling that no amount of time would have been enough to solve the problems he would face afterwards.

10...c4!! 11.♗xc4 ♗a6 12.♗f3 ♗d5 13.♗xd5
13.♗g3?! was more dangerous.

13...cxsd5 14.♗xe5 f6 15.♗f3 e5 16.0–0
♗f7 17.c4 ♗e7 18.♗e3 ♗b7 19.cxd5 ♗xd5
20.♗fc1 a5 21.♗c5 ♗hd8 22.♗xe7
½–½

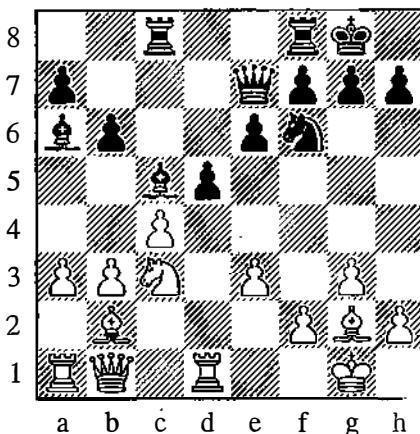
Looking at a recent game from the Women's World Championship, I remembered this lesson. And again, when I was annotating the game against Pert above. On move 14, Pert made a bad decision that he never recovered from. It would have been better to take the chances after 14.cxd5 and see where it led. The same is the case with the following game:

Nana Dzagnidze – Dronavalli Harika

Tehran (4.2) 2017

1.♘f3 ♗f6 2.c4 e6 3.b3 d5 4.♗b2 ♗e7 5.g3
0–0 6.♗g2 c5 7.0–0 ♗c6 8.e3 b6 9.d4 cxsd4
10.♗xd4 ♗b7 11.♗c3 ♗xd4 12.♗xd4 ♗c5
13.♗d3 ♗a6 14.♗fd1! ♗c8 15.♗b1
15.♗c2?! might have been stronger.

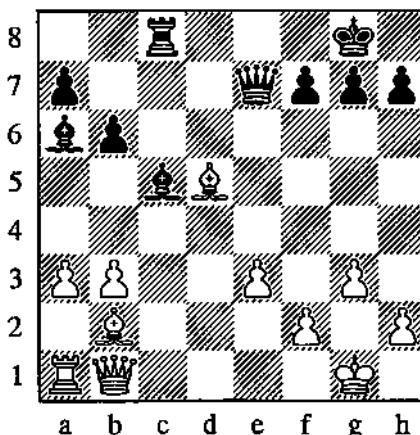
15...♗e7 16.a3



16...Bd8!

16...dxc4? 17.b4 would win a piece for White, on account of 17...Qd6 18.b5. Black could give up the piece in a better way, but it is still pain that should be avoided.

17.cxd5 exd5 18.Qxd5 Qxd5 19.Bxd5 Bxd5
20.Qxd5

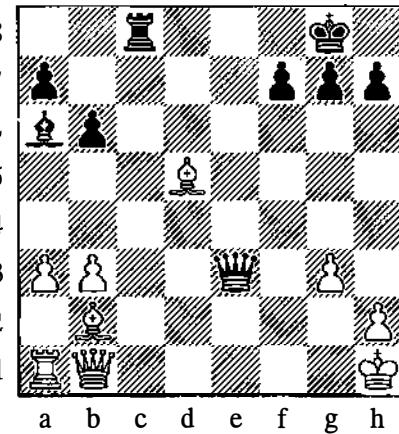


This is the critical moment in the game. Harika spent quite a bit of time trying to avoid losing the pawn, but in the end she could not prevent it. At this point she spent half of her remaining time, considering taking on e3. Finally she decided to play 20...Bd8?, and after 21.Qe4 she tried to resist, but in the long run there was nothing she could do. A pawn down

in a bishop and rook endgame is not a great starting point.

I think calculating the sacrifice for this amount of time was a mistake. The endgame is rather hopeless, so it might have made more sense to take the leap:

20...Qxe3! 21.fxe3 Qxe3† 22.Qh1



I am sure that Harika tried to find something here, but failed. She should have tried harder. I think most grandmasters would have done so, thinking on move 20, while a few would have done their thinking here. Either way, it was there to find.

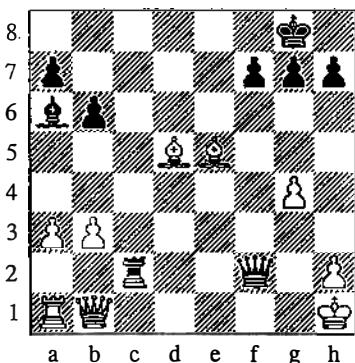
22...Qf2!!

The key point to this move is that the bishop on b2 is threatened, so the white queen cannot join the defence, and at the same time Black is preparing ...Qe2, and more importantly, ...Qc2. The main line deals with the prevention of this move.

23.Qe4

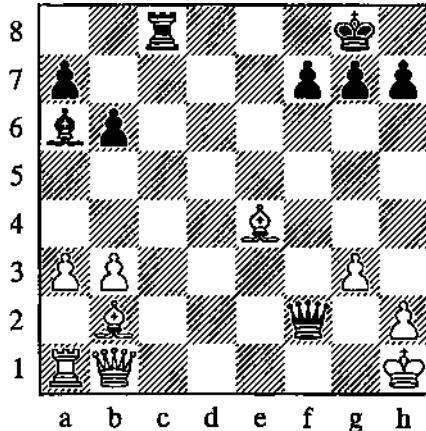
There are some other lines that are interesting to look at.

23.g4 Qc2 24.Qe5



24... $\mathbb{Q}e2!$ 25. $\mathbb{W}xc2$ $\mathbb{Q}f3\#$ 26. $\mathbb{Q}xf3$ $\mathbb{W}xc2$ Black will manage to win the pawns on the queenside and make a draw. She might have to suffer in practice, although my analysis suggests that the suffering should not be too much.

23. $\mathbb{Q}e5$ $\mathbb{W}c5!$ 24. $\mathbb{W}e4$ $\mathbb{E}d8$ 25. $\mathbb{Q}c4$ (25. $\mathbb{E}d1$ $\mathbb{E}xd5$ 26. $\mathbb{W}xd5$ $\mathbb{W}xd5\#$ 27. $\mathbb{E}xd5$ $\mathbb{Q}b7$ gives Black an extra pawn in a drawn ending) 25... $\mathbb{Q}xc4$ 26.bxc4 $\mathbb{E}e8$ 27. $\mathbb{E}d1$ f6 and Black wins back the piece. White has to play 28. $\mathbb{E}d7$ to not be worse.



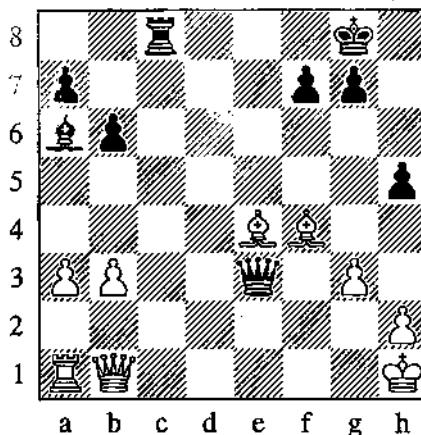
23...h5 24. $\mathbb{Q}e5$ $\mathbb{W}e3!$

This is quite counterintuitive.

24... $\mathbb{Q}e2?$ 25. $\mathbb{Q}g2$ $\mathbb{Q}f3$ 26. $\mathbb{W}f1$ does not work.

However, Black can also play 24... $\mathbb{E}e8?$ 25. $\mathbb{W}d1!$ (25. $\mathbb{Q}f4??$ would lose to 25... $\mathbb{E}xe4!$ 26. $\mathbb{W}xe4$ $\mathbb{Q}e2$) 25... $\mathbb{W}e3!$ 26. $\mathbb{W}d5$ $\mathbb{Q}h8!$ followed by ...f6 and Black wins the piece back.

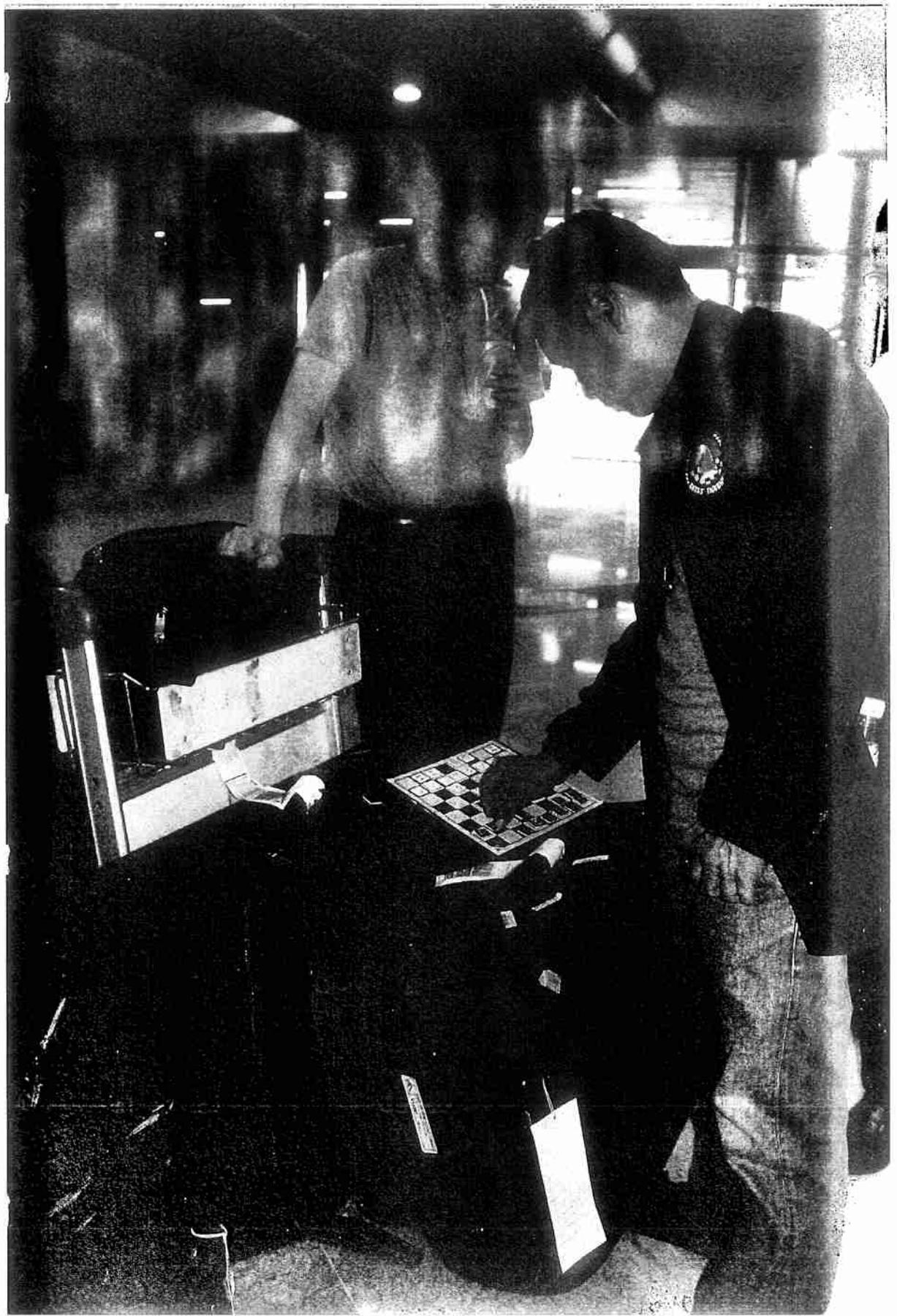
25. $\mathbb{Q}f4$



25... $\mathbb{E}c1\#$!! 26. $\mathbb{W}xc1$ $\mathbb{W}xe4\#$ 27. $\mathbb{Q}g1$ $\mathbb{Q}b7$ 28. $\mathbb{Q}f2$ $\mathbb{W}g2\#$ 29. $\mathbb{Q}e1$ $\mathbb{W}g1\#$ 30. $\mathbb{Q}e2$ $\mathbb{Q}a6\#$ 31. $\mathbb{Q}d2$ $\mathbb{W}d4\#$

Black draws by perpetual check.

This was all difficult to find and there was no chance of Harika calculating this till the end. But the game involved no calculation to speak of and no counter-chances. I appreciate that this was not a clear-cut decision to make during the game, but it is always worth considering whether or not something is a dead end. As Dylan Thomas wrote in his poem, *Do not go gentle into that good night*, about his father's failing health: "Rage, rage against the dying of the light." You may be a fish on a hook, but you should fight the bitter end until, well, the bitter end.



David Navara – Sune Berg Hansen

Reykjavík 2015

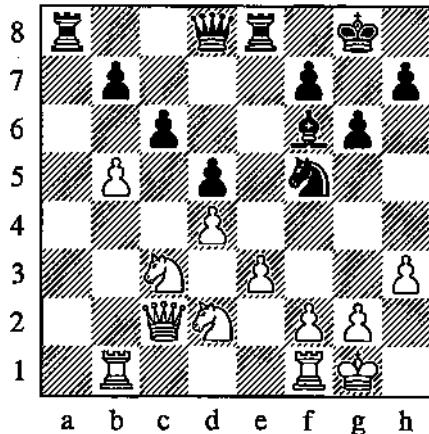
It has taken me many years to appreciate the influence Sune Berg Hansen has had on my chess thinking. I think this is common with competitors; there is a tension that makes it hard to see just how much you have influenced each other.

This game was played in the first round of the 2015 European Championship, where I was the team captain for Denmark.

1.d4 $\mathbb{Q}f6$ 2.c4 e6 3. $\mathbb{Q}f3$ d5 4. $\mathbb{Q}c3$ $\mathbb{Q}bd7$
 5.cxd5 exd5 6. $\mathbb{Q}g5$ $\mathbb{Q}e7$ 7.e3 c6 8. $\mathbb{W}c2$ 0–0
 9. $\mathbb{Q}d3$ $\mathbb{E}e8$ 10.0–0 $\mathbb{Q}f8$

This sort of solid classical position works well for Sune. It took a long time for him to work out who he was as a chess player. He was greatly helped by a book by another Danish grandmaster, as you can read about on page 69.

11.h3 g6 12. $\mathbb{E}ab1$ $\mathbb{Q}e6$ 13. $\mathbb{Q}h4$ $\mathbb{Q}g7$ 14.b4
 a6 15.a4 $\mathbb{Q}f5$ 16.b5 axb5 17.axb5 $\mathbb{Q}xd3$
 18. $\mathbb{W}xd3$ $\mathbb{Q}f5$ 19. $\mathbb{Q}xf6$ $\mathbb{Q}xf6$ 20. $\mathbb{W}c2$ $\mathbb{Q}d6$
 21. $\mathbb{Q}d2$ $\mathbb{Q}f5$!?



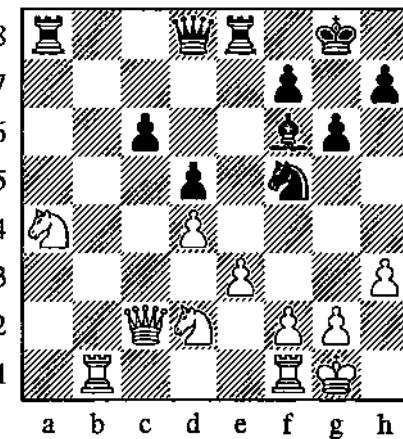
A few games had been played in this position before, but it is wrong to call the position

theoretical. Sune knows this type of position well and he played the text move as simple prophylaxis against White's most natural plan. I do not think it is necessarily the best move in the position, but it worked well in the game.

22.bxc6

Navara spent a long time before deciding to allow the sacrifice, almost 27 minutes. Obviously he was considering other things as well, but (sitting less than a metre from the board) I was still quite surprised that he allowed it.

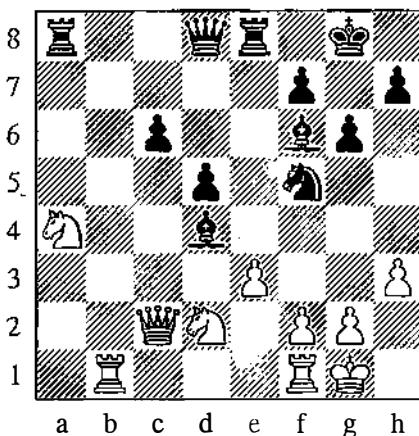
22. $\mathbb{Q}e2$! is more flexible, as suggested by Krasenkow. However, I quite like the prophylactic 22. $\mathbb{E}fe1$!, preparing $\mathbb{Q}a4$ with the tiniest of advantages.

22...bxc6 23. $\mathbb{Q}a4$!

White's last move is rather one-dimensional. He wants to put the knight here, but Black's intentions against it have been rather bluntly revealed.

23... $\mathbb{Q}xd4$!

An intuitive sacrifice. Sune could not see a direct refutation, nor any way for White to free himself in general, and therefore decided to go for it, knowing that it was not something he could calculate till the end.



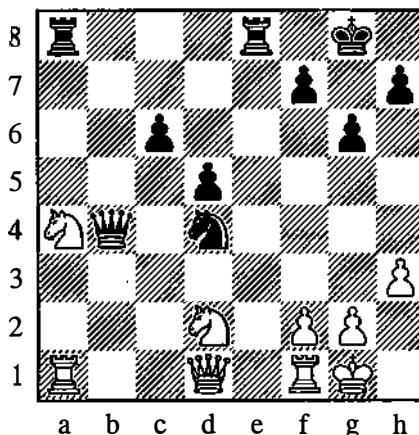
24.exd4

I should maybe add that 24... $\mathbb{W}xc6$ does not keep the balance. Black's strongest continuation involves first winning tempos against the queen with the rooks, then taking on e3 with the knight. Alternatively, the immediate 24... $\mathbb{Q}xe3$ wins a pawn, although White keeps drawing chances in that line.

24... $\mathbb{Q}xd4$ 25. $\mathbb{W}d1$ $\mathbb{W}a5$ 26. $\mathbb{E}a1$

26. $\mathbb{Q}b2?$ $\mathbb{Q}e2\#$ 27. $\mathbb{Q}h2$ $\mathbb{Q}c3$ and Black has a winning endgame.

26... $\mathbb{W}b4!$



This was Sune's plan, and I am certain also what Navara had missed. Not that it was terribly difficult to see, but there you go.

23. $\mathbb{Q}a4$ was close to being the first real decision of the first game of the tournament. It is easy to get caught out in such circumstances.

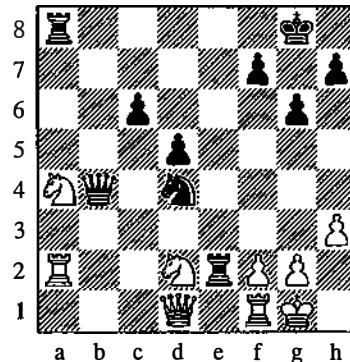
This has created an illustrative moment for us to ponder. It does not take a lot of falsification for us to work out that what Navara played in the game is hopeless. I doubt if he thought everything was going well. This is the moment where it is better to run low on time, than to just play a move.

You must overcome the temptation to hope that things will work out and that there will be chances later, when your gut feeling is screaming and shouting to you that there won't be.

Navara spent only 4 minutes and 25 seconds on his next move.

27. $\mathbb{Q}f3?$

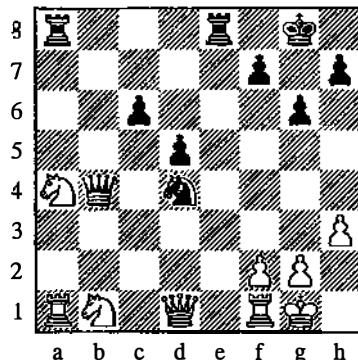
White can save the game with 27. $\mathbb{E}a2$, with the intention of $\mathbb{W}a1$ and $\mathbb{E}b1$. Of White's saving chances, this is probably the easier move to find. The challenge is what to do about 27... $\mathbb{E}e2$, the only aggressive move at Black's disposal. If White does nothing, Black will play ... $c5$ and consolidate his grip on the centre.



But for one of the strongest players in the world, it is possible to find 28. $\mathbb{E}b2!!$ with the idea 28... $\mathbb{W}xa4$ 29. $\mathbb{E}b8\#$ $\mathbb{E}xb8$ (29... $\mathbb{Q}g7?!$)

30. $\mathbb{Q}xa8$ $\mathbb{W}xa8$ 31. $\mathbb{Q}b3!$ would win the exchange and give White winning chances) 30. $\mathbb{W}xa4$ $\mathbb{B}xd2$ where White should be OK with accurate play.

It turns out that White can also hold with: 27. $\mathbb{Q}b1!?$

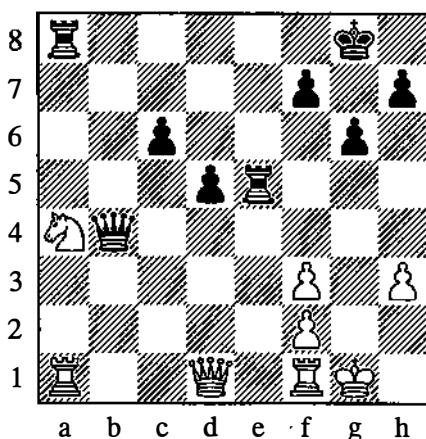


27... $\mathbb{Q}e2\#$ 28. $\mathbb{Q}h2$ d4 29. $\mathbb{R}a2!$ somehow holds together according to the engine.

Also 27... $\mathbb{Q}b3$ 28. $\mathbb{R}a3$ $\mathbb{R}eb8$ 29. $\mathbb{W}g4$ d4 30. $\mathbb{W}f4!$ $\mathbb{R}f8$ 31. $\mathbb{W}f3$ $\mathbb{R}fb8$, with a repetition of moves, has a glimmer of good fortune to it.

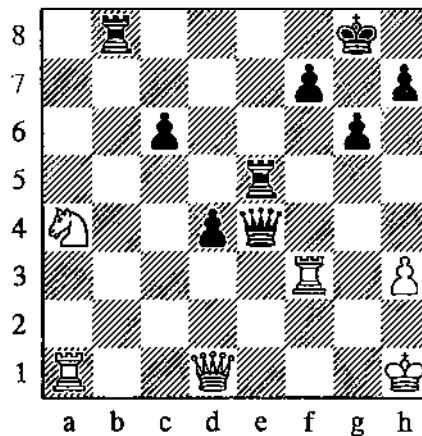
Both of these solutions are rather elaborate and difficult to find, which is why 23. $\mathbb{Q}a4$ is a mistake. But they were there to be found.

27... $\mathbb{Q}xf3\#$ 28. $\mathbb{R}xf3$ $\mathbb{R}e5!$



This move was not so difficult to see. Black is now completely winning. It took a while, but there was never any doubt.

29. $f4$ $\mathbb{W}xf4$ 30. $\mathbb{Q}h1$ $\mathbb{W}e4\#$ 31. $\mathbb{Q}h2$ $\mathbb{W}f4\#$
32. $\mathbb{Q}h1$ d4 33. $\mathbb{R}g1$ $\mathbb{W}xf2$ 34. $\mathbb{R}f1$ $\mathbb{W}e3$ 35. $\mathbb{R}f2$
 $\mathbb{W}e4$ 36. $\mathbb{R}aa3$ $\mathbb{R}b8$ 37. $\mathbb{R}a1$



37... c5 38. $\mathbb{Q}h2$ c4 39. $\mathbb{R}f1$ $\mathbb{W}d5$ 40. $\mathbb{R}a2$ $\mathbb{R}be8$ 41. $\mathbb{R}f6$ d3 42. $\mathbb{Q}c3$ $\mathbb{W}d4$ 43. $\mathbb{R}xf7$ $\mathbb{W}xc3$ 44. $\mathbb{R}aa7$ $\mathbb{R}e2\#$ 45. $\mathbb{Q}g3$ d2# 46. $\mathbb{R}f3$ $\mathbb{W}xf3\#$
47. $\mathbb{Q}xf3$ $\mathbb{R}e2\#$

0-1

Improving your decision making is a lifelong endeavour

There are many other angles of decision making to consider. Analysing your own games will help you to realize what you could be doing better in your decision-making process. You may suffer from entirely different afflictions than I did; or you may have similar problems. Either way, I hope this has helped you look differently at decision making.

Chapter 5

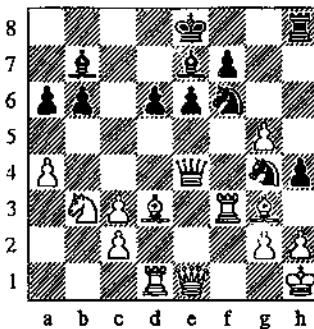
Four Types of Decisions



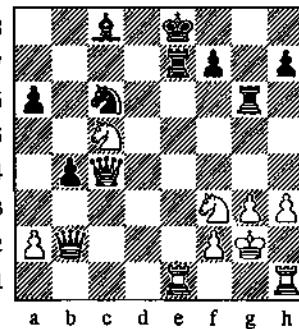
It was a great privilege to teach at the Dibyendu Barua Chess Academy in Kolkata. The curiosity and passion of the kids was breathtaking.

Test yourself against the book

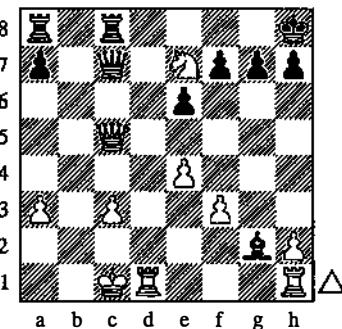
This book is not an exercise book, but an experienced trainer can always find interesting moments in games that can be more effective for the student if he thinks about them first. On this page, I have included a few positions from this chapter that you can look at, should you feel so inclined. As long as it does not make you put off reading the chapter!



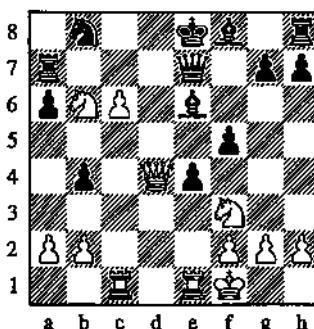
A painful moment...
(see page 121)



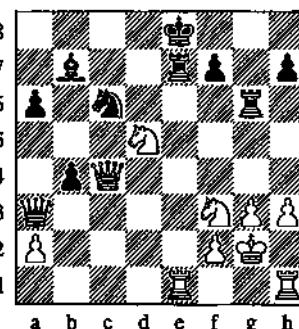
Train your candidate move search
(see page 131)



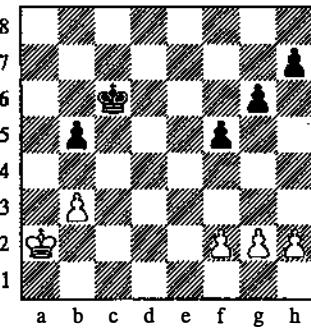
White wins
(see page 114)



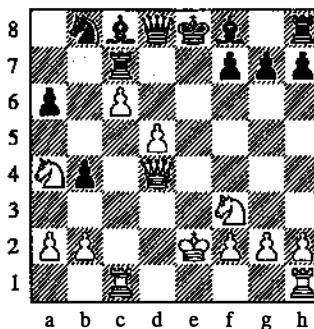
White has a very powerful
continuation
(see page 128)



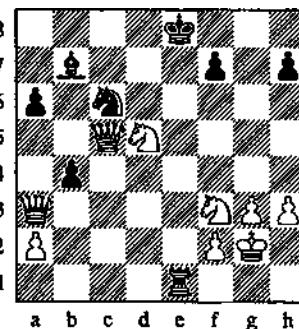
The chance of a lifetime!
(see page 133)



Only one move?
(see page 116)



How should Black
untangle himself?
(see page 129)



Find a powerful two-move
continuation for White
(see page 134)

In chess, we use different thinking methods for different scenarios, so it makes a lot of sense to think about these in order to see if it helps our decision making. It is my impression that it does. The model given below is my own and is just one possible way to distinguish the various scenarios from each other. I came up with it after a lot of thinking, because I was lacking a model for my training activities. As always, I find it useful and I hope you will find it useful as well. If it does not help you, abandon it. These ways of thinking about things are here to help us make better decisions at the board. I believe that this model has the potential to help a lot of people better navigate their decision making; if nothing else, it can assist their analysis of their own games and help them develop an intuition for how to approach things. My method of dividing up the decisions is based on simplicity and on the types of thinking needed to perform them.

The four types are:

1. Automatic Decisions
2. Simple Decisions
3. Critical Moments
4. Strategic Decisions

1. Automatic Decisions

These are the decisions you can make quickly. It is playing your opening preparation, it is the only legal move, moving the king out of check, it is the recapture. And so on. There are a few points relating to this type of decision which I shall quickly run through. They all have to do with double-checking yourself.

Did I remember correctly?

I would expect that I am the standard rather than the exception, by repeatedly having played a bad move, while being totally convinced that it was my opening preparation. The worst case being in the final round of the British Championship, where I was leading the tournament and playing for the title. What happened in that game was that I believed I was following Narciso Dublan – Almasi, a game I had sat next to a month earlier in the Spanish League, when in fact my opponent had already deviated. As a consequence, the move I played was absolutely horrendous and I had to suffer for a long time before untangling myself and winning with a counterattack. I think “lucky” is the description that could be attached to my performance in that game.

I have seen people do the same in endgames. Positions they believed were winning, were not, and instead of playing quickly and confidently, they could have found the right move by applying some old-fashioned brain power. Mistakes on automatic decisions are always the same type of mistakes – lack of thinking. Actually, it is the answer to the age-old question: “What was I thinking?” You weren’t.

Not thinking and forcing sequences

The most common type of error in this zone is when you carry out a forcing sequence and make each move as if what you saw a long time ago was the truth and not just your own erroneous calculation.

I personally have a tendency to miss the opponent's chance to castle long in positions where the queenside has been obliterated. It happened to me twice, in 1993 and 2005. In both cases my opponent saw it.

In the first game I resigned a move or two later. In the second my opponent did not feel confident enough to play it, and went for the draw instead. I was in shock afterwards when he showed me the move, especially by the fact that he did not play it!

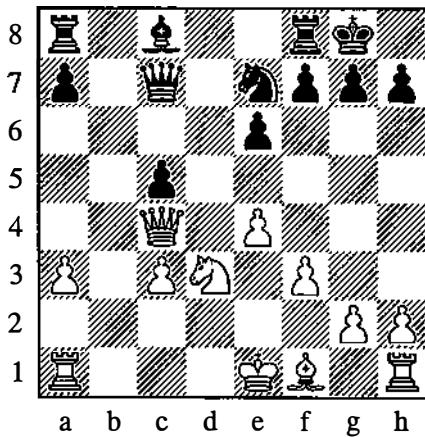
John Cox – Jacob Aagaard

Isle of Man 2005

1.d4 $\mathbb{Q}f6$ 2.c4 e6 3. $\mathbb{Q}c3$ $\mathbb{Q}b4$ 4.f3 d5 5.a3 $\mathbb{Q}xc3\#$ 6.bxc3 c5 7.cxd5 $\mathbb{Q}xd5$ 8.dxc5 $\mathbb{W}a5$ 9.e4 $\mathbb{Q}e7$ 10. $\mathbb{Q}e3$ 0–0 11. $\mathbb{W}b3$ $\mathbb{W}c7$ 12. $\mathbb{Q}h3$

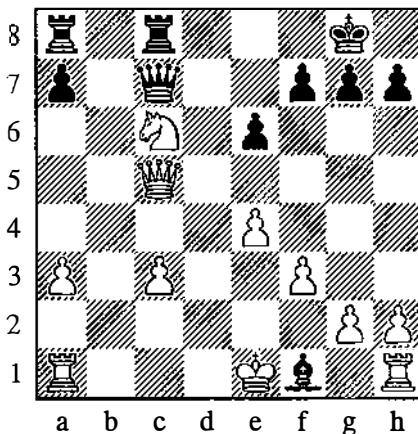
I confess that this brought me out of book. I have never been a very theoretical player. But I have read a lot of crime novels!

12... $\mathbb{Q}d7$ 13. $\mathbb{Q}f2$ $\mathbb{Q}xc5$ 14. $\mathbb{W}c4$ b6 15. $\mathbb{Q}xc5$ bxc5 16. $\mathbb{Q}d3$



At this moment, I calculated for a while and saw what I thought was a forced draw. I felt in the zone and for that reason believed I had seen everything. You can stop laughing now.

16... $\mathbb{Q}c6$ 17. $\mathbb{W}xc5$ $\mathbb{Q}a6$ 18. $\mathbb{Q}b4$ $\mathbb{Q}xf1$
19. $\mathbb{Q}xc6$ $\mathbb{Q}fc8$



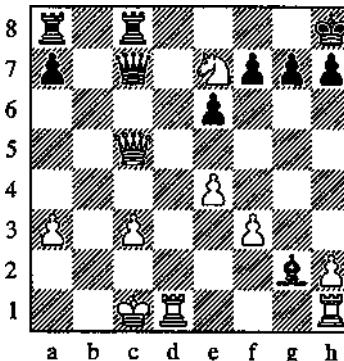
20. $\mathbb{Q}xf1$

John played this after a lot of consideration. At the time, I was a bit too cocky and did not waste a moment wondering what it was he was thinking about. I would have been surprised if I had.

The key thing John considered was to win the queen with:

20.0–0–0!

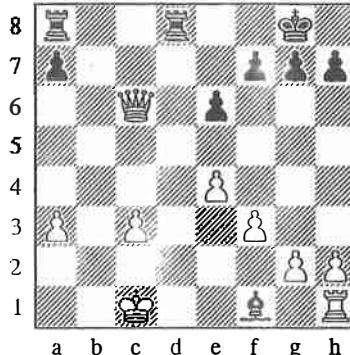
The main trick is that 20... $\mathbb{Q}xg2$ 21. $\mathbb{Q}e7\#$ $\mathbb{Q}h8$



22. $\mathbb{Q}xc8!$ $\mathbb{W}xc5$ 23. $\mathbb{Q}d8\#$ is mating.

So I would have had to give up the queen (a simple only move) with:

20... $\mathbb{W}xc6$ 21. $\mathbb{B}d8\#$ $\mathbb{B}xd8$ 22. $\mathbb{W}xc6$



I hope that I would have been able to find the following great line:

22... $\mathbb{B}ac8$ 23. $\mathbb{W}a4$ $\mathbb{B}xc3\#$ 24. $\mathbb{B}b2$ $\mathbb{B}c4!$

This and the next move are key.

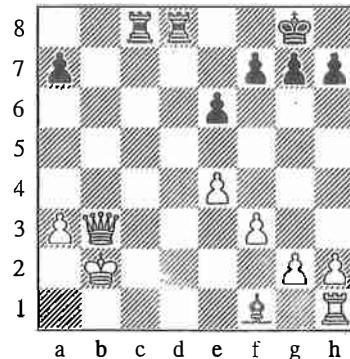
25. $\mathbb{W}b3$

25... $\mathbb{W}xa7$ $\mathbb{B}d2\#$ 26. $\mathbb{B}b3$ $\mathbb{B}d3\#$



27. $\mathbb{B}xc4$ $\mathbb{B}xa3\#$ is not too hard to find. (For me, the last move would probably be the hardest to find. Somehow, intuitively, I would look to go backwards with the rook, and not see that I could capture the a-pawn on the way.) Longer is only harder in the mind of the non-chess-playing public.

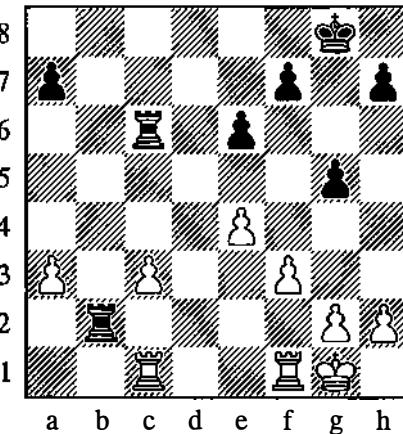
25... $\mathbb{B}cc8!$



White has nothing better than 26. $\mathbb{B}xf1$ $\mathbb{B}b8$, when Black will play ...g5 and get enough counterplay on the kingside to hold an easy draw.

It should be possible to hold the draw without winning back the queen as well, but from a human perspective, it feels uncertain. Let's call it play for two results, while this is more like a race to the bar.

20... $\mathbb{W}xc6$ 21. $\mathbb{W}xc6$ $\mathbb{B}xc6$ 22. $\mathbb{B}c1$ $\mathbb{B}b8$
23. $\mathbb{B}f2$ $\mathbb{B}b2\#$ 24. $\mathbb{B}g1$ g5



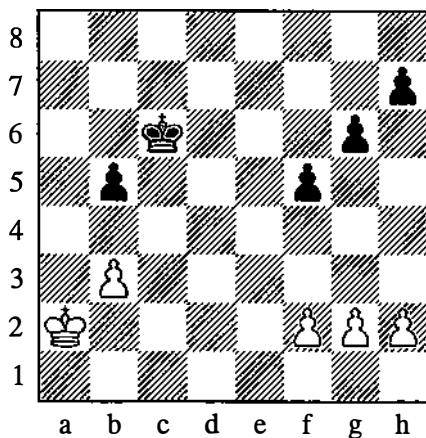
I had seen this far in advance and had no doubt about my compensation. A few moves later it was John who had to show good moves to hold the draw. There might have been a win for me somewhere, but that would be a subject for another book, another time.

25.♗fd1 ♘a2 26.♗a1 ♘xa1 27.♗xa1 ♘xc3
 28.♗a2 a5 29.a4 h6 30.♗f2 ♗g7 31.♗g3
 ♗g6 32.h4 ♘c4 33.hxg5 hxg5 34.♗f2 ♗f6
 35.♗e3 ♘b4 36.♗c2 ♘xa4 37.♗c7 ♘a1
 38.♗f2 a4 39.♗a7 a3 40.♗g3 ♘a2 41.♗a5
 ♗g6 42.♗h3 f6 43.g3 ♗f7 44.♗a7† ♗e8
 45.♗g4 ♘a1 46.e5 fxe5
 ½-½

This type of *incorrect automation* can happen in the simplest position possible, for various reasons. The following is not at all uncommon!

Jacob Carstensen – Jacob Aagaard

Denmark 2016



Thinking that I only had one sensible move, I made it and went to somewhere else I had wanted to go to for the last few moves. If I had been less rusty, more sensible or just generally smarter, I would have stood up and left after taking his rook with my king on move 40. I would have had to do that in the blink of an eye, as he then took my rook on a2 very quickly too. Or I could have talked to the arbiter to get permission to leave even though it was my move.

The only thing that does not make sense is to play a move without checking if it is really the only move.

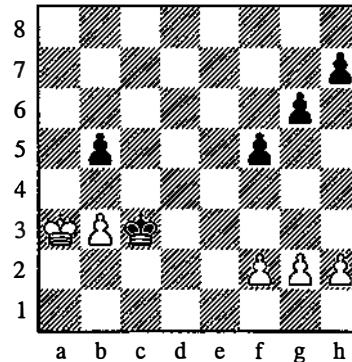
41...b4? 42.♗b2 ♗d5 43.♗c2 ♗e4 44.h4!

The only move, but Jacob simply thought for a while and saw everything.

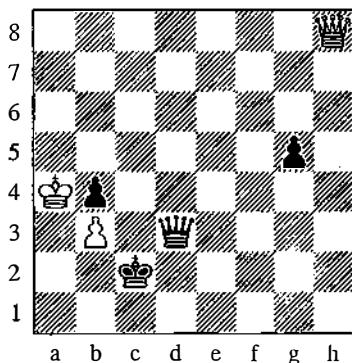
44...h6 45.♗d2 ♗d4 46.♗c2 ♗e4 47.♗d2
 ♗d4 48.♗c2 g5 49.hxg5 hxg5 50.♗d2
 g4 51.g3 ♗e4 52.♗e2 ♗d4 53.♗d2 ♗e4
 54.♗e2 ♗d4
 ½-½

It was only later that I even considered that there could have been something better at this point (although I was sure I had missed something earlier). When I looked at it, it quickly became clear that White would have to be careful and would not be able to fully neutralize the pressure, had I kept my concentration.

It was stronger to bring in the king immediately: 41...♔c5! 42.♗b2 (42.♗a3? g5 quickly leads to a sad zugzwang). 42...♗d4 43.♗a3 ♗c3!



Holding this pawn endgame is by no means easy. Even to go for this position with confidence requires a brave soul. It turns out that White is able to queen a pawn with check and find an escape into a dangerous queen ending. 44.f4 h6 45.g3 g5 46.fxg5 hxg5 47.h4 f4 48.h5 fxg3 49.h6 g2 50.h7 b4† 51.♗a4 g1=♕ 52.h8=♕† ♕d4 53.♕h3† ♕d3 54.♕h8† ♗c2



White might only be 0.29 worse, if you are a computer, but for a human, it would be unpleasant defending an endgame with a pawn less.

Assumption is a common sin. As an editor, I have seen many top grandmasters missing interesting extra options in their annotations, even though they were analysing the games with engines. They simply moved quickly past these moments without checking what the engine says.

It takes experience to know that we can be surprised at any moment, and it is hard to react accordingly. The analysis of Giri – Harikrishna below will discuss all four types of decisions and will show how well rewarded you could be in top-level games, if you do not presume too much.

The remedy for not making these types of mistakes is to raise your awareness. The use of candidate search has been known to all serious students of chess since Kotov wrote about it in *Think Like a Grandmaster*. His tree of variations and recommendation that we should think entirely systematically and mechanically is of little use, but the concept of the candidate search is highly useful and has been the bedrock of serious chess training ever since. Our imagination has expanded a lot since that book was written, with the appearance of first Mikhail Tal, then Garry

Kasparov and finally the engine. We will talk more about candidate moves and calculation technique in Chapter 7. For now, all I want to say is that you will never be able to expand your imagination enough to match the magic of reality. This includes in the game of chess.

2. Simple Decisions

This type of situation involves mainly intuitive decision making. There are few indications in the position that you can decide things by calculation. The difference between the best move and the second-best move will not be earth-shattering and not require deep calculation. The objects in your mind will be long-term weaknesses, bringing the remaining pieces into play, which exchanges are beneficial in the long term, and more cases like this.

As with automatic decisions, it is important to approach the position with imagination in order to ensure that this is indeed a position without hidden tactical opportunities. But besides some minor lines that can be seen, rather than need to be calculated (the discrepancy will be explained in full on page 157), these positions are not ripe for calculation. These are situations where you can use your knowledge of strategic concepts (see Chapters 10 and 11) and combine your logic and intuition in a fluent way to decide, giving almost equal weight to both.

My training system of the *three questions* has been developed to get the most out of your intuition when you reach these types of positions, which is quite often. The first two categories will cover more than 50% of all moves played in top-level games, I estimate entirely unscientifically. I will discuss this in Chapter 6.

There are some players who like to go really deep in these situations, Gelfand and Grischuk come to mind, and make big strategies and heighten their level of concentration, hoping that they will be able to calculate the tactics coming later quickly and accurately. Boris and I certainly agree that it is a matter of style and I would not make any suggestions to him about changing his style after all these years. But personally, I do not believe it is the most effective style. I find it more valuable to have a surplus of time for the next category.

3. Critical Moments

A commonly misunderstood – or weakly defined – concept is that of the critical moment. I wrote about it in *Excelling at Chess Calculation*, but never defined it. What I wrote was later criticized by Willy Hendriks in his highly thought-provoking book *Move First, Think Later*, the title of which is not to be mistaken for a summary of the book or a recommendation of how to play better chess, but instead is the final joke in a highly entertaining read. I enjoyed the book a lot, but often found it misguided, both in its general advice for the improving player and its handling of other people's work.

In his chapter on my book, or on the critical moment to be precise, Hendriks claims that it is only *after* the game that you can know which moments are the critical ones. He gives an example where a player blundered a piece to a one-mover and the opponent did not see it. He calls this a critical moment.

It is in moments like this that I get an idea of how it must feel to be an evolutionary biologist dealing with people who believe that evolution is not proven fact and that there is somehow dispute about its place in history, because of the word "theory". In the same way, I felt that Hendriks made a cheap point that no doubt will have made sense to a good deal

of his audience – those who believe that people in general are stupid.

My experience of life is the opposite; I find that people are generally highly intelligent and have interesting ideas, within their own areas of expertise. But at times when they stray into foreign territories, they presume that they take their expertise with them and are experts on everything. You know the type, I am sure. We had a few famous chess players who act like this as well...

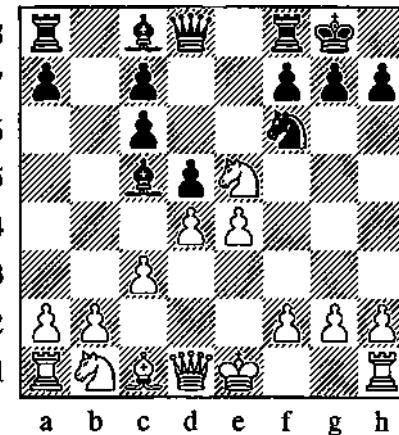
Critical moments have always been described as the moments where the game turns. They are not to be confused with blunders. Not commonly at least. The only person I have consistently seen doing this is Karjakin, who is a great chess player and great ambassador for the game, but not a master of the English language!

Here is a game he lost recently.

Wei Yi – Sergey Karjakin

Wijk aan Zee 2017

1.e4 e5 2.♘f3 ♘c6 3.♗b5 ♘f6 4.d3
4...♗c5 5.c3 0-0 6.♗xc6 bxc6 7.♗xe5 d5
8.d4



Karjakin seems a bit uncertain about his preparation and already here he started to think for 16 minutes.

8... $\mathbb{Q}b6$ 9.0–0 $dxe4$

And another 15 minutes.

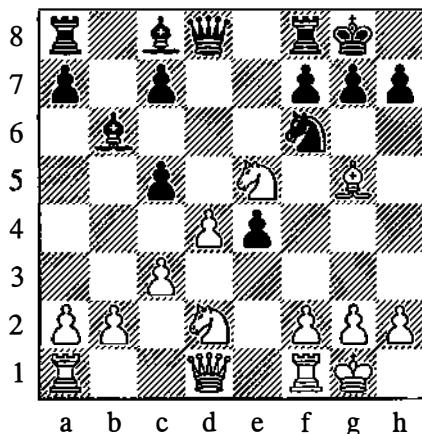
9... $\mathbb{Q}xe4$ 10. $\mathbb{Q}xc6$ $\mathbb{W}d6$ 11. $\mathbb{Q}b4$ $\mathbb{E}e8$ has been played in some games and has been doing OK for Black so far. But there is nothing wrong with the move played by Karjakin either.

10. $\mathbb{Q}g5$ c5

Five minutes (only). But meanwhile Wei Yi is blitzing out his preparation.

11. $\mathbb{Q}d2$

22 seconds.



11...cxd4?

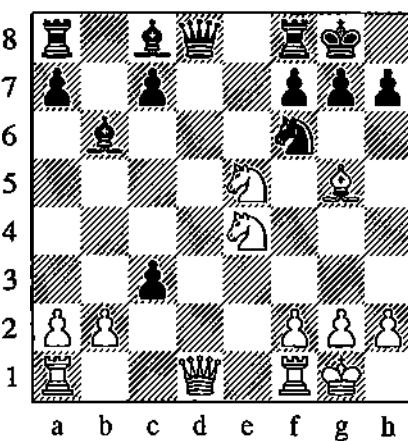
Played after almost 23 minutes of thinking, but it is a total disaster. That's chess. Sometimes we apply our best abilities to the game and it is not enough. Not even for a player who has won the World Cup and after this the Candidates tournament, thereafter taking the lead in a World Championship match against one of the true greats of the game.

It would have been better to play something along the lines of: 11...h6!? 12. $\mathbb{Q}xf6$ $\mathbb{W}xf6$

13. $\mathbb{Q}xe4$ $\mathbb{W}e6!$ N (this seems better than 13... $\mathbb{W}e7$ 14. $\mathbb{E}e1$ $cxd4$ 15. $cxd4$ ± Luther – Strache, Germany 2014) 14. $\mathbb{E}e1$ $cxd4$ 15. $cxd4$ $\mathbb{E}d8$ 16. $\mathbb{W}f3$ $\mathbb{B}b7$ 17. $\mathbb{Q}c5$ $\mathbb{Q}xc5$ 18. $\mathbb{W}xb7$ $\mathbb{Q}xd4$ 19. $\mathbb{Q}c6$ $\mathbb{W}f6$ 20. $\mathbb{Q}xd4$ $\mathbb{W}xd4$ White's advantage is so minuscule that it is not worth debating.

To me this is not a critical moment. Black did not have to try to solve all of his problems with deep calculation and interesting tactics.

12. $\mathbb{Q}xe4$ $dxc3$



Sensing that this was a critical moment, where the correct move would lead to a very nice position, Wei Yi stopped for 45 minutes and crunched the numbers. He is good at that...

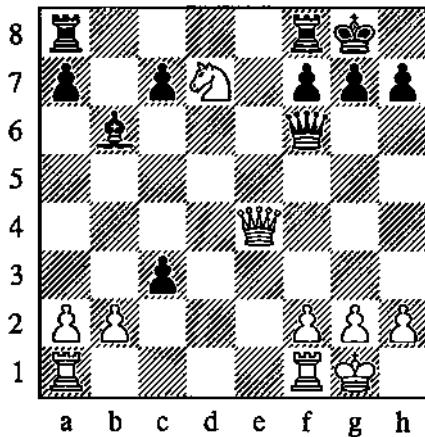
But how did he work out that this was the right moment to calculate deeply? First of all, White can exchange some pieces, after which Black will be OK. There is really not a lot to calculate. But then there is the pin and the active minor pieces, as well as an attractive-looking queen move, which leads to deep complications. The possible reward for investing the time here is immense, while little time will be needed later on, if a lot of pieces are exchanged here. A draw would be a very likely outcome. And maybe a short one.

13. $\mathbb{W}f3!$ $\mathbb{Q}b7$ 14. $\mathbb{Q}xf6$ $\mathbb{Q}xe4$ 15. $\mathbb{W}xe4$ $\mathbb{W}xf6$?

Karjakin played moves 12-16 almost instantly. On Facebook, he later expressed that he was tired after the World Championship match, which is understandable.

15... $gxf6$ 16. $\mathbb{Q}c6$ $\mathbb{W}d6$ 17. $\mathbb{E}ad1$ is very dangerous for Black, but at least he is still playing after 17... $f5$! 18. $\mathbb{W}f3$ $\mathbb{W}f6$ 19. $bxc3$ $\mathbb{E}ae8$ 20. $\mathbb{E}fe1$ $\mathbb{E}e6$, when his position is unpleasant, but still a good deal away from lost.

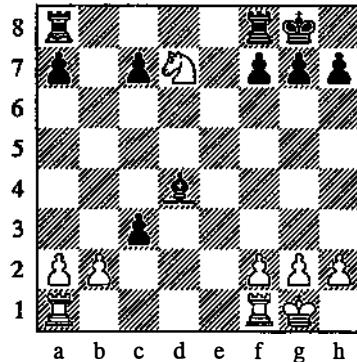
16. $\mathbb{Q}d7$



16... $\mathbb{W}g6$

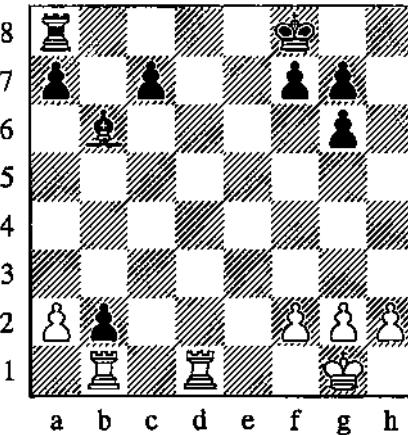
Only now did Karjakin realize that his calculation had been flawed.

On Facebook he said that he had “blundered” that after: 16... $\mathbb{W}d4$ 17. $\mathbb{W}xd4$ $\mathbb{Q}xd4$



White would not have to play 18. $\mathbb{Q}xf8$? $cx b2$ 19. $\mathbb{E}ad1$ $\mathbb{E}d8$!, when it is Black who has all the winning chances, but instead would play the simple 18. $\mathbb{E}ad1$!, winning the exchange. Karjakin chose to go down in a different way, but there was already no way out.

17. $\mathbb{W}xg6$ $hxg6$ 18. $\mathbb{Q}xf8$ $cx b2$ 19. $\mathbb{E}ab1$ $\mathbb{Q}xf8$ 20. $\mathbb{E}fd1$



Wei Yi converted the advantage easily.

20... $\mathbb{Q}e7$ 21. $\mathbb{E}xb2$ $g5$ 22. $\mathbb{E}bd2$ $\mathbb{E}h8$ 23. $g3$ $\mathbb{E}h5$ 24. $\mathbb{Q}g2$ $\mathbb{Q}f6$ 25. $h3$ $\mathbb{E}h6$ 26. $\mathbb{E}d8$ $\mathbb{Q}e7$ 27. $\mathbb{E}1d7\uparrow$ $\mathbb{Q}e6$ 28. $\mathbb{E}d2$ $\mathbb{Q}f6$ 29. $\mathbb{E}g8$ $\mathbb{E}g6$ 30. $\mathbb{E}e8\uparrow$ $\mathbb{Q}f6$ 31. $\mathbb{E}d7$

1-0

As you can see, Karjakin’s definition of blunder is the same as what others would call an oversight. But the moment where he had to make the decision, he had to calculate accurately in order to choose between the various options. Because of the strategic aspect of the decision, I would put this in the fourth and last category, but more about this later.

The best definition I have is this:

The critical moment is when the difference between the best and the second-best move is half a point or more.

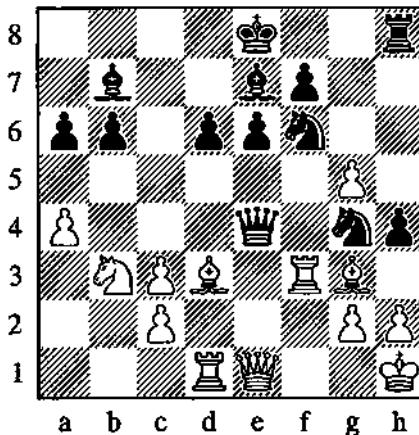
Please understand this intelligently and not literally. For example, there can be two top moves and the difference can be between winning and having some advantage, for example, or a position where we know that we should find the only move to stay in the game, but we will not necessarily hold the draw easily thereafter.

The defining characteristic with this type of position is that you can only solve it by calculation. You cannot feel your way. It is like maths, you need to get it right. If you try to guess, you will get a very low success rate.

How do I know this with certainty? Because it was the defining feature of my experience as a practical player. I had many faults as a chess player, but the one I think made the biggest difference was my inability to win positions where accuracy was demanded at some point. The following is a sadly typical example.

Sergey Fedorchuk – Jacob Aagaard

Cappelle-la-Grande 2005



Unable to focus or calculate, I became very confused and exchanged the queens without knowing why exactly.

22... $\mathbb{W}xe1\text{?}$ 23. $\mathbb{Q}xe1$ h3 24.gxf6 hxg2†

25. $\mathbb{Q}xg2$ $\mathbb{Q}e3\text{!}$ 26. $\mathbb{Q}g3$ $\mathbb{Q}xf3$

26... $\mathbb{Q}xd1$, with some sort of balanced position, was also possible.

27. $\mathbb{B}b1$ $\mathbb{Q}g4\text{?}$

A blunder.

27... $\mathbb{Q}xf6$ with a complicated position was right. 28. $\mathbb{Q}f2$ $\mathbb{B}b7$ 29. $\mathbb{Q}xe3$ $\mathbb{Q}g5\text{!}$ 30. $\mathbb{Q}e2$ $\mathbb{B}xh2\text{!}$ and 31...e5 would have given Black a decent game.

28. $\mathbb{Q}d2$

This double attack decides the game. White wins a piece and afterwards crashes through on the b-file.

28... $\mathbb{Q}d5$ 29.fxe7 $\mathbb{B}xh2$ 30. $\mathbb{Q}e4$ $\mathbb{Q}xe4$
31. $\mathbb{Q}xe4$ $\mathbb{Q}xe7$ 32. $\mathbb{Q}xb6$ d5 33. $\mathbb{Q}f2$ $\mathbb{B}h4$
34. $\mathbb{Q}xa6$ $\mathbb{Q}e5$ 35. $\mathbb{Q}d3$ $\mathbb{Q}e4$ 36. $\mathbb{Q}g3$ $\mathbb{Q}c4$
37. $\mathbb{Q}f2$ f6

1–0

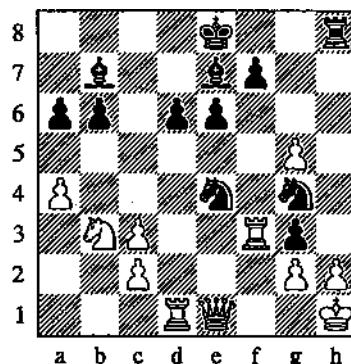
It was only after I had returned from the tournament, when I received an email from an old friend, that I understood that I had missed one of the most brilliant combinations of my life.

22...hxg3!! 23. $\mathbb{Q}xe4$

23.gxf6 $\mathbb{W}xf3\text{!}$ leads directly to mate.

23... $\mathbb{Q}xe4$

Black has overwhelming compensation with three minor pieces against rook and queen.



24.h3

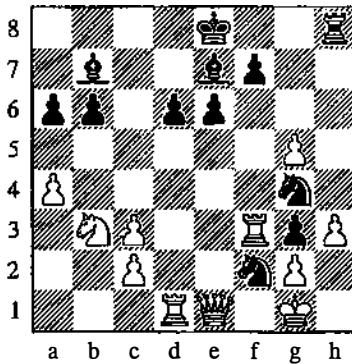
The other lines also do not work.

24. $\mathbb{B}d2$ $\mathbb{Q}xh2$ 25. $\mathbb{B}g1$ $\mathbb{Q}xf3\#$ 26. $gxf3$ $\mathbb{Q}xg5$ gives a winning attack.

After 24. $\mathbb{B}xg3$ $\mathbb{B}xh2\#$ 25. $\mathbb{B}g1$ $\mathbb{Q}xg3$ 26. $\mathbb{W}xg3$ $\mathbb{B}xg2\#$ Black wins material.

24. $\mathbb{B}g1$ $\mathbb{Q}ef2$ 25. $\mathbb{B}xg3$ $\mathbb{B}xh2$ 26. $\mathbb{W}xf2$ $\mathbb{B}h1\#$ and again Black wins material.

24... $\mathbb{Q}ef2\#$ 25. $\mathbb{B}g1$



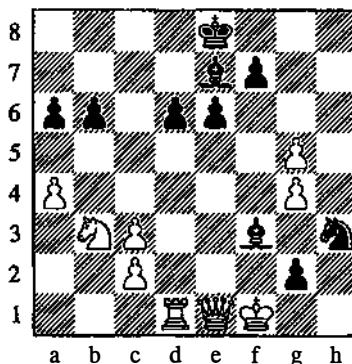
25... $\mathbb{B}xh3!!$

There is nothing tender about the way this position wins.

26. $gxh3$ $\mathbb{Q}xf3$ 27. $hxg4$

Or 27. $\mathbb{W}f1$ g2 and Black wins.

27... $\mathbb{Q}h3\#$ 28. $\mathbb{B}f1$ g2#



A few years ago, I gave ten hours of coaching to one GM and a week of coaching to another GM, both around 2600. The

first was positionally inclined, with good preparation; the other played dynamic chess and is a dangerous opponent for anyone. Both were very intuitive and when they got good positions, they both blew it. It is the first thing I check with a new student, because failing to win winning positions is both demoralizing and the place where the greatest potential for immediate progress exists.

When the two later spoke together, they felt their programs were less individual than they were. If you have problems winning your winning positions, and the computer shows you simple tactical lines that you feel you should be able to see, I would recommend you to start your training program by focusing a lot on calculation. You will never get a perfect score in these positions and I would not argue that this is the most important aspect of chess. But if you get the positions, it is the place where you can make the most progress in a short amount of time. A short amount of time is not as short as a lot of people would like, but this is because chess is a difficult and complex game and not because of your or anyone else's lack of talent, ability and so on.

4. Strategic Decisions

The last type of decision is the slightly messy category – strategic. This word is often, incorrectly, used interchangeably with ‘positional’. The two are not the same, as shall be explained below. Positional decisions belong to the second category of decisions.

So, let’s look at the word ‘strategy’. The top definition in the Oxford dictionary is “*A plan of action designed to achieve a long-term or overall aim.*” A highly illustrative example is the following:

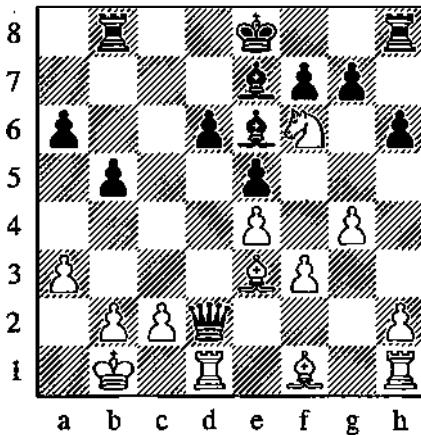
Vassily Ivanchuk – Viswanathan Anand

Linares (1) 1992

1.e4 c5 2.♘f3 d6 3.d4 cxd4 4.♘xd4 ♘f6
 5.♘c3 ♘c6 6.♗g5 e6 7.♗d2 a6 8.0–0–0 h6
 9.♗e3 ♘xd4 10.♗xd4 b5 11.f3 ♗a5 12.a3
 e5 13.♗e3 ♗e6 14.♘b1 ♗e7 15.g4 ♗b8

Black has been quite successful in the opening. If he gets just one more move, he will be ready to push ...b4, creating real threats towards the white king. Ivanchuk decided to look for equality and a potential draw.

16.♘d5 ♗xd2 17.♘xf6†



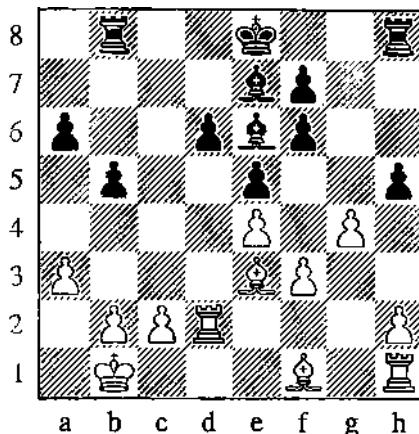
This is a small inaccuracy since it makes White's life much more difficult. As we shall see, Ivanchuk could keep the balance later on with accurate play, but it turned out to be too difficult.

17.♗xd2 was simpler. Ivanchuk probably believed that 17...♘xd5 18.exd5 ♗d7 was more unpleasant. It turned out not to be the case.

17...gxsf6!

Anand found a fantastic concept, not content with letting the game fizzle out.

18.♗xd2 h5



The question is asked immediately. How do you want to defend your pawn on g4?

19.♗g1!?

This is a very natural move and probably also what Anand had expected. White is going to play h2-h3 soon and have a passed h-pawn, defended by the bishop. Later on he can transfer the rook to h2 and think about advancing the pawn. This is of course a misunderstanding of what is happening in the position.

25 years after this game was played, the engine shows us an elaborate way White could have played to keep the balance.

19.♗e2! hxg4 20.fxg4 ♘h3

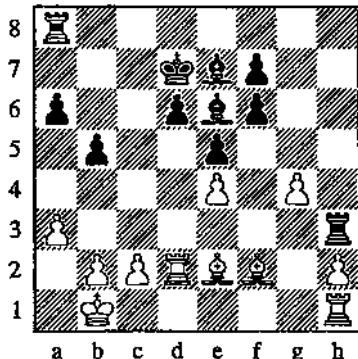
Anand gave himself a clear advantage in his notes, which would be right if White did not have a very accurate way of neutralizing the pressure.

Black has other tries at various places, but White can neutralize them all with accurate play. One of them is 20...b4 21.a4 b3 22.a5! which is more complicated, but White still has sufficient counterplay.

21.♘a7

It is not entirely obvious to me that this move is necessary, but I like this inclusion. If the rook goes to b7, the a-pawn will hang with tempo in some lines, and if it goes to a8, Black loses the ...b4 options.

21... $\mathbb{R}a8$ 22. $\mathbb{Q}f2$ $\mathbb{Q}d7$



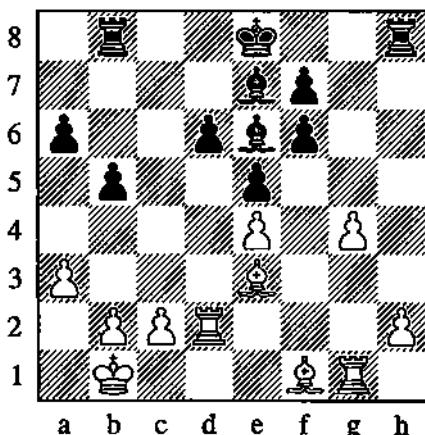
23. $\mathbb{B}d3!$

It is necessary to relieve the pressure down the h-file to prevent the white position falling apart.

23... $\mathbb{B}ah8$ 24. $\mathbb{B}xh3$ $\mathbb{B}xh3$ 25. $\mathbb{Q}g3$

White has managed to secure the kingside. Black will continue with his strategic plan, but White will have freedom to create counterplay. Most people would probably prefer to play Black here, but we should not forget that the h-pawn is passed and might become a hero one day...

19... $hxg4$ 20. $f\text{x}g4$



20... $\mathbb{Q}c4!!$

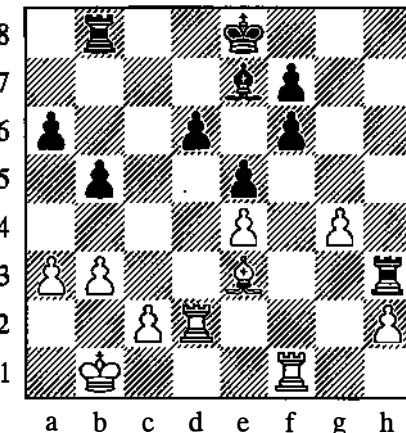
This is truly the star move of the game; the strategic surprise.

Anand said of this move: "Paradoxical? Yes, but this doesn't mean that the old positional rules have been suspended for the course of this game."

As Andrew Greet correctly pointed out, Black is also getting short-term positional things for trading his opponent's "bad bishop": the pressure against the h2-pawn and control over the great h3-square for the rook. Also, the weak d5- and f5-squares remind us of the open file in Nimzowitsch's *My System*, which you can control but not utilize when you have no rooks... Here White has rooks, but it is knights he needs.

But what I always liked is the way Anand looked at it strategically. Yes, the bad bishop is defending the backward pawns, which is how a positional look at it would be. But if you think ahead, as Anand did, you will see that Black first will exchange the d-pawn for the e-pawn and then the f6-pawn for the g4-pawn. Eventually, Black will be left with two majestic passed pawns in the centre. As happened in the game.

21.b3 $\mathbb{Q}xf1$ 22. $\mathbb{B}xf1$ $\mathbb{B}h3$



23. $\mathbb{B}e2?$

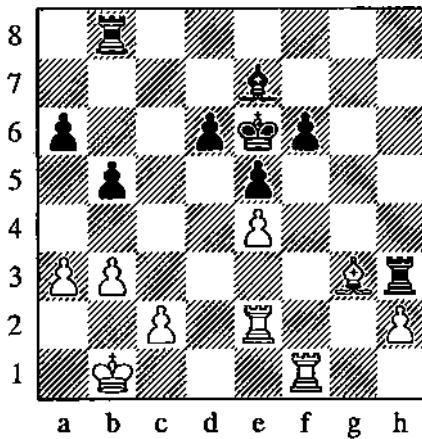
Anand correctly points out that Ivanchuk could have defended much better with 23. $\mathbb{Q}g1!$

when Black still has the initiative, but White can sort of neutralize it with a long sequence of very accurate moves. I don't want to fill a page with analysis, just state the obvious, which is that White needs to resist the black plan as explained above. And after the move in the game, White must accelerate his resistance.

23...♝d7 24.g5

This is forced, as after something like 24.♝c1 ♜bh8 25.♜f2 ♜3h4 26.♝g2 ♜g8 Black wins a pawn and shortly thereafter the game.

24...♝e6 25.gxf6 ♜xf6 26.♝d2 ♜e7 27.♝e1 f6 28.♝g3



28...d5

To me 28...♜d8! feels slightly more accurate, involving the rook. White is now able to generate a little counterplay.

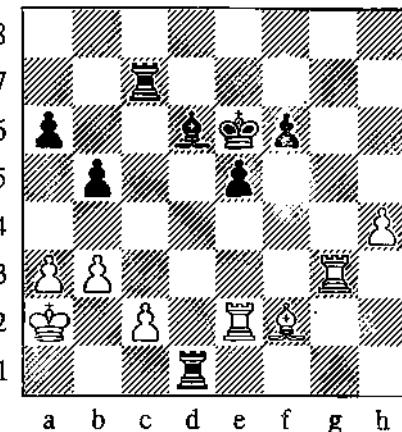
29.exd5† ♜xd5 30.♜f5 ♜c6! 31.♜ef2

31.♜f3!? might have offered more resistance.

31...♜h6 32.♝b2 ♜d7

Black is back in control.

33.♜e2 ♜d6 34.♜f3 ♜c8 35.♜e1 ♜e6 36.♜d3 ♜h7 37.♜g3 ♜c5 38.♝a2 ♜d7 39.♜c3 ♜cc7 40.h4 ♜d1 41.♜f2 ♜d6 42.♜g3



42...e4!

A nice little tactic to finish the game.

43.♜xe4† ♜e5 44.♜xe5† fxe5 45.♝b2 ♜d2 0–1

The idea that the rules of positional chess were suspended during the game, or never relevant at all, has been uttered about this game – not by Anand, but by other authors. I see it differently. Anand understands the properties of the pieces, how to place the pawns, and everything else there is known about positional chess. As does Ivanchuk. Neither player would be successful in trying to outplay the other by simple technical means, the way a grandmaster can outplay an amateur. But by combining long-term planning with a good understanding of the resulting pawn structure, Anand could “break the rules” by taking on weak pawns and a bad bishop. He did this, not because he did not understand the strategic concepts of bad bishops or backward pawns, nor was it because he did not think they were valuable. He played as he did, because he understood that in the long term he could end up with connected passed pawns. He also understood that the backward pawns and the bad bishops would not stay so.

What I love about this game is that seemingly poor positional decisions, made by Anand, were great positional options in the long term.

Expanding the definition

To me a strategic decision is not just long-term positional thinking, although this is a fair description of it. But what I am trying to do is group the main tools we need for decision making. To me, a strategic decision is one that cannot be made with calculation alone, and cannot be made by a positional evaluation with a low level candidate check.

Some problems can only be solved by a combination of calculation and deep positional thinking. We shall see some of them below in Giri – Harikrishna, but it will suffice to say that they are what the middlegame is about on grandmaster level. We pose each other deep problems that we might not even be able to solve half the time ourselves, in the hope that we can solve them better than our opponent. A lot of guessing is involved, of course.

(I should say that it is not uncommon to attempt to get some advantage from the opening and then test the opponent's technical abilities. It depends on the mood and style of the player. We see a lot of draws in such games these days, which is why there is a gravitation towards taking more risk. Even Magnus Carlsen is not managing to squeeze blood out of a stone in the endgame as often as he used to.)

Summing up

What I like about this division of decisions in chess is that although it is simplistic, it is also useful.

When we have automatic decisions, we should check carefully if it is so.

Simple decisions are made using our intuition, combined with a simple candidate search.

Critical moments require accurate calculation, preferably without using intuition/guessing.

Finally, strategic decisions require us to use all our tools: intuition, abstract thinking,

calculation, often ending with what can fairly be called a qualified guess.

It is a matter of taste how you spend your time during a game.

Automatic decisions should be made quickly, but not too quickly. There should always be time for a candidates scan.

Simple decisions should also not consume too much of our time. Often I see players who have already committed themselves to go in a certain direction then spend truckloads of time on accuracy in the implementation, only to realize that the move orders were virtually unimportant. I prefer to make my simple decisions in a few minutes.

I was never great at calculation and for this reason always preferred to save as much of my time as possible for it. This meant that I would guess more than others when making strategic decisions. Several top players follow a similar pattern, so it cannot be all wrong. I have strong intuition, which might have something to do with it.

There are more logical players who prefer to invest most of their time on the strategic decisions, trusting that their highly-developed calculation skills will be sufficient to exploit their advantage even with approaching time trouble.

I would suggest that you choose your own methodology consciously after a realistic assessment of your strengths and weaknesses. And that you reassess it from time to time.

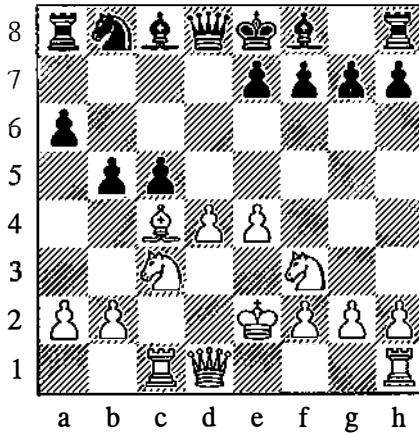
A recent example

The following recent game caught my eye because of its great complexity. After the automatic moves of preparation, both players face deep strategic problems immediately. Throughout the game both players face all four types of decisions. I shall discuss the most interesting of them in detail.

Anish Giri – Penteala Harikrishna

Wijk aan Zee 2017

1. $\mathbb{Q}f3$ $\mathbb{Q}f6$ 2. $c4$ $c5$ 3. $\mathbb{Q}c3$ $d5$ 4. $cx d5$ $\mathbb{Q}xd5$
 5. $e4$ $\mathbb{Q}b4$ 6. $\mathbb{Q}c4$ $\mathbb{Q}d3\#$ 7. $\mathbb{Q}e2$ $\mathbb{Q}xc1\#$ 8. $\mathbb{Q}xc1$
 a6 9. $d4$ b5

10. $\mathbb{Q}d5$ $\mathbb{Q}a7$

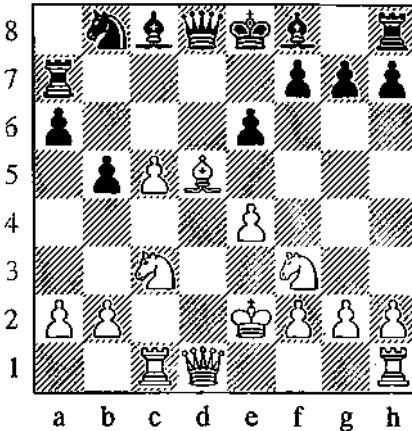
This variation is not wildly explored, but it seems that Giri has done his homework. The more I analysed, the more beautiful lines kept popping up all over the place. Giri works hard on the opening, and this and his very practical style makes him a difficult opponent for anyone, but also limits him a bit in potential, when we are talking about reaching a World Championship match. I generally find that the players who have had the chance to play for the highest honour in chess have all had a very deep style.

But then Giri is in his early 20s, so there is plenty of time for him to develop his style. Remember, Korchnoi was in his early 30s when he decided that he needed to rework his style from scratch.

11. $dxc5$

11. $\mathbb{Q}e5$ e6 12. $\mathbb{Q}c6\#$ $\mathbb{Q}e7$ 13. $\mathbb{W}d2$ f6
 14. $\mathbb{Q}d5\#$ $exd5$ 15. $\mathbb{Q}xc5$ $dxe4$ 16. $\mathbb{Q}hc1$ $\mathbb{Q}e6$
 was wildly unclear in Jakovenko – Sutovsky, Poikovsky 2016.

11...e6



12. c6!

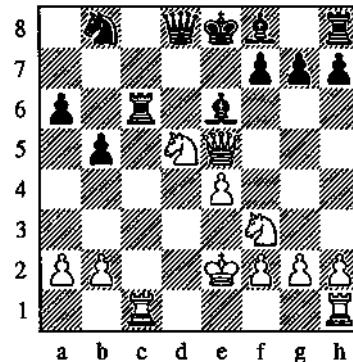
This was Giri's novelty, played after a minute and clearly prepared. It is an improvement over another complicated game, which went: 12. $\mathbb{Q}b3$ $\mathbb{Q}d7$ 13. $\mathbb{W}c2$ $\mathbb{Q}b7\#$ Jakovenko – Nepomniachtchi, Moscow 2012. Giri's move initiates a very sharp strategic battle with many finesse and possible variations to consider. Both players had to use all their abilities to choose a move in what follows.

Up to this point both players have performed automatic decisions.

12...b4!

After having been sprung this nasty surprise, Harikrishna plays the first part of the opening quite accurately.

12... $exd5$ 13. $\mathbb{Q}xd5$ $\mathbb{Q}c7$ 14. $\mathbb{W}d4!$ $\mathbb{Q}xc6$
 (14... $\mathbb{Q}e6$ 15. $\mathbb{W}e5$ transposes) 15. $\mathbb{W}e5\#$ $\mathbb{Q}e6$



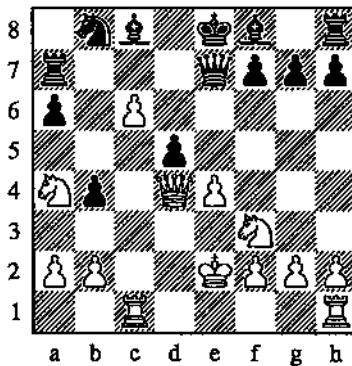
16. $\mathbb{E}hd1$ and White has a dangerous initiative. Black will either have to allow a check on c7 with the knight or give up the g7-pawn. For example: 16...f6?! 17. $\mathbb{Q}xc6$! fxe5 18. $\mathbb{Q}c7\#$ and White has a technically winning position.

At this point Giri went into the box for 25 minutes. I am certain that he has analysed this position in detail previously, so my suspicion is that he was checking the lines, trying to remember everything. It is possible that he had expected a different defence from Harikrishna for this game and 12.c6! was prepared for another occasion.

13. $\mathbb{Wd4}$ $\mathbb{E}c7$

Another spectacular line is the following (where obviously, there are a lot of alternatives along the way; the line is just to show the potential of the position).

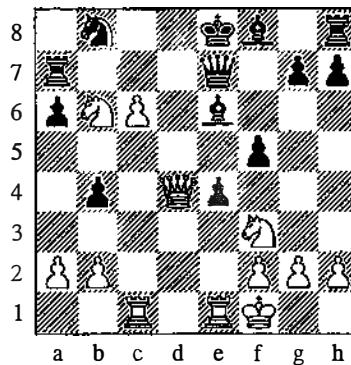
13... $\mathbb{W}e7$ 14. $\mathbb{Q}a4$ exd5



15. $\mathbb{E}he1$!

If you want to talk about strategic concepts, then this is the dream move for White to get to play, while it is not possible to see how Black is going to get either side of the board going. Still, a piece is a piece and White needs to keep the momentum.

15... dxе4 16. $\mathbb{Q}f1$ f5 17. $\mathbb{Q}b6$ $\mathbb{Q}e6$

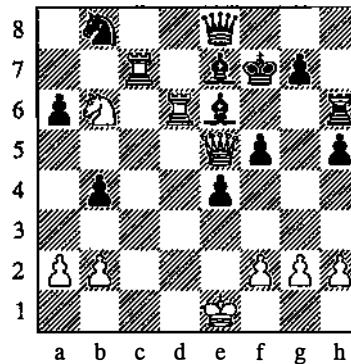


All of White's pieces are on attractive squares. It is time to do something active. And the knight on f3 is lacking a mission in life. So in comes a nice tactic.

18. $\mathbb{Q}g5$! $\mathbb{W}xg5$ 19. $\mathbb{W}e5$ $\mathbb{W}d8$ 20. c7 $\mathbb{E}xc7$
21. $\mathbb{E}xc7$ $\mathbb{Q}e7$ 22. $\mathbb{E}ec1$ $\mathbb{Q}f7$

Black is a move or two away from being back in the game. The next move exposes the poor position of the queen.

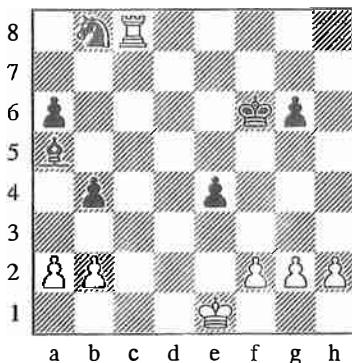
23. $\mathbb{Q}e1$! h5 24. $\mathbb{E}d1$ $\mathbb{W}e8$ 25. $\mathbb{E}d6$ $\mathbb{E}h6$



26. $\mathbb{E}xe6$! $\mathbb{E}xe6$ 27. $\mathbb{W}xf5\#$ $\mathbb{E}f6$ 28. $\mathbb{W}xh5\#$ g6
29. $\mathbb{W}h7\#$ $\mathbb{Q}e6$ 30. $\mathbb{W}h3\#$ $\mathbb{E}f5$

OK, I will throw in one little sideline, as I quite like it: 30... $\mathbb{Q}f7$ 31. $\mathbb{Q}d5$ $\mathbb{E}e6$ 32. $\mathbb{W}h7\#$ $\mathbb{Q}f8$ 33. $\mathbb{E}c8\#$ and White wins.

31. $\mathbb{W}b3\#$ $\mathbb{Q}f6$ 32. $\mathbb{Q}d5\#$ $\mathbb{E}xd5$ 33. $\mathbb{W}xd5$ $\mathbb{W}d8$
34. $\mathbb{W}xd8$ $\mathbb{Q}xd8$ 35. $\mathbb{E}c8$ $\mathbb{Q}a5$

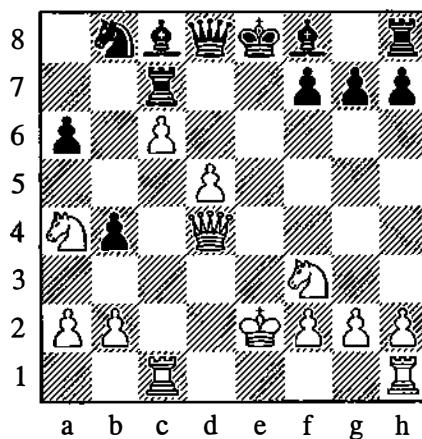


Black saves the piece with a little trick, but it does not save the position.

36.♗e2 ♗d7 37.♗c6†

White has a technical win ahead.

14.♕a4 exd5 15.exd5



15...♗e7?

If I were Harikrishna's trainer, this would be the main moment in the game I would bring up. I cannot see why the Indian grandmaster would choose the game continuation over:

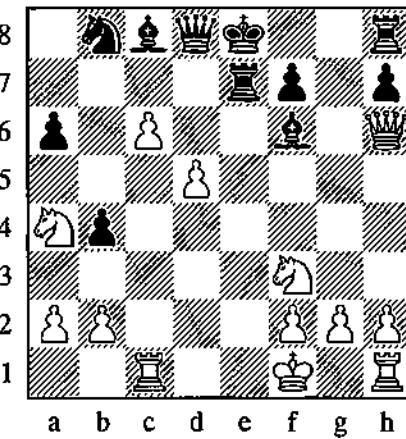
15...♗d6! 16.♗xg7 ♗e7† 17.♔f1 ♗f8 Black's position is unpleasant, but so is White's! The situation is completely unclear. The big difference between this and the game is that the bishop is not trapped on f6.

Is it fair to call this a simple decision for a 2700 player? The comparison between the position after 18.♔f1 in the game and 17.♔f1 in this line is not something that requires a lot of calculation or deep thought, which is also why it is surprising that Harikrishna did what he did. Simple does not mean easy, as you remember. And people get simple decisions wrong all the time.

Incidentally, it could be that he overlooked 17.♔d1? ♗e5! 18.♗xe5 ♗xd5† and Black wins, but somehow I doubt that this is what happened.

What follows are a few automatic moves for both players. After checking there were no alternatives, they played them.

16.♗xg7 ♔f6 17.♗h6 ♗e7† 18.♔f1



The white king is also blocking in the rook in this line, but Black is struggling to defend his bishop.

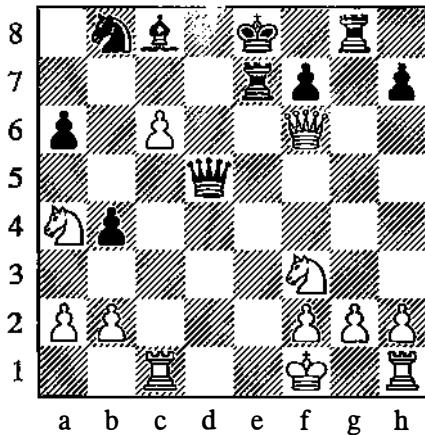
18...♗xd5?

Black gives the piece back to get things going at least a little bit. He thereby accepts that his chances will be purely practical and that his position is objectively lost.

18... $\mathbb{E}c7$ 19. $\mathbb{Q}b6$ is hopeless.

It is also possible that Harikrishna was planning to play 18... $\mathbb{Q}e5$ 19. $\mathbb{Q}xe5$ $\mathbb{W}xd5$, but realized that after 20. $\mathbb{Q}f3$ $\mathbb{W}b5\#$ 21. $\mathbb{Q}g1$ $\mathbb{W}xa4$ 22.h3, his position is entirely undesirable.

19. $\mathbb{W}xf6$ $\mathbb{E}g8$



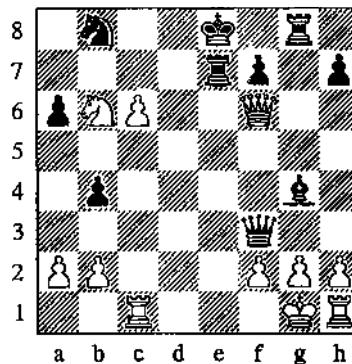
20.h3

Giri spent 25 minutes on this move, which is quite appropriate. He would have to use every tool in his toolbox to find a path for the next few moves. To work out how to get the rook on h1 into the game, to keep the king safe, he would need to both calculate and think abstractly.

Again, we can see that the positional concepts of chess are not obsolete. It is better to castle than to move the king to f1. But in complex strategic operations, we accept that we cannot do whatever we want. Everything is made up of trade-offs. White has a trapped rook on h1, but Black's king is stuck in the centre. White has a knight on the rim, but Black's knight on b8 is dominated. White has two extra pawns, Black is in trouble...

I guess Giri hoped he would be able to find something clear that would eliminate the counterplay, get the rook on h1 into the game, and thus secure the advantage. He failed.

20. $\mathbb{Q}g1!$ is objectively stronger, but there are many extreme tactics needed to make it work. The following is just one of them: 20... $\mathbb{E}g4$ 21. $\mathbb{Q}b6$ $\mathbb{W}xf3\#$



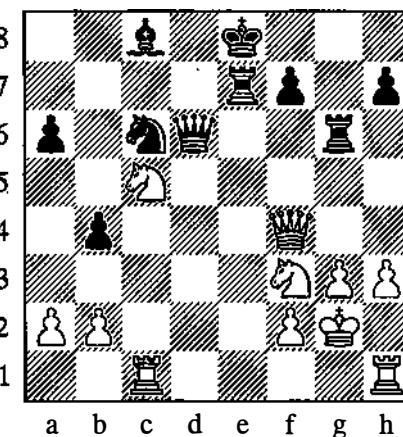
22.c7!! $\mathbb{E}xc7$ 23. $\mathbb{B}e1\#$ $\mathbb{Q}f8$ 24. $\mathbb{W}h6\#$ $\mathbb{E}g7$
25. $\mathbb{W}d6\#$ $\mathbb{Q}g8$ 26. $\mathbb{W}d8\#$ Enough to make anybody's head spin.

20... $\mathbb{E}e6$

The next few moves are not forced, but also not critical in nature. Both players do what they were planning to do; Harikrishna probably with some reluctance.

21. $\mathbb{W}f4$ $\mathbb{Q}xc6$ 22. $\mathbb{Q}c5$ $\mathbb{E}e7$ 23.g3 $\mathbb{E}g6$ 24. $\mathbb{Q}g2$ $\mathbb{W}d6$

Based on how his position was five moves ago, Black can be somewhat relieved. His position is still bad though...



25. $\mathbb{W}c4?$

And if I were training Giri, I would ask him about this decision, although in this case I would not know for sure what I would be thinking.

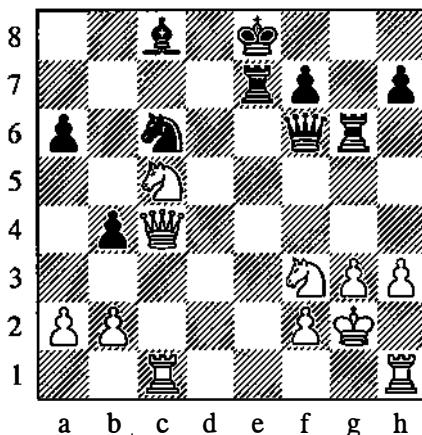
Again, this is in the potentially “simple” category. White needs to make a choice between several options and I think this move, although perfectly decent, is impractical.

25. $\mathbb{W}xd6 \mathbb{B}xd6$ 26. $\mathbb{B}hd1$ with an extra pawn and superior pawn structure looked like the sensible choice to me, but somehow Giri wanted more. It can be difficult to go for an endgame with an extra pawn, when quite recently the position was entirely winning.

Giri saw things differently. He felt the weakness of the black king, stuck in the middle, was more significant.

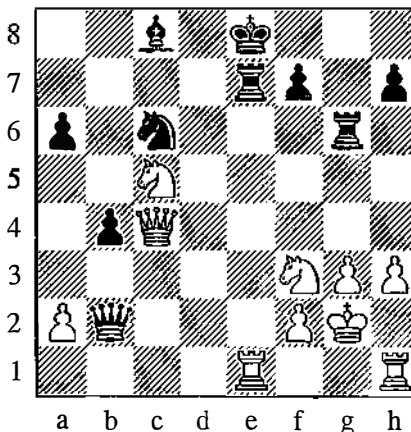
25... $\mathbb{W}f6$

25... $\mathbb{Q}e5\pm$ was better, but Harikrishna was already down to less than 10 minutes.

26. $\mathbb{R}ce1!$

Having committed to going for the attack, Giri puts pressure down the e-file with the correct rook.

26. $\mathbb{R}he1?$ $\mathbb{Q}xh3\#!$ would allow Black to come back into the game.

26... $\mathbb{W}xb2$ 

Giri still had a lot of time left. To me this was the moment he should have spent a lot of it finding something concrete. He spent 3 minutes and 51 seconds.

The interesting question is not what he should have played, more how he could have known that this was a moment worth investing 10-15 minutes into. The way I see it, White's pieces are all more or less as active as they can be without careful manoeuvring. This is my definition of a critical moment, which means that careful calculation should be applied.

27. $\mathbb{Q}a4?$

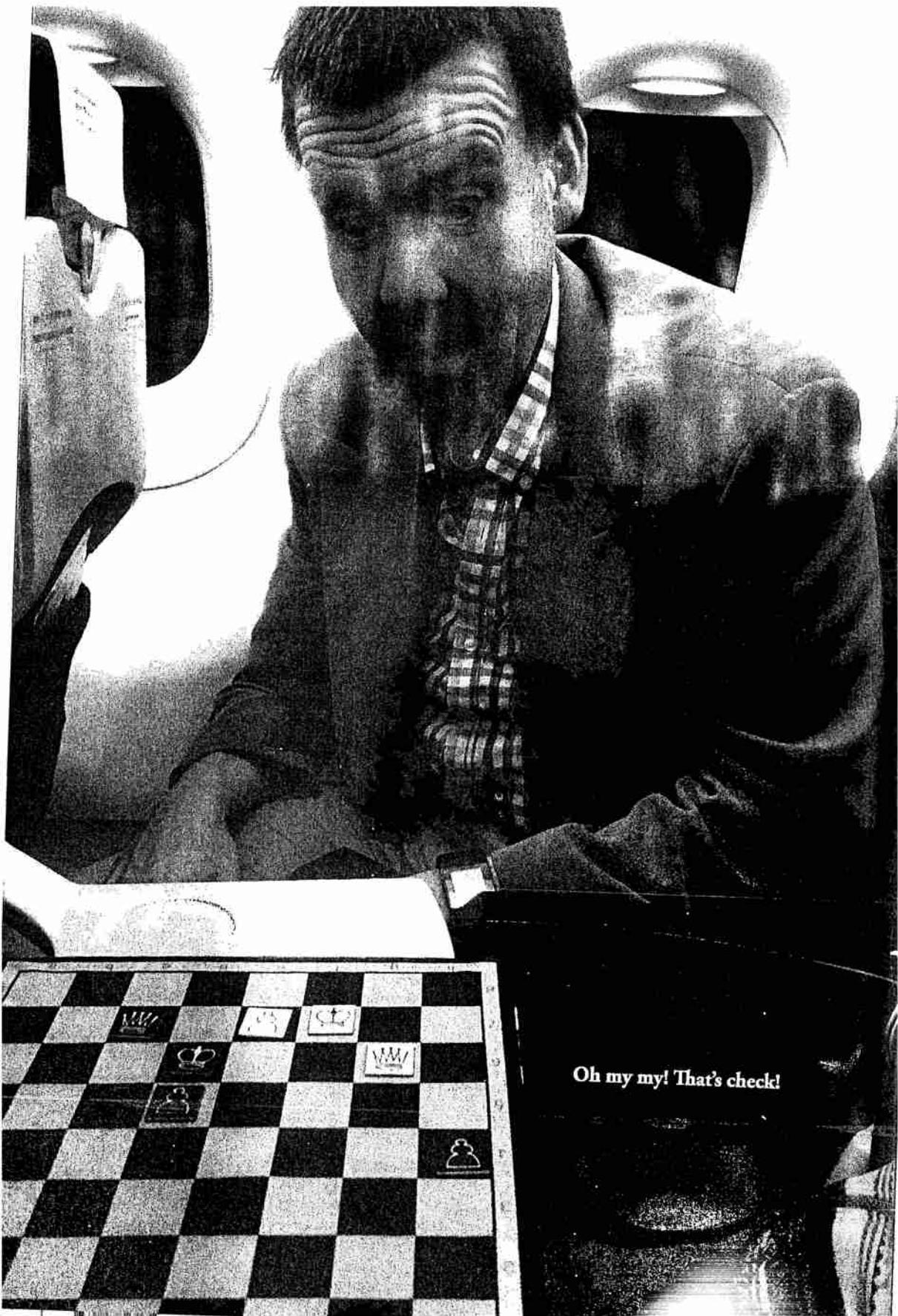
If Giri had gone into deep-thinking mode, he would have found the winning candidate move.

27. $\mathbb{W}f4!$ with a planned penetration on c7 is decisive. There are many possible lines, but once you see the idea, the rest will be much less difficult for a player of Giri's stature.

27. $\mathbb{B}xe7\#$ $\mathbb{Q}xe7$ 28. $\mathbb{Q}e4 \mathbb{B}c6$ 29. $\mathbb{W}d3$ followed by 30. $\mathbb{R}e1$ was also very strong, but not very concrete. Seeing this line is not hard, but realizing it is very strong is far more difficult.

27... $\mathbb{W}a3$

Harikrishna is playing the most natural moves.

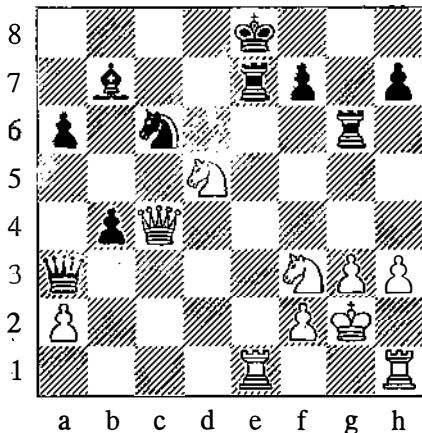


Oh my my! That's check!

28. $\mathbb{Q}b6?$

This loses, but 28. $\mathbb{Q}c5$, with a possible repetition of moves, was not the intention.

28... $\mathbb{B}b7$ 29. $\mathbb{Q}d5$



29... $\mathbb{B}ge6?$

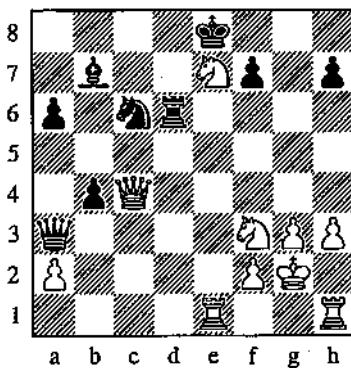
Harikrishna was already down to his last minute and had little chance to see the most amazing combination:

29... $\mathbb{B}d6!!$ 30. $\mathbb{Q}xe7$

This is the critical test, but there are other moves.

30. $\mathbb{W}c5$ $\mathbb{B}xd5!$ is a disaster for White.

30. $\mathbb{Q}c7\#$ $\mathbb{B}f8$ 31. $\mathbb{B}xe7$ $\mathbb{Q}xe7$ 32. $\mathbb{W}f4$ looks incredibly shaky. Black has equal material already and it is no surprise that he can win the game in many ways. The most human is 32... $\mathbb{B}c6$ simply taking the knight.



30... $\mathbb{Q}e5!!$

Blocking the e-file and opening the long diagonal is not enough for this brave stallion. It also attacks the queen and the big focal point for the black attack, the knight on f3.

31. $\mathbb{W}f4$

There is nothing better. 31. $\mathbb{W}b3$ simply transposes with the pawn on b3 instead of a2.

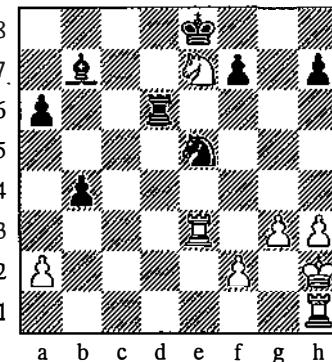
31... $\mathbb{W}xf3\#$ 32. $\mathbb{W}xh3$ $\mathbb{Q}xf3$

The threat of a discovered check is highly damaging. I personally cannot remember seeing a variation where a discovered check is met with a discovered double check!

33. $\mathbb{B}e3$ $\mathbb{Q}e5\#$

Black wins. People using the space bar to analyse games will not be able to work out how the game is played, as they will not look at the only human move:

34. $\mathbb{Q}h2$



But Black has a final combination. It is simple, but it is very beautiful.

34... $\mathbb{Q}g4\#!!$

This energetic horsey is very impressive!

35. $hxg4$

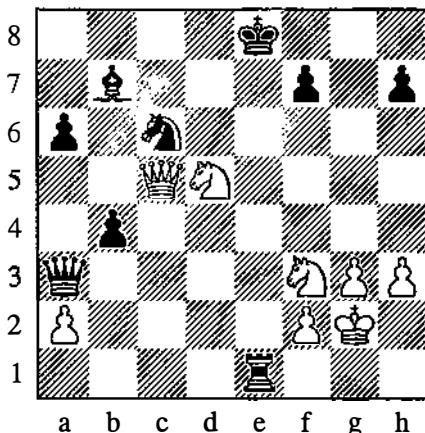
35. $\mathbb{Q}g1$ $\mathbb{B}d1\#$ is also mating.

35... $\mathbb{B}h6\#$ 36. $\mathbb{Q}g1$ $\mathbb{B}xh1\#$

But if we imagine that he did have a lot of time, it is not hard to see that this was a moment where pure calculation was needed. The pieces are hanging and both kings are in danger. No guessing or feeling your way is adequate for such a scenario.

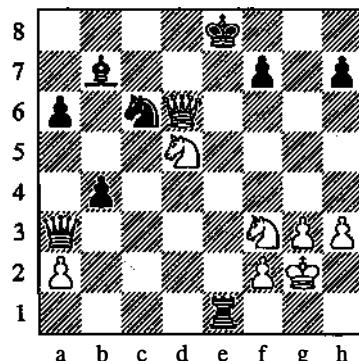
30. $\mathbb{W}c5 \mathbb{A}xe1?$

30... $\mathbb{W}d3!$ with an unclear position was best. But as the skipping record said: "out of time, out of time, out of time..."

31. $\mathbb{A}xe1 \mathbb{A}xe1$ 32. $\mathbb{Q}xe1?$

Something that puzzles me is that it took Giri 45 seconds to play this move. Either he looked at 32. $\mathbb{Q}f6\#$ briefly or, more likely, he was trying to decide on his next move in advance, in order to rattle his opponent and exploit his time trouble.

If Giri had seriously looked for alternatives, rather than believing that this was an automatic decision, I have no doubt that he would have found: 32. $\mathbb{W}d6!!$

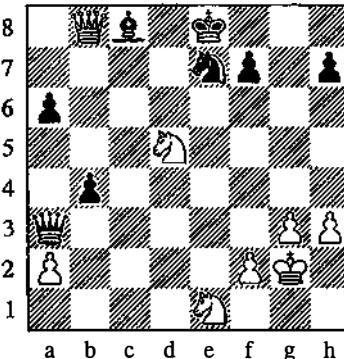


The obvious threat is mate in one.

Black's most logical reply is 32... $\mathbb{A}e7$, but after 33. $\mathbb{Q}d4!$ Black's position is collapsing.

Instead he would have to find 32... $\mathbb{Q}e7$, with only seconds on the clock, although after:

33. $\mathbb{W}b8\# \mathbb{Q}c8 34. \mathbb{Q}xe1$



White has made great progress. Forcing lines such as 34... $\mathbb{Q}xd5$ 35. $\mathbb{W}xc8\# \mathbb{Q}e7$ 36. $\mathbb{W}c5\# \mathbb{Q}e6$ 37. $\mathbb{W}c6\# \mathbb{Q}e5$ 38. $\mathbb{Q}f3\# \mathbb{Q}e4$ 39. $\mathbb{W}c4\# \mathbb{Q}e3$ will rattle off the tongue from a super-GM as he overtakes an old lady on the motorway, juggling four full glasses of beer – or whatever he likes to drink when celebrating a great victory (Giri is rather well-dressed, so it is plausible we are talking high-end red wine or even expensive water with bubbles...).

To me there is only one explanation that makes sense, which is that Giri did not see this option. The fact that I found it in about five seconds, when a friend told me that Giri had missed something, is what assures me of this. It was my first alternative to taking on e1. It does threaten mate after all.

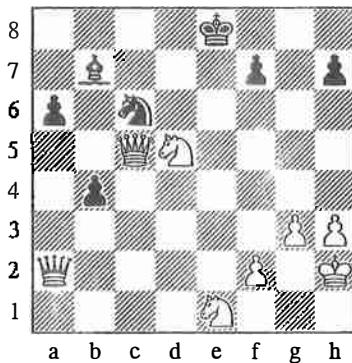
Using the guideline of automatic decisions – that we should always check if it is really so – should have helped.

32... $\mathbb{W}xa2?$

32... $\mathbb{W}a5!$ would force a draw (after 33. $\mathbb{Q}f6\#$), as after 33. $\mathbb{W}d6\#! \mathbb{W}xd5\#$ 34. $\mathbb{W}xd5\# \mathbb{Q}d8$ 35. $\mathbb{W}xb7 \mathbb{Q}xb7$ the endgame is slightly more pleasant for Black.

33. $\mathbb{Q}f3??$

There was a last random chance to play for the win: 33. $\mathbb{Q}h2!$



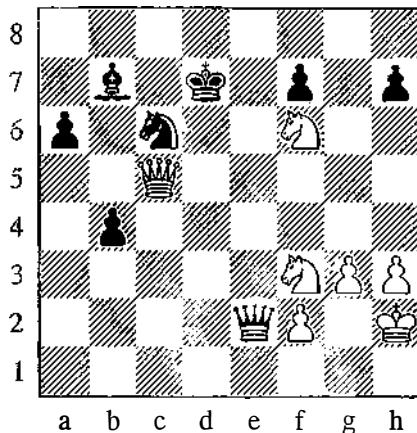
This gives Black problems, because the pin is gone and White is threatening $\mathbb{Q}d3$ and then all the usual stuff with $\mathbb{W}d6$, $\mathbb{Q}f6\#$ and so on. The binary oracle comes up with the following variation as making sense: 33...f5! 34. $\mathbb{Q}d3$ $\mathbb{W}e2$ 35. $\mathbb{W}d6$ b3 36. $\mathbb{Q}c7\#$ $\mathbb{Q}f7$ 37. $\mathbb{W}d5\#$ $\mathbb{Q}e7$ 38. $\mathbb{W}xb3$ $\mathbb{Q}d6$ 39. $\mathbb{W}xb7$ $\mathbb{W}xd3$ 40. $\mathbb{Q}xa6$ $\mathbb{W}f3$ and Black still has drawing chances.

It is one of those lines that feels easy to explain afterwards, but is very difficult to find in the heat of the battle.

33... $\mathbb{Q}d7$ 34. $\mathbb{Q}h2?$

A half-hearted attempt to play for a win with the opponent running out of time? Contrary to on the previous move, this is now a bad move. Giri must have sensed after this move that he was losing control, as he then decided to go for a draw.

34... $\mathbb{W}e2!$ 35. $\mathbb{Q}f6\#$



35... $\mathbb{Q}c7?$

Totally out of time Harikrishna does not look for an advantage. After 35... $\mathbb{Q}c8!$ 36. $\mathbb{W}f8\#$ $\mathbb{Q}d8$ 37. $\mathbb{W}c5\#$ $\mathbb{Q}c6$ 38. $\mathbb{Q}e5$ $\mathbb{W}b5!$ he would have good winning chances, but there is still a lot of play left.

36. $\mathbb{Q}d5\#$

$\frac{1}{2}-\frac{1}{2}$

I am sure some will argue that the rear-view mirror thinking of analysing a strong player's games with an engine, and then saying that they should have spent more time at various moments, is highly unfair. It would be, if the purpose was to judge the players in any way. But I am coming from the starting point that these are some of the greatest players in the world, which is why they are in this prestigious event, so let's get back to debating how chess can be played better.



Using the Four Categories in Training

In my experience, it is very useful to use the *four categories* when training. I generally believe that we should not try something for the first time over the board, and that the ideal situation would be if we have been able to internalize the method to such an extent that we do not have to remember to apply it.

My forthcoming book *The Best Move*, a part of the *Grandmaster Training* series, will have sets of six exercises, where you can do them in any which way you like. You can do them one at a time or go back and forwards between them as you like. At the end of the period you set for yourself, which can be anywhere from 20 to 60 minutes, you write down your solution to all six exercises.

The purpose of this type of exercise, which is inspired by Mark Dvoretsky as always, is to practise handling time better. It is possible to prescribe a method of time management during the game, but methods presume that we are all the same. We both are and are not.

When it comes to those types of decisions we make easily and those we struggle with, it makes sense to use Mark's model of four types of chess personalities, as described on page 69. We all have our strengths and weaknesses.

What I like about these "sheets" is that it gives each player a chance to work out his or her own balance between the different types of decisions and distribute it better as they progress with the training. Combined with an understanding of which types of thinking we need to apply to what types of problems, we will be able to make better decisions, more quickly, and manage our time more consciously and, eventually, better.



Chapter 6

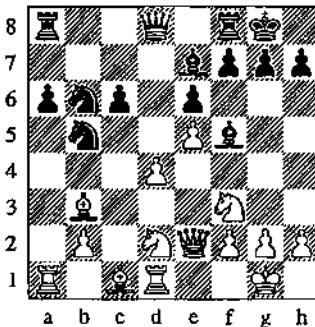
Simple Decisions



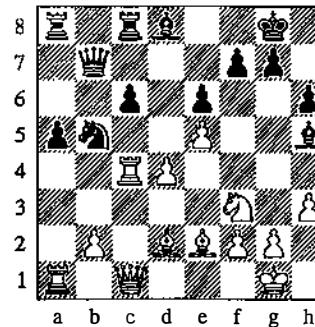
Teaching 11 grandmasters in Chennai, I heard noise from the adjacent room. As the GMs were solving exercises, I went to check it out. I found five young boys messing about! I decided to teach them a lesson and set up an impromptu simultaneous. I managed to win four of the games, but despite having a big positional advantage, I was unable to win with White on the board nearest to the camera. In the end I even had to hang on for the draw...

Test yourself against the book

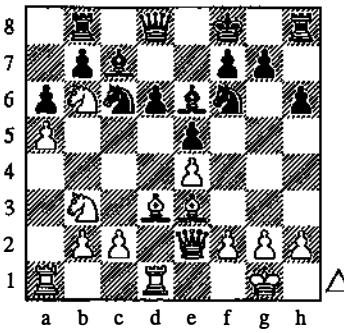
This book is not an exercise book, but an experienced trainer can always find interesting moments in games that can be more effective for the student if he thinks about them first. On this page, I have included a few positions from this chapter that you can look at, should you feel so inclined. As long as it does not make you put off reading the chapter!



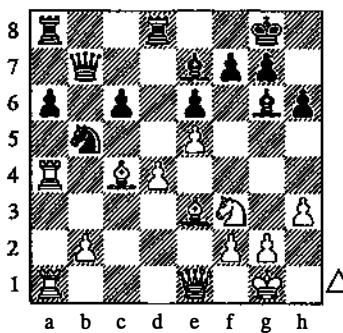
Where should the knight go?
(see page 145)



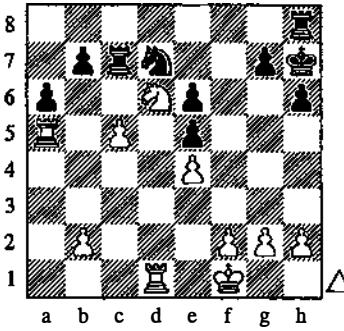
Me too!
(see page 148)



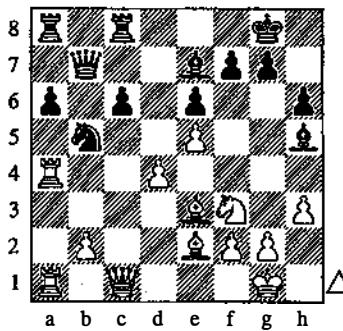
Just improve your position
(see page 141)



Simple prophylaxis. Can you
find my move in two minutes?
(see page 146)



An easy shot
(see page 143)



Try to think deeply here, this is
anything but trivial!
(see page 147)

Not only was my technique poor when I was younger; all of my decision making in quiet positions was questionable. I simply did not know what I was looking at or for. It was only later that I understood that I was thinking about “simple decisions”. I did not know exactly what I was looking for, but I knew I would see it when I saw it.

I started out by looking at Peter Leko’s games. It was sort of random, but it made a great impact on me and I think it would be a good starting point for anyone. Leko was exceptionally strong for a while, winning the 2002 Dortmund Candidates Tournament in front of Topalov and leading the World Championship match in Brissago against Vladimir Kramnik. My book *Excelling at Positional Chess* includes some of his games leading up to those successes. The clarity of his thinking was transparent from the games and, as I was to find out later, also from his annotations. Hopefully he will write a book on his best games one day.

At one point, by means of an abstract association with another subject, I realized that often the problem is not that we are unable to come up with the right answers; but rather that we fail to understand which questions we should be asking.

One day I spent an afternoon writing a long list of recurring questions; I then pruned it. I wanted a very short list: one I could remember.

|

1. Where are the weaknesses?
2. What is my opponent’s idea?
3. Which is the worst placed piece?

These three questions are the most relevant ones. Games are decided on the weakest squares; our opponent moves roughly as often as we do; and your position can always be improved by bringing in the worst placed piece, or by preventing your opponent’s worst placed piece from getting into the game or being exchanged.

I have used these questions as a player, as a writer and as a trainer. I use them with players rated 180, 1800 and 2680. They are universal, because they allow us to access our disorganized knowledge of the position and focus on the most important aspects of it.

Grandmaster Preparation – Positional Play is all about using these three questions in your training. The follow-up, *Grandmaster Preparation – Strategic Play* is also based on this division of importance.

I used to tell everyone that this was meant as a training method only, designed to help you develop a better intuition – a better feeling for what is important in the position. And it does do that. But some time after I said this, Grandmaster Sabino Brunello said that he uses it frequently in his games, especially when he is out of shape. This was a good reminder of one of the main tenets of my beliefs: the fact that *teaching should be simple* does not mean it is without value. My main reason for underplaying the value of the three questions is simple: I did not want to come across as self-important.

Every chess player wants to play good moves consistently. This sounds simple, but the reality is that it is anything but easy to do. Thus to have a system, a method, makes sense. Many players have a vague feeling for what their opponent is up to; an even vaguer feeling for what a weakness is; and no feeling at all for the concept of the worst placed piece. Such players will benefit immensely from working with these three questions.

At the end of this chapter, you will find a page of exercises, where you can test your simple decision making. If you feel that this area is something you want to work more on, I will do my job as a publisher and say I would kick myself if I didn't refer you to *Positional Play*, a book which I am personally very fond of.

There are, or course, other relevant questions that you could consider asking yourself. For example: *How can I ever lose this position?* – a question I wish some of my students would think from time to time. Or the last question to be mutilated by the eraser: *What are my advantages in this position?* You can always find your own recurring questions; I think it would be an interesting exercise.

Being practical

One of the things I learned, when I started thinking about getting better at making simple decisions, was the importance of playing move by move. When I did not clearly see such things as weaknesses, my opponents(!), and misplaced pieces, I would use the only tool I had in my box: calculation. And it would lead me to try to calculate as far as possible, often trying to force matters in positions where it was not warranted.

Learning to make decisions in a different way did not hurt my ability to deliver heavy blows, as you can see elsewhere in the book. But it did make it possible to play other types of positions just as well, which is useful once the attack is over and mate did not happen. Or to play an entirely different type of game, such as the following.

Jacob Aagaard – Michael Bezold

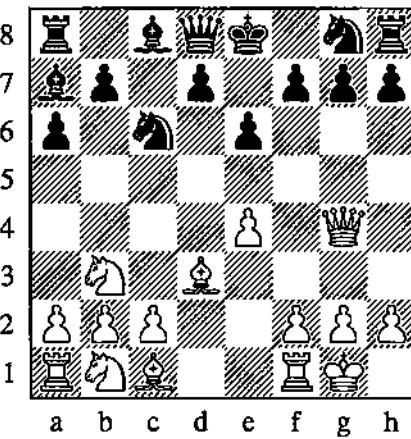
Stockholm 2004

1.e4 c5 2.♘f3 e6 3.d4 cxd4 4.♗xd4 a6
5.♗d3 ♜c5 6.♗b3 ♜a7 7.0–0 ♜c6

At the time of the game I believed 7...♝e7 to be a better move, but the truth is that each option has its pros and cons. Michael's move maintains the option of putting the king's knight on f6, where it is generally more active than on e7, but the drawback is that it invites my next move.

8.♗g4

8.c4 results in the kind of fixed central structure which I find less appealing.



8...♞f6?

Michael played this with a smile. I later saw that he had played this before, which must have been why he was smiling. Moving the king may not be objectively such a bad move, but I certainly would not aim for Black's position.

8...♞f6?! is the critical continuation, offering a pawn sacrifice which I have always been a bit nervous about accepting – although Parimarjan Negi has recently provided excellent guidance for White in *Grandmaster Repertoire – 1.e4 vs the Sicilian III*.

For a while I believed 8... $\mathbb{W}f6$ 9. $\mathbb{Q}c3$ $\mathbb{Q}ge7$ to be the right way to handle Black's position, but White is doing well here too, as Negi demonstrates.

9. $\mathbb{W}e2!$

I did not want to try to refute his odd move, but rather to continue the game with simple play, allowing him to struggle with solving the problem of his king, on top of the other issues Black usually has from the beginning. So, I decided to exchange the dark-squared bishops and finish my development. It was both a good practical decision and an objectively correct one.

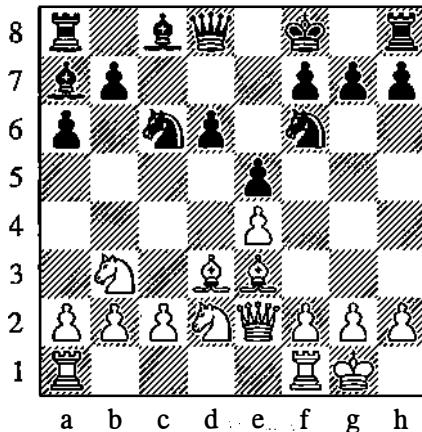
9...d6 10. $\mathbb{Q}e3$

10.c4?! was another possible way to play but, as said, I prefer more flexible structures.

10... $\mathbb{Q}f6$ 11. $\mathbb{Q}1d2!$

I really like this move, because it eyes the c4-square. The weaknesses on b6 and d6 are the main targets.

11...e5



12. $\mathbb{R}fd1!$

Negi only covers the 8... $\mathbb{Q}f8$ line in the briefest of notes in his book. He references the present game up to this point, commenting

that "it's just a normal position where Black's king is on a strange square", which seems accurate enough!

Notice the choice of the correct rook on White's last move. There is nothing to achieve on the kingside for White – the pieces are not pointing in that direction and the weaknesses are on d5, d6 and b6.

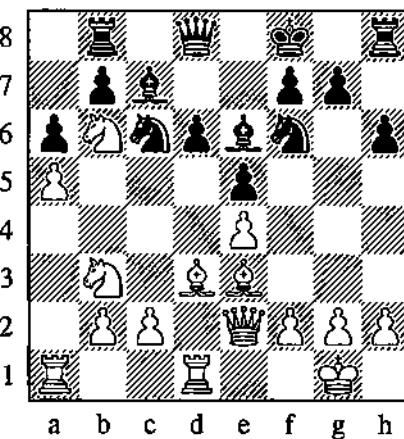
12...h6 13.a4

Trying to fix the b7-pawn and keeping my advantages, especially by establishing a strong knight on c4.

13... $\mathbb{Q}b8$

13... $\mathbb{Q}xe3$ 14. $\mathbb{W}xe3$ g6 was the best choice. White has a slight edge after 15.a5, and it is one of those that will not go away easily – but at least Black will be able to finish his development.

14. $\mathbb{Q}c4$ $\mathbb{Q}c7$ 15.a5 $\mathbb{Q}e6$ 16. $\mathbb{Q}b6$ $\mathbb{B}b8$



17. $\mathbb{Q}c4!$

The bishop is my weakest piece, so exchanging it makes a lot of sense.

17... $\mathbb{Q}xa5!?$

Bezold is trying to mix things up.

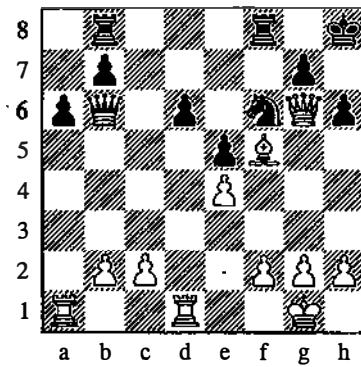
17... $\mathbb{Q}xc4$?! 18. $\mathbb{Q}xc4$ $\mathbb{Q}xe4$ does not work; White plays 19.f3 $\mathbb{Q}f6$ 20. $\mathbb{Q}xd6$! with a big advantage.

18. $\mathbb{Q}xe6$!

18. $\mathbb{Q}xa5$ $\mathbb{Q}g4$! 19.f3 $\mathbb{Q}xb6$ is more tolerable for Black than the game.

18...fxe6

18... $\mathbb{Q}xb3$ 19. $\mathbb{Q}xb3$ $\mathbb{Q}xb6$ does not work on account of 20. $\mathbb{W}c4$! $\mathbb{Q}g8$ 21. $\mathbb{W}xf7\#$ $\mathbb{Q}h7$ 22. $\mathbb{Q}e6$! $\mathbb{Q}f8$ 23. $\mathbb{Q}xb6$ $\mathbb{W}xb6$ 24. $\mathbb{Q}f5\#$ $\mathbb{Q}h8$ 25. $\mathbb{W}g6$ with a winning advantage:



If Black does nothing, White will play c2-c3, $\mathbb{E}d2$ and $\mathbb{E}ad1$, when the black position will become intolerable. And after 25... $\mathbb{W}xb2$! White plays 26.g4! with the threat of h2-h4 and g4-g5 (or simply g4-g5 immediately), when the opening of the h-file will be devastating.

19. $\mathbb{Q}xa5$ $\mathbb{Q}xb6$ 20. $\mathbb{Q}c4$

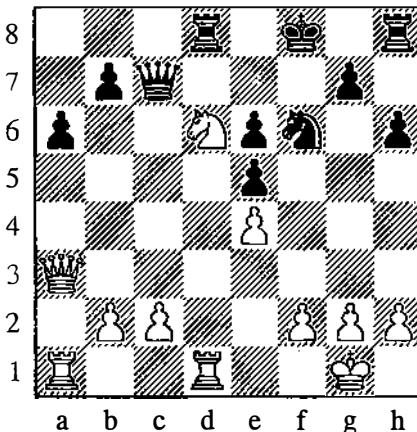
I chose this move order, as it allowed me to get my queen to a3.

I rejected 20. $\mathbb{Q}xb6$ $\mathbb{W}xb6$ 21. $\mathbb{Q}c4$ on account of 21... $\mathbb{W}c7$ 22. $\mathbb{Q}xd6$ $\mathbb{E}d8$, but had missed that White would keep his advantage with 23. $\mathbb{W}c4$!.

20... $\mathbb{Q}xe3$ 21. $\mathbb{W}xe3$ $\mathbb{W}c7$ 22. $\mathbb{Q}xd6$ $\mathbb{E}d8$

22... $\mathbb{Q}g8$ 23. $\mathbb{W}b3$! $\mathbb{W}e7$ 24.c4 is even worse for Black.

23. $\mathbb{W}a3$

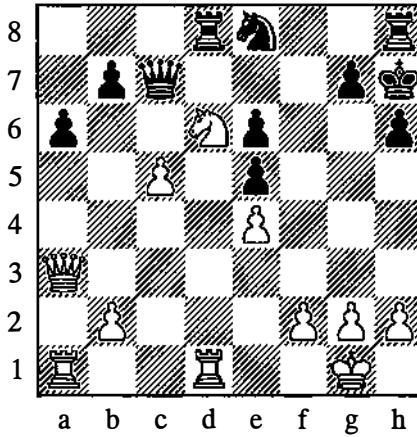


This was the plan. Keep control. However, I did not manage to draw up a plan for how to exploit my advantage. Simply play can only take you so far; at some point, strategic thinking should take over.

23... $\mathbb{Q}g8$ 24.c4!

Preparing to support the knight.

24... $\mathbb{Q}h7$ 25.c5 $\mathbb{Q}e8$



26. $\mathbb{Q}c4$!

This loses a bit of time. But as I said, I was struggling to work out a way to exploit my advantage. So, I continued to improve my position. This is the way Capablanca played,



relying more on the opponent's mistakes than on good moves of his own.

It was possible to play 26... $\mathbb{Q}ac1!$ and keep full control.

26... $\mathbb{Q}f6$ 27. $\mathbb{W}a5!?$

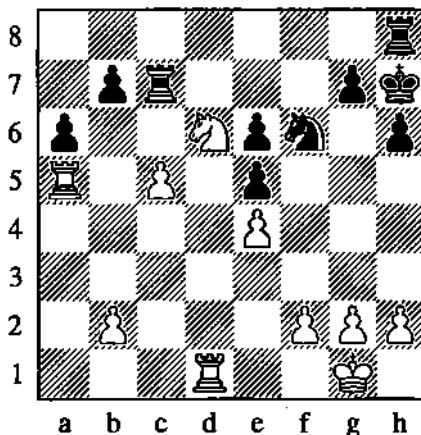
At the time I believed that exchanging the queens would make b7 weak. I now think that the queen on c7 was poorly placed, and the white queen could have been used to put pressure on the e-pawns.

27.b4 and 27.f3 were the "simple" options.

27... $\mathbb{E}c8$

27... $\mathbb{E}xd1\#$ 28. $\mathbb{E}xd1$ $\mathbb{E}c8$ 29.b4 $\mathbb{Q}xe4$ 30. $\mathbb{W}a1$ $\mathbb{E}d8$ 31. $\mathbb{E}e1$ $\mathbb{W}c6$ 32. $\mathbb{W}xe5$ $\mathbb{W}d5$ and Black is within reach of a holdable position.

28. $\mathbb{Q}d6$ $\mathbb{W}xa5$ 29. $\mathbb{E}xa5$ $\mathbb{E}c7$



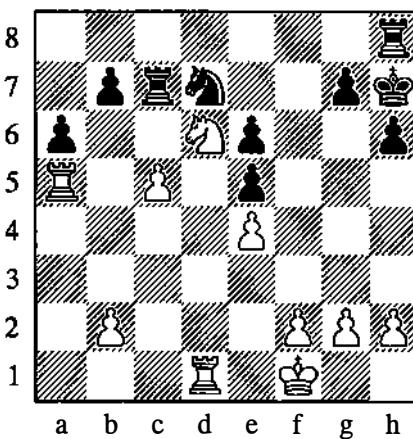
30. $\mathbb{Q}f1!?$

The correct way to play the position was 30.b4! $\mathbb{E}d8$ 31. $\mathbb{E}a1$ $\mathbb{Q}g8$ 32. $\mathbb{E}e7$ 33. $\mathbb{Q}f2$ $\mathbb{Q}c6$ 34. $\mathbb{E}ab1$ with a nice advantage.

30... $\mathbb{Q}d7?$

This often happens when you are defending a worse position for hours on end – you miss something.

30... $\mathbb{E}d8$ was the last chance. After 31. $\mathbb{Q}e1$ White's position is wonderful, but Black can play 31... $\mathbb{Q}g8!$ heading for c6, with drawing chances.



31. $\mathbb{Q}xb7!$ $\mathbb{E}xb7$

31... $\mathbb{E}b8$ 32.c6! also wins.

32.c6 $\mathbb{E}b6$ 33.cxd7 $\mathbb{E}d8$ 34. $\mathbb{E}c5!$

1-0

Prophylaxis

When you calculate a lot, there is a tendency to prioritize forcing moves, as said above. When you do this, you prioritize your own plans over those of your opponent and limit yourself. I had to learn to make short-term decisions, the aim being to improve the position and without necessarily trying to take control of the direction of the game.

I never became a great technical player, even if I played some good positional games from time to time. I really like the following game. Even if it does not look like a great win when you look at it with an engine, it felt as if I had played one of my best games right after it was finished. I managed to use a combination of small manoeuvres and various prophylactic ideas. As engines do not plan, they cannot see the value in frustrating the opponent's plans; all they do is calculate. But humans make plans; and if they cannot be carried out, we get frustrated.

The game was played at my first Danish Championship for four years. At the time, Lars had a daily column in a Danish newspaper. Before the tournament, he had annotated one of my games with the headline MATE. In round one I won a nice ending, with checkmate. The headline was MORE MATE. Then came this game.

Jacob Aagaard – Lars Schandorff

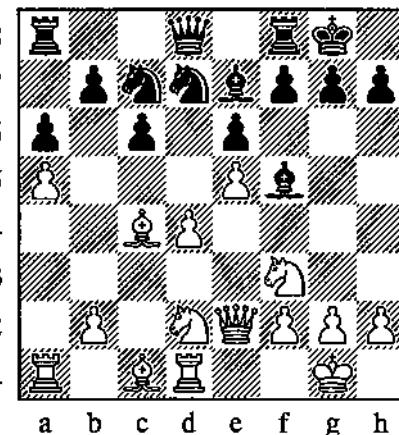
Hillerød 2010

1.e4 c6 2.d4 d5 3.e5 ♕f5 4.♕d2

A repeat of the system that gave me a winning position in the second round (see page 180 for the end of this game). This time around I was sort of rested and ready to take my chances as they came. As a result, I played a decent game. There was a twist to this game: Lars had recently finished a book on the

Caro-Kann, written for Quality Chess. As the publisher, I had the book on my computer, as well as a dilemma. I did not consider it ethical for me to read the chapter before the book was published, nor did I think that John Shaw, the editor of the book and my helper in this tournament, should read it either. He said he thought he knew what Lars would play, as there is a manoeuvre he likes a lot in the Caro-Kann (kingside knight to b6, I later learned); however, he did not advise me of this before the game.

4...e6 5.♕b3 ♔d7 6.♕b3 ♔e7 7.♔e2 ♔c8
 8.a4 ♔e7 9.a5 a6 10.0–0 0–0 11.c4 dxc4
 12.♔xc4 ♔a7 13.♔e2 ♔b5 14.♔d1 ♔c7
 15.♔bd2



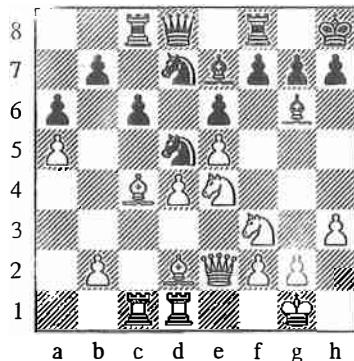
This was all my preparation. Lars had focused on 15.♔e1 in his book.

15...b5?N

Lars is not happy with passive defence and decides to accept isolated pawns in exchange for freedom of movement.

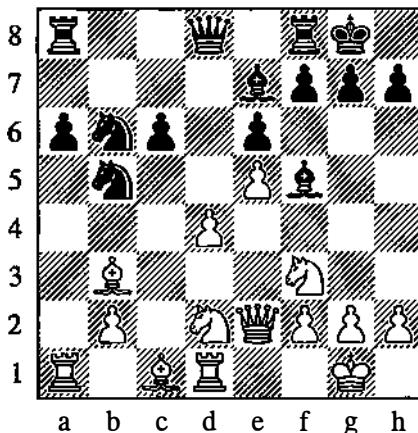
15...♗d5 16.♗e4± was the end of my preparation. In general, it is difficult for Black to free his position with any pawn breaks without creating weaknesses. An earlier game continued: 16...♗g6 17.♗d2 ♗h8 18.h3 ♘c8

19. $\mathbb{Q}ac1\pm$



19... $\mathbb{Q}e8$ 20. $\mathbb{Q}d3$ c5 21. $\mathbb{Q}eg5$ $\mathbb{Q}xg5$ 22. $\mathbb{Q}xg5$
 $\mathbb{W}e7$ 23. $\mathbb{Q}xg6$ $\mathbb{Q}xg6$ 24. $\mathbb{Q}e4$ cxd4 25. $\mathbb{Q}d6$
 $\mathbb{Q}xc1$ 26. $\mathbb{Q}xc1$ $\mathbb{Q}f8$ 27. $\mathbb{Q}xd4$ $\mathbb{Q}b8$ 28. $\mathbb{Q}d2$ $\mathbb{Q}c6$
29. $\mathbb{Q}c4$ g5 30. g3 h6 31. h4 gxh4 32. $\mathbb{Q}xh4$ $\mathbb{Q}g8$
33. $\mathbb{W}h5$ $\mathbb{Q}f7$ 34. $\mathbb{Q}xh6$ gxh6 35. $\mathbb{Q}xf7$ $\mathbb{W}xf7$
36. $\mathbb{Q}g4\#$ $\mathbb{Q}f8$ 37. $\mathbb{W}xh6\#$ $\mathbb{Q}e8$ 38. $\mathbb{W}h8\#$ 1–0
Fedorov – Itkis, Bucharest 2008.

16. axb6 $\mathbb{Q}xb6$ 17. $\mathbb{Q}b3$ $\mathbb{Q}b5$



18. $\mathbb{Q}c4$

I have a feeling that this exchange aids Black.

If I had the same position today I would play 18. $\mathbb{Q}e4!$?.. I was worried about 18... $\mathbb{Q}g4$ but White can play 19. $\mathbb{Q}c2!$?, when he is still fighting for an advantage.

Another idea is 19. $\mathbb{Q}g3!$?, intending

19... $\mathbb{Q}xf3$ 20. $\mathbb{W}xf3$ $\mathbb{Q}xd4$ 21. $\mathbb{W}g4$. However, Black can counter with 21... $\mathbb{Q}xb3!$ 22. $\mathbb{Q}xd8$ $\mathbb{Q}fxd8$, with sufficient compensation for the queen.

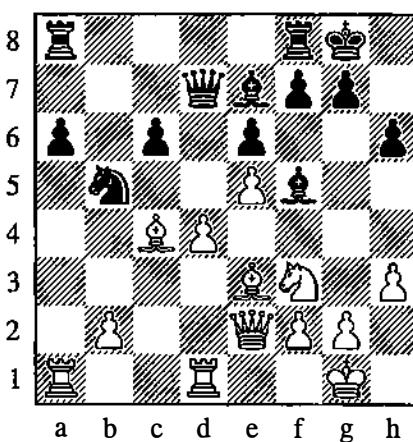
18... $\mathbb{Q}xc4$ 19. $\mathbb{Q}xc4$ h6

19... a5 was the move I wanted to prevent. I was planning 20. d5!?. exd5 21. $\mathbb{Q}xb5$ cxb5 22. $\mathbb{W}xb5$, although it is not clear if White is better here. Maybe 20. $\mathbb{Q}d3$ should be preferred, with the aim of simplifying to exploit White's superior pawn structure.

20. h3

Based on the idea that if he has time for such a move, so do I.

20... $\mathbb{W}d7$ 21. $\mathbb{Q}e3$



21... $\mathbb{Q}fb8$

I do think Lars became a bit flustered here. He had probably been thinking that 21... $\mathbb{Q}e4?$! would be a move if I ever put the bishop on e3, but after 22. $\mathbb{Q}d2!$ $\mathbb{Q}d5$ 23. $\mathbb{Q}d3!$ his kingside would suddenly come under a terrible attack.

Lars later said that things could have gone differently if he had placed his rooks better to start with; I think he meant on d8. I am not sure I would have played in the same way though.

22.♖a4

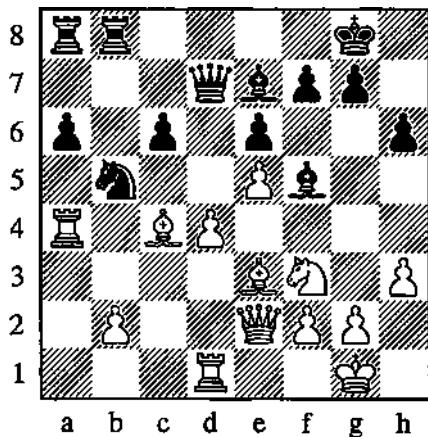
Covering $\text{d}4$ and preparing to pile up on $\text{a}6$.

22...♗d8

22... $\text{c}5?$ targets the rook on $\text{a}4$, but after 23. $\text{dxc}5$ $\text{Qd}4$ 24. $\text{Qxd}4$ White gets a winning attack in the centre.

The right way to create counterplay was 22... $\text{Qc}7!$ 23. $\text{Bd}1$ $\text{Qd}5$ 24. $\text{Bxa}6$ $\text{Bxa}6$ 25. $\text{Bxa}6$ $\text{Qxe}3$ 26. $\text{fxe}3$ $\text{Qe}4$ and Black has decent play for the pawn.

In the game Lars tries to solve his problems without giving any sort of concessions. This is rarely possible when you have extra weaknesses, as is the case for Black here.

**23.♖d1**

23. $\text{Bc}1!?$ was also annoying. The idea would be to play $\text{Bd}3$ and put pressure on $\text{c}6$.

23...♗b7 24.♗e1!?

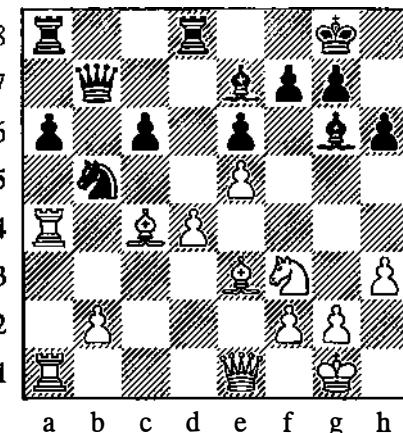
This is a prophylactic idea. I am taking control over the $\text{a}5$ -square and preparing $\text{Be}2$ and $\text{Qd}2-\text{b}3/\text{c}4$, when White would have a real advantage.

24...♗g6

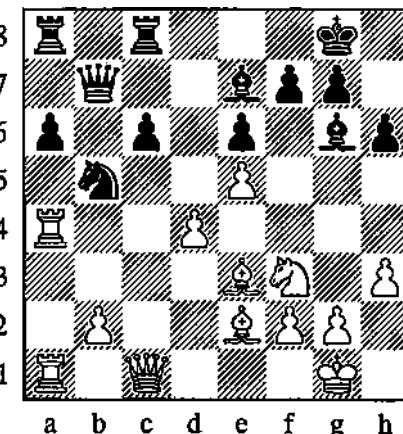
This is one of those positions where the modern engines all say 0.00, but where a

human has to make real decisions. He has to advance his goals and make life difficult for his opponent, not bow to a digital paymaster. Lars wanted to put the bishop on $\text{h}5$ with this move, to annoy White. This turned out not to work well in practice.

The idea I like most for Black is 24... $\text{Qc}2!$. This would force me to play 25. $\text{b}3$, taking away the $\text{b}3$ -square from the knight.

**25.♗c1!**

I was not thinking so much of taking on $\text{h}6$ at this point, but wanted to prevent Black from freeing himself on the queenside. My main idea is still to play $\text{Be}2$ followed by $\text{Qd}2-\text{b}3/\text{a}5/\text{c}5$, with pressure on the queenside.

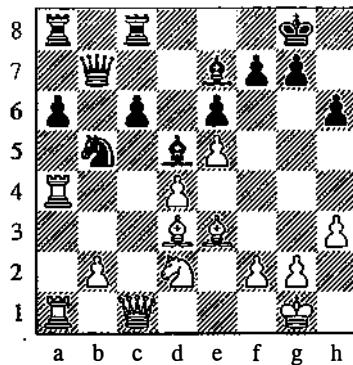
25...♗dc8 26.♗e2!

Again, prophylaxis against ...c5, as well as preparing ♜d2-b3 and perhaps ♞c4.

26...♝h5?!

Lars said after the game that things had gone wrong when he had to play a move like this. I am not really sure why this should be so awful, but I am no expert in these positions.

26...♝e4 27.♛d2 ♛d5 28.♛d3! would be dangerous for Black.



The trick 28...c5 29.dxc5 ♘xg2 is not as smart as it might first appear. I was not sure how I wanted to continue, but probably just ♖h2, ♜c2 and ♜g1, and the rest of the pieces flow towards the black king without resistance.

It took me some time to work out what Lars was intending against 27.g4 ♘g6 28.♛d2, which seemed like an logical continuation of my plan. I worked out that he wanted to play ...♝c7-d5 and give up the a-pawn for reasonable compensation.

This led me to use prophylaxis against Lars's idea, which really frustrated him and helped win the game for me.

27.♞c4?!

Black cannot give up both the a- and c-pawns, so I anticipated that he would persist with his idea with the next move. Besides

frustrating his play, I thought it was a little trap, which worked wonders.

But there was something amazing that I was very far from seeing. White is close to winning after the deep move: 27.♛d3!!

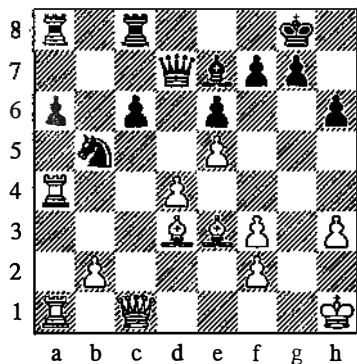


This looks ridiculous at first, as Black can eliminate the knight (and it is usually hard to start an attack without knights – although not in this case it seems) and damage White's pawn structure. But the doubled pawns also lead to an opening of the g-file, which could prove devastating for Black, on account of the ...h6 move, which makes it hard to defend both the h7-square and the g7-pawn. Let's look at a few lines:

27...♝g6?! 28.♛xg6 ♜xg6 29.♝b1 is catastrophic. Black can choose between 29...♞f7 30.d5! cxd5 31.♝f4 or 29...g5 30.♝g6 ♜d7 31.h4; or something else that is equally bound to fail.

Also after 27...♝c7 28.♛d2 Black is struggling. White has a lot of threats, both positional and involving an attack on the kingside.

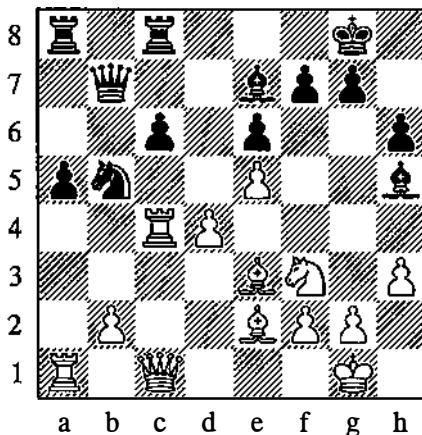
The key point is of course found in the line 27...♝xf3 28.gxf3, where Black needs counterplay against d4 to avoid a sacrifice on h6. But after 28...♝d7 White plays: 29.♝h1!



White has a powerful attacking plan of $\mathbb{W}g1-g4-e4$, which Black cannot prevent in a simple way, after which his position is desperate.

All of this was simply too deep for me.

27...a5



28. $\mathbb{Q}d2!!?$

This was my idea. I actually thought he had already fallen into the trap, but he is still objectively fine. We were both down to about eight minutes, and play continued as I had anticipated.

28... $\mathbb{Q}d8??$

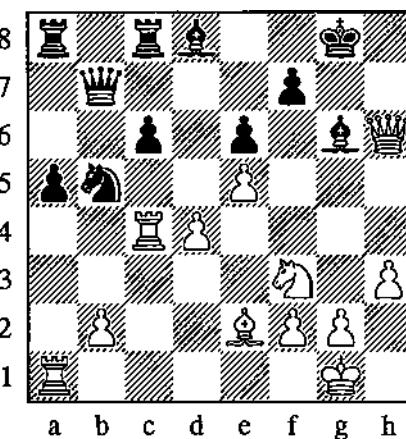
28... $\mathbb{W}b6!$ was the right move, when there is nothing seriously wrong with the black

position. Probably I would have played 29. $\mathbb{Q}h1$, with the point that ... $\mathbb{Q}xd4$ would be impossible, as there would be no checks to follow up with. In that case the fight continues. The game continuation gave me the chance I was hoping for.

29. $\mathbb{Q}xh6! \mathbb{Q}xh6$

Lars decided to take the bishop, rather than being a pawn down. Either way his position was bad.

30. $\mathbb{W}xh6 \mathbb{Q}g6$



31.d5!

Although fairly obvious, this move was still pleasant to play.

31...cxd5 32. $\mathbb{E}g4$

The attack cannot be stopped. White has too many resources: $\mathbb{Q}h4$, $\mathbb{Q}d3$, $h4-h5$, and even $\mathbb{E}xg6\#$ followed by $\mathbb{E}a4-g4$. Everything is suddenly an attacking machine. I don't know why this keeps happening to me – even when I play with prophylactic ideas...

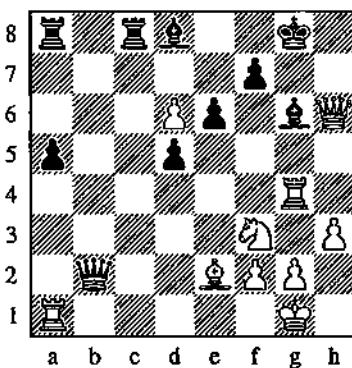
32... $\mathbb{E}c4$

Short of time, Lars tries... something. At first I was in shock, as I had not anticipated the idea. Then I realized the reason why I had missed it: I can simply take it!

Against 32... $\mathbb{W}e7$ I had planned the computer's favourite 33. $\mathbb{Q}d3$, but of course it is far more practical to play the human 33. $\mathbb{B}h4!$, as pointed out by a former chairman of the Danish federation in the commentary room.

32... $\mathbb{Q}e7$ was probably the most stubborn although White has many good continuations. I was intending 33. $\mathbb{Q}d3$ $\mathbb{B}f8$ 34. $\mathbb{W}h5$ $\mathbb{B}g7$ 35. $\mathbb{B}xg6$ $\mathbb{F}xg6$ 36. $\mathbb{B}xg6$ and I could not imagine that there would be a credible defence to $\mathbb{B}g5$ and $\mathbb{B}a4-f4$, or something along those lines. And there isn't.

Finally, 32... $\mathbb{Q}d6$ can be refuted by: 33. $\mathbb{exd}6$ $\mathbb{W}xb2$



34. $\mathbb{B}xg6\#!$ $\mathbb{fxg}6$ 35. $\mathbb{W}xg6\#$ $\mathbb{W}g7$ 36. $\mathbb{W}e8\#$ $\mathbb{W}f8$ 37. $\mathbb{d}7$ followed by moves such as $\mathbb{Q}e5$ and $\mathbb{B}a4-g4$, with a winning attack.

33. $\mathbb{Q}xc4$ $\mathbb{dxc}4$ 34. $\mathbb{Q}h4$
1–0

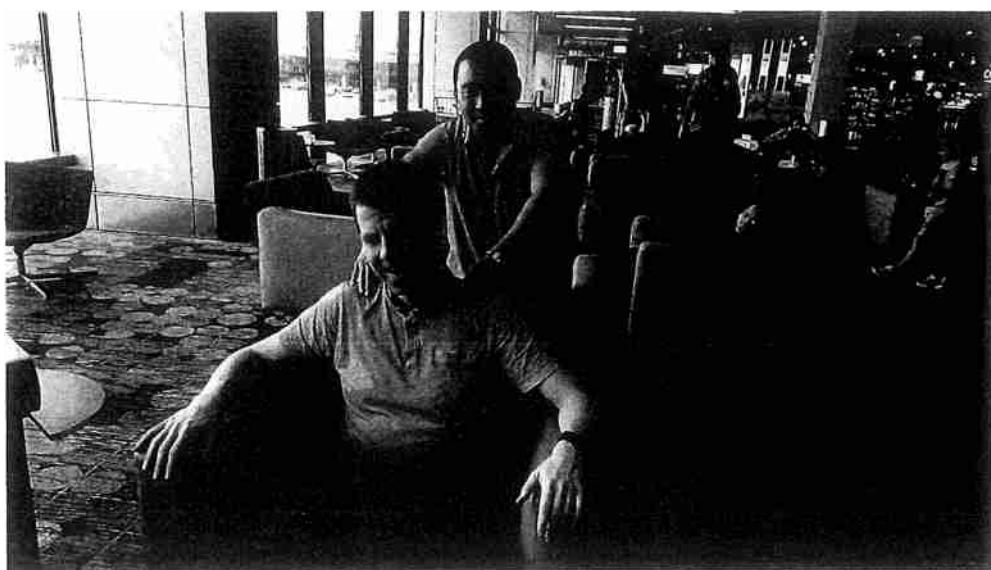
The game featured in Lars's column after the tournament with the headline ME TOO!

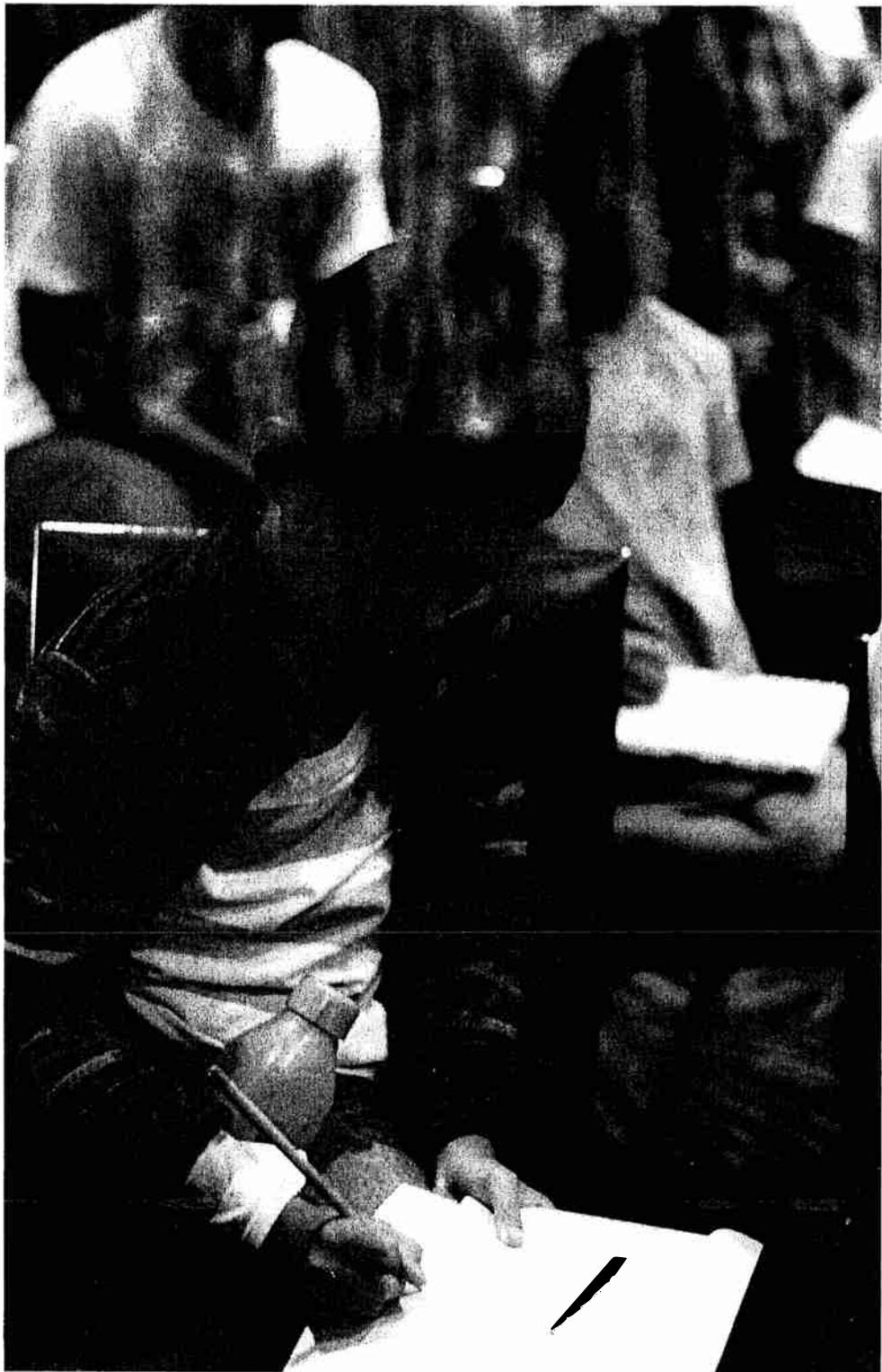
Six exercises

Overleaf you will find six exercises with the task of finding the best move. Use the three questions:

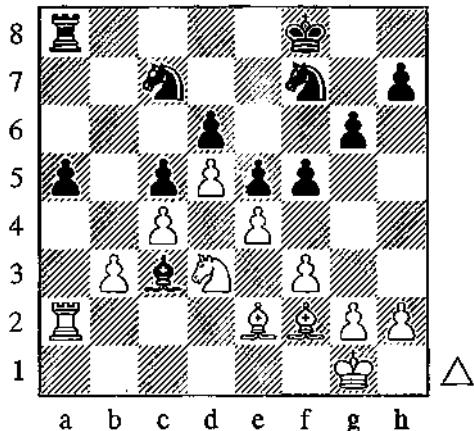
1. Where are the weaknesses?
2. What is my opponent's idea?
3. Which is the worst placed piece?

And you will have a much better chance at spotting the ideas. The questions are only a starting point; a mental sniper scope. You will still need to look for the candidates and calculate short lines, use abstract thinking and so on. But the decisions are not incredibly deep or difficult to understand.

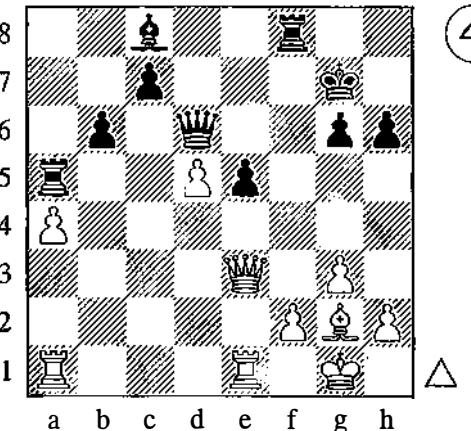




Gelfand – Sutovsky, Tilburg 1996

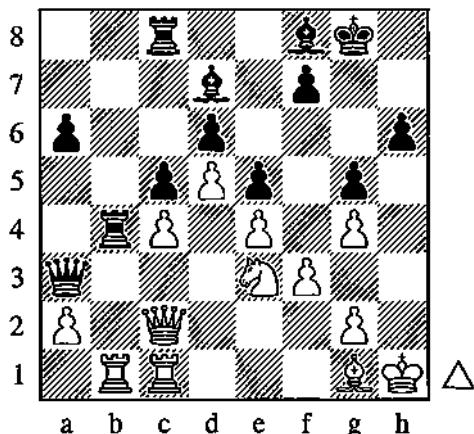


Xiu Deshuan – Ding Liren, Qingdao 2013

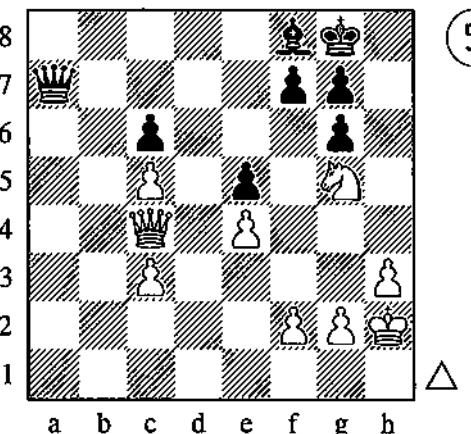


4

Teplyi – Molvig, Helsingør 2013

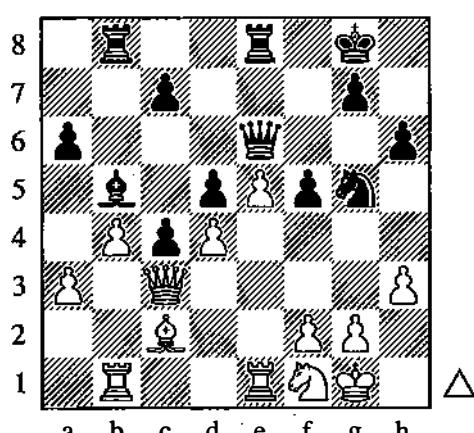


Almási – Fridman, Bastia (var) 2013

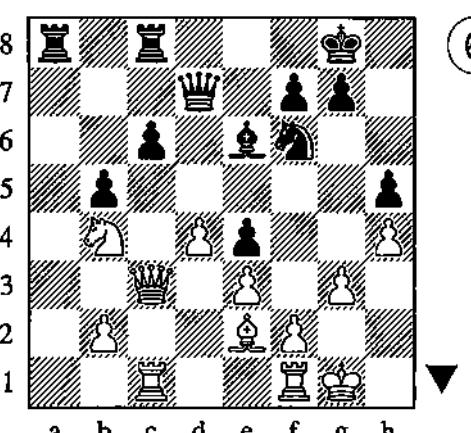


5

Hou Yifan – Ruan Lufei, Jermuk 2012

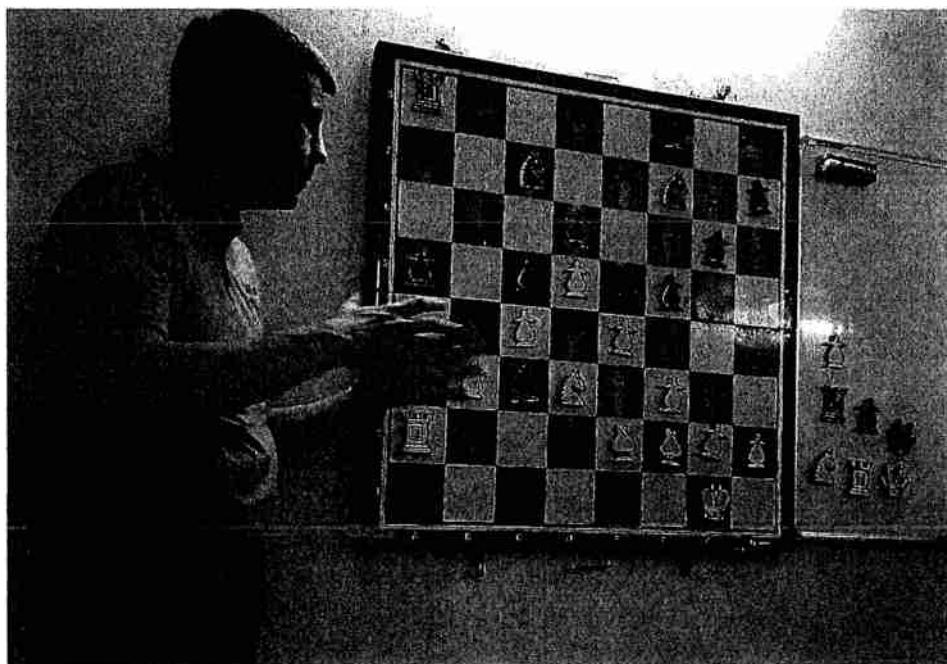


6



1. Boris Gelfand – Emil Sutovsky, Tilburg 1996 (Main topic: Weaknesses)

If Black was able to playfxe4 White would have a perpetual responsibility to protect the pawn on e4. Gelfand for this reason played: 29.exf5! This move has an additional benefit; the f5-pawn becomes a liability for Black. It is really this simple. 29...gxfs 30.Qf1 Ruling out ...Qd4. 30...Qa6 31.Qd1! The bishop is heading for c2, where it puts pressure on the f5-pawn. White is a bit better. 31...Qb4?! Gelfand considers Black's best option to be 31...Qg7 32.Qc2 h5 33.Qe1 Qxe1 34.Qxe1 Qc7, when White's advantage is limited. 32.Qxb4 Qxb4 33.Qc2 Black loses a pawn. 33...Qh6 34.Qe3 f4 34...Qg7 35.Qxh6† Qxh6 36.Qxf5† is close to winning for White. Gelfand wrote in his annotations: "Such an opposite-coloured bishop's ending is extremely difficult to defend as Fischer and many other players showed many times." 35.Qc1 Qg7 36.g3! fxg3 36...Qf8 37.gxf4 exf4 38.Qd3 would also give White a great advantage. The rook comes into play on g2. 37.hxg3 Qf8 38.Qg2 Qf5 39.f4! An unpleasant move for Black to face; he cannot take on f4, as it would expose the weakness of the d6-pawn. 39...Qd4 40.fxe5 dxe5 41.Qg5! This move supports the d-pawn and makes Black's defence a passive one. White has a clear advantage and won the ending after further events. 41...h6 42.Qh4 Qf7 43.d6 Qd7 44.Qe7 Qf7 45.Qd1 Qxe7 46.Qf2†?! Gelfand thinks it was better to take on e7 immediately in order to activate the king via f2. 46...Qe6 47.dxe7 Qxe7 48.Qf1 Qe6 49.Qh2 Qf5 50.Qxh6 Qe4 51.g4 Qd2 52.Qh2 52.Qh8?! with the idea of Qg8 and g4-g5 might have been better. 52...Qf4 53.Qh3 Qd2 54.Qf2 Qf4 55.Qh5 Qe3† 56.Qf1 Qc1 56...Qe6 57.Qf5† Qe4 58.Qc2† Qd4 59.Qf6 Qc3 60.Qxe6 Qxc2 61.Qe2 and Qb6 with a decisive advantage. 57.g5 Qf5 57...Qf5 58.g6† Qxg6 59.Qxe5 Qa3 was the last chance, but White should win anyway. 58.g6 Qe7 59.g7 e4 60.Qxc5 Qb2 61.Qc7 1-0



2. Igor Teplyi – Henrik Molvig, Helsingør 2013 (Main topic: Pieces)

There is a slight strategic edge to this position, as it includes changing the pawn structure. The key idea is that the knight on e3 would be ideally placed on c4; or White would benefit immensely by gaining control over the b-file.

32.♗b3? ♜xb3 33.AXB3 ♜b8 Black is fine. 34.♗b1 a5 35.♗d1 ♜b4 36.♘c2 ♜c3 37.♔a1 a4 38.♗c1 ♜b4 39.bxa4 ♜xa4 ½-½

32.♗xb4! is the critical move. If Black recaptures with the queen, White will play 33.♗b1 with a clear advantage. The critical line is therefore: 32...cx b4 33.c5!! This is the challenging move of the exercise. 33...b3?! This is forced. (33...♗xc5 34.♘c4 and White wins material) 34.axb3 ♜xc5 35.♗xc5 ♜xc5 36.♗xc5 dxc5 37.♘c4 White has excellent winning chances.

3. Hou Yifan – Ruan Lufei, Jermuk 2012 (Main Topic: Pieces)

For some reason, my students are attracted to advancing the h-pawn. I really cannot understand it, as this pawn can only become a weakness, while at the moment it beautifully supports the g2-g4 advance, for which White's pieces are ideally placed. Still, this is also what the World Champion played, so my lack of understanding might be a general weakness with me, even if the move is no good here?

26.h4? ♘e4 27.♗h3 27.♗e3 ♘f8 27...♗d7 28.♗bc1 ♜f7 29.♗e3 From this point Hou Yifan outplays her opponent brutally. 29...♗f6! Black would have done better with 29...a5!, when after 30.bxa5 ♘a8 31.f3 f4 32.♗e2 ♘d6! the position is unbalanced and even. 30.♗f3 ♘g4? Better was 30...♗e4 31.♗f4 a5!, though White retains some advantage after 32.bxa5 c5 33.dxc5 ♘xc5 34.♗e3±. 31.♗f4 h5 32.♗g3 ♘f8? The last chance to fight was 32...♗b6? 33.♗e2 ♘f8, though White is much better after 34.g3 ♘g6 35.f3 ♘h6 36.♗d2 ♘e8 37.♗f4±. 33.f3 ♘h6 34.♗g5 ♘e8 35.e6 ♘g6 36.♗e5 c6 37.♗e2! ♘h7? 38.♗f4 ♘xg5 39.hxg5 ♘g8 40.e7 1-0

26.♗e3 is strongly met with 26...♗f7! 27.♗f4 ♘e6 and Black is not worse.

The correct move was 26.f4!, where White is on a roll after either 26...♗f7 27.♗e3 g6 28.g4! with the idea 28...fxg4 29.f5! and White wins, or 26...♗e4 27.♗xe4! (Could it have been the thought of giving up this bishop that distressed my students, now that the f5-pawn is so weak? Well, exchanges should historically be judged by which pieces remain and not which are exchanged. Looking at it like this, hopefully everyone would prefer the blockading knight over the bad bishop.) 27...fxe4 28.♗e3 ♘f8 29.♗f1 g6 30.g4 White's advantage is devastating.

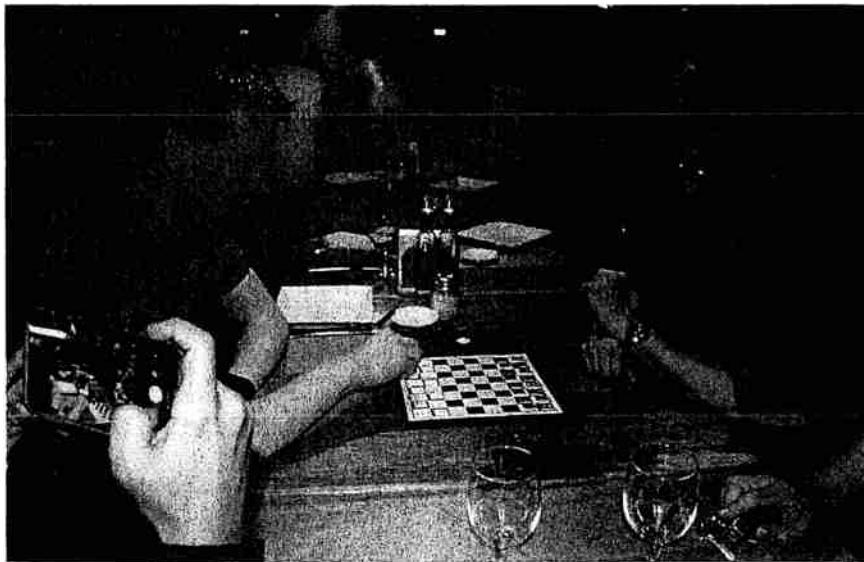
4. Xiu Deshun – Ding Liren, Qingdao 2013 (Main topic: Prophylaxis)

It is obvious that White has the advantage, but how best to exploit it? If we look at the safety of the two kings, it becomes immediately apparent that entering the endgame is not the most obvious way. But on the other hand, winning the e5-pawn does make a lot of sense! For this reason, the correct move is: 27.♗c3! 27.♗xe5†? ♘xe5 28.♗xe5 might give White some advantage, but after something like 28...♗d7 29.♗e4 b5 30.♗c1 bxa4 31.♗xc7 ♘f7 the position even becomes unpleasant for him. 27.♗ac1 ♘d7 28.♗xe5† ♘xe5 29.♗xe5 ♘xa4 is also nothing special for White, as 30.♗xc7?? ♘a1† 31.♗f1 ♘f6! wins material for Black. 27...♗c5 If White is allowed to play f2-f4, he would be close to winning already. 28.♗b2 White has a big advantage. 28...♗g8 29.♗xe5 ♘f5 From here on things go a bit wrong. 30.♗ae1 Although White's move is objectively fine, I feel naturally inclined to prefer 30.♗e2!±, where no black rook enters the second rank. 30...♗c2 31.♗d4 But this is a mistake. 31.♗a1! ♘c5 32.♗e2 would have retained the pawn

without allowing any significant counterplay. 31... $\mathbb{W}c5!$ 32. $\mathbb{W}xc5 \mathbb{B}xc5$ It will be hard for White to convert his extra pawn as he has too many pawn islands. 33. $\mathbb{Q}e4 \mathbb{Q}xe4$ 34. $\mathbb{B}1xe4 \mathbb{Q}g7$ 35.h4 h5 36.g4 hxg4 37. $\mathbb{B}xg4 \mathbb{B}c1\uparrow$ 38. $\mathbb{Q}g2 \mathbb{B}c2$ 39. $\mathbb{B}e7\uparrow \mathbb{Q}h6$ 40. $\mathbb{Q}g1 \mathbb{B}c1\uparrow$ 41. $\mathbb{Q}g2 \mathbb{B}c2$ 42. $\mathbb{Q}g1$ $\frac{1}{2}-\frac{1}{2}$

5. Zoltan Almasi – Daniel Fridman, Bastia (variation) 2013 (Main topic: Prophylaxis)
 White can do nothing about defending his c5-pawn, except that he will be able to take on f7 when Black takes it. In order to prepare in the best possible way for this, he should play: 36.g3!!± With this White keeps the one-pawn advantage. The simple point is of course that Black will not have a check available on f4. If Black does nothing, White will play h3-h4 next. 36... $\mathbb{Q}xc5$ 36... $\mathbb{W}e7$ 37.h4 keeps control. 37. $\mathbb{Q}xf7 \mathbb{W}xf7$ 37... $\mathbb{Q}xf2$ loses to everything, the prettiest option being 38. $\mathbb{Q}h6\uparrow \mathbb{Q}f8$ (38... $\mathbb{Q}h7$ 39. $\mathbb{W}g8\uparrow \mathbb{Q}xh6$ 40. $\mathbb{W}h8\uparrow \mathbb{Q}g5$ 41. $\mathbb{W}h4\#$) 39. $\mathbb{W}g8\uparrow \mathbb{Q}e7$ 40. $\mathbb{Q}g4$ followed by $\mathbb{W}xg7$, winning. 38. $\mathbb{W}xc5 \mathbb{W}f3$ 39. $\mathbb{W}c4\uparrow \mathbb{Q}h7$ 40. $\mathbb{Q}g1$ White has good winning chances.

6. Shakhriyar Mamedyarov – Veselin Topalov, Warsaw 2013 (Main Topic: Weaknesses)
 Black would love to exploit the weakness of the light squares on the kingside, but the bishop is not really doing any damage over there. For this reason Topalov switched it to the other diagonal: 23... $\mathbb{Q}c4!!$ 24. $\mathbb{Q}xc4 bxc4$ The threat is ... $\mathbb{W}h3$, winning. 25. $\mathbb{Q}g2$ This was easy enough to see. But the real point comes on the queenside, where White is ill-prepared to deal with Black's strategy. 25... $\mathbb{B}cb8!$ 26. $\mathbb{B}a1$ 26. $\mathbb{W}xc4?$ $\mathbb{B}a4$ and Black picks up an extra piece. 26... $\mathbb{B}xa1$ 27. $\mathbb{B}xa1$ $\mathbb{Q}d5$ The culmination of Black's strategic operation. White has to take, thereby giving Black a far superior pawn structure. 28. $\mathbb{Q}xd5 cxd5$ This position is already close to strategically winning. Mamedyarov did not offer a lot of resistance. 29. $\mathbb{W}d2 \mathbb{W}g4$ 30. $\mathbb{B}e1 \mathbb{W}f3\uparrow$ 31. $\mathbb{Q}h2 \mathbb{Q}h7$ 32. $\mathbb{W}e2$ $\mathbb{Q}g6$ White did not want to see Black slowly strangle him, so, certain of the outcome, he decided to call it a day. 0–1

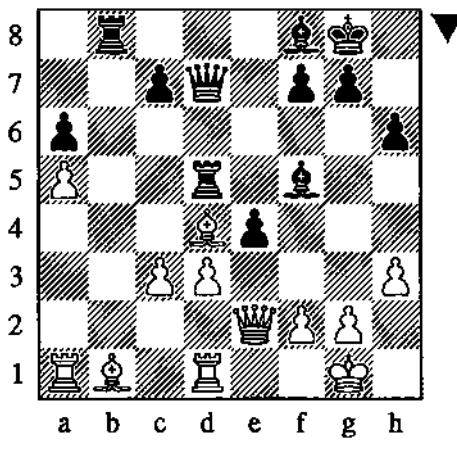


Chapter 7

What is Calculation?

Peter Svidler – Magnus Carlsen

London 2013

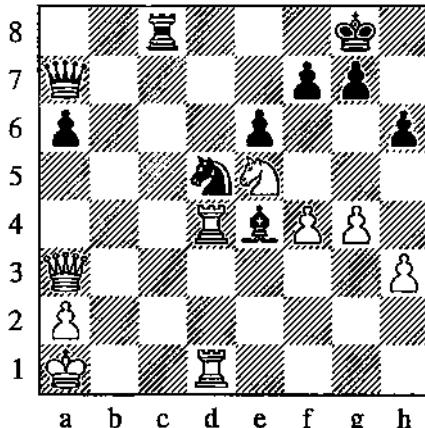


Not realizing there was a combination, Carlsen was very confused when asked about it at the press conference after the game. Once he realized it was there, he calculated it till the end in seconds. Even if you need a bit longer, it is worth your while to make sure you see everything.

To get the most out of the chapter, I would recommend that you try to find the best move/sequence in these four positions.

Michael Adams – Yuri Razuvaev

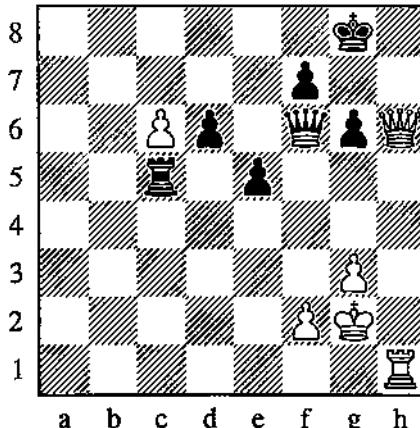
Slough 1997 (European Club Cup)



Black to play

Ivo Timmermans – Toon van Laanen

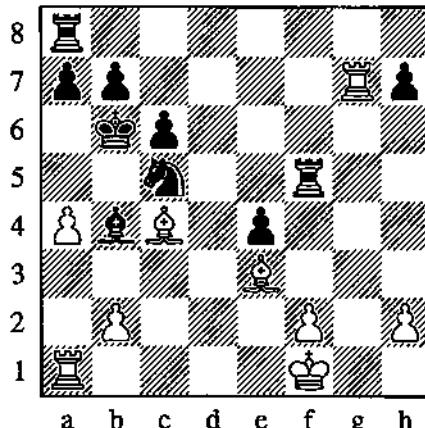
Netherlands 2012



White to play

Pavel Eljanov – Anish Giri

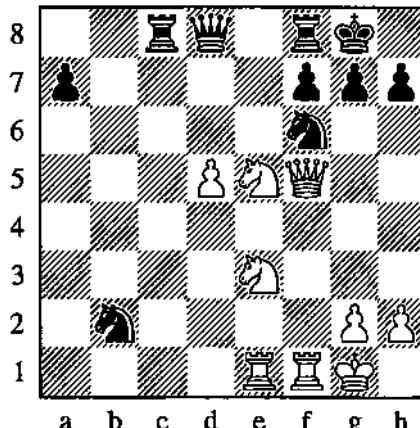
Ohrid 2009



White to play

Kacper Piorun – Michal Krasenkow

Stockholm 2013



White to play – this one is difficult and requires time investment

System 1 and System 2 – and Candidates

Daniel Kahneman is a professor of psychology at Princeton and the 2002 Nobel Laureate in Economics for his work on decision making. To chess players all over the world he is mainly known for his 2011 book *Thinking, Fast and Slow* that summarizes his discoveries over the decades. This 499-page psychology book is an unlikely bestseller, but it has brilliantly explained some things that a lot of strong chess players have known, consciously or subconsciously, for a long time. It is the chess book of the decade – without being a chess book at all...

Based on one of the key ideas in this book, the one providing its title, I will discuss pattern recognition and calculation and explain what I think the difference is. I have had my opinion on this for a long time, but it is pleasant to now be able to lean on “*certainly the most important psychologist alive today*” (per Steven Pinker, a great student of the brain).

In *Thinking, Fast and Slow*, Kahneman explains how the brain has two different ways to think. We have our own words for these, but psychologists obviously go with the most innocuous terminology, **System 1** and **System 2**.

System 1 is *fast, automatic, frequent, emotional, stereotypic* and *subconscious*. It handles all the things that we already know how to do. It assists me in touch-typing this article; in stringing sentences together, while watching *Person of Interest – Season 2* on my iPad.

In chess, we call this *intuition*, something that is based largely on *pattern recognition*, visual and abstract.

System 2 is *slow, effortful, infrequent, logical, calculating*, and *conscious*. When we try to solve unusual and complex problems, we use the brain in this way. The brain is very reluctant to turn to this way of thinking, as it requires us to stop everything else we are currently working on.

In chess, this is basically everything else. The two main ways to divide up what we can do with this would be *strategy* and *calculation*.

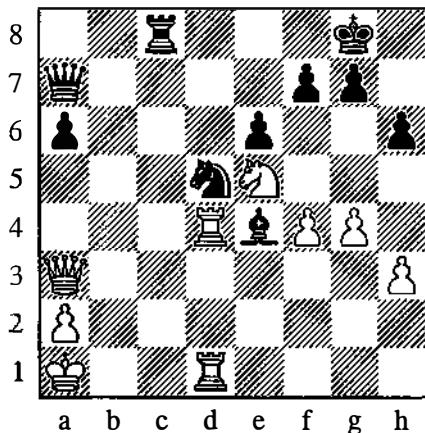
Strategy is not positional play. Positional play is short term, mainly intuitive and void of surprises. Strategy sees into future developments and plans for them; it can be by choosing the right one of two natural-looking moves, though also by choosing a counter-intuitive, anti-positional move. More on this on page 122.

Calculation is the most confusing chess term of all. Most will agree that it relates to working out sequences of moves, known as variations. This can consist of tactics, though not exclusively so. What is confusing is that *seeing variations* is not calculation. **Calculation is finding variations you do not see intuitively**. As elsewhere in this book, my definition is designed to result in practical advice.

I fear I might have lost some of you by now. Hopefully, a move from the abstract to the concrete will help clarify my point.

Michael Adams – Yuri Razuvaev

Slough 1997



Black has a pawn for the exchange, as well as a strong knight on d5 and a much safer king. Razuvaev played a very natural-looking move, but was subsequently unable to squeeze more out of the position than a draw.

39... $\mathbb{E}c3?$ 40. $\mathbb{W}a4 \mathbb{W}c5$ 41. $\mathbb{E}c4 \mathbb{W}e3$ 42. $\mathbb{W}e8\#$
 $\mathbb{Q}h7$ 43. $\mathbb{Q}d7 \mathbb{E}xc4$ 44. $\mathbb{Q}f8\#$
 $\frac{1}{2}-\frac{1}{2}$

This exercise is in principle simple, yet few of the grandmasters I have shown it to solved it. I can only remember one; and he saw it immediately, which violates the point of the exercise, which is to train two things:

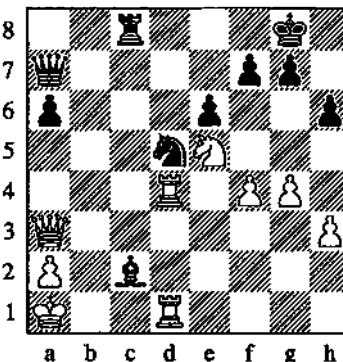
- 1) To understand that the decision requires calculation and not positional judgement or long-term strategic thinking.
- 2) To use the technique of *candidate moves* to find the winning move.

My favourite description of the technique of candidate moves became the chapter title of Chapter 1 in my own book *Excelling at Chess Calculation* (Everyman Chess 2004): **Before you can think, you need to learn how to see.**

I will get colourful in a moment, but for now let us stick to the technique of candidate moves being the act of actively looking for moves or ideas you do not see automatically. In 2004, I recommended that the way to do this was to slow down the variations running through your head, in order to be in control of the process. I did not know then that I was recommending activating System 2 in order to find options additional to those provided by System 1 thinking, our intuition.

Imagine that a lot of variations dance on the board in front of you. Some jump into your head; they appear, seemingly out of nowhere (confirming your genius). Others do not. Learning to catch those evasive scoundrels is what calculation is all about.

The solution to this exercise is based on the overloading of the rook on d1. Black has a winning position after 39... $\mathbb{E}c2!!$.



White has no defence. 40. $\mathbb{E}1d2 \mathbb{E}b8!$ or 40. $\mathbb{W}c1 f6$ 41. $\mathbb{Q}f3 \mathbb{E}c3$. In both cases Black wins.

One reason this position is so difficult, despite the moves in the variation running in single digits, is that the targets are obscure. Who would be looking for a quick mate in the starting position?

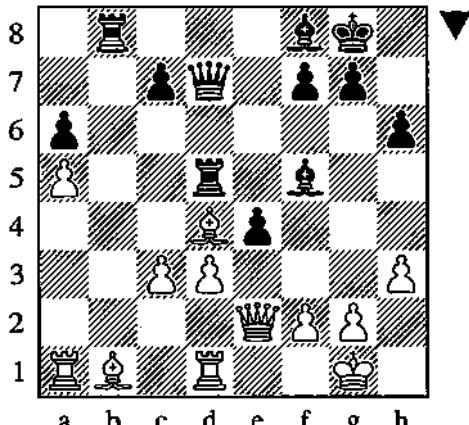
Looking for the moves you do not see

As we know from the limited psychological investigations into chess, most of the decisions we make are deeply founded in our subconscious (System 1). But this is not the full story. MRI scanners are crude instruments and cannot tell us all that happens in the brain. The areas in the brain that flare up in the scanner are not neat little departments that deal with clearly defined responsibilities. The brain's one hundred billion neurons each have up to ten thousand connections to places all over the brain. Thinking happens all over the brain, only there are some areas that are more active in some situations than others, which is what we see on the brain scanners.

In my opinion it makes sense to combine the few things we can learn from science with our real-world observations. An example is the following famous position.

Peter Svidler – Magnus Carlsen

London 2013

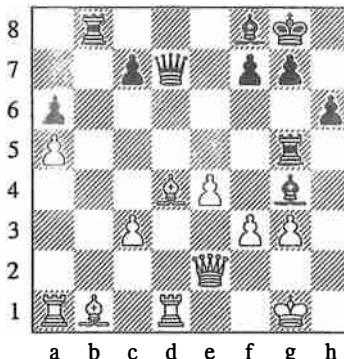


Black to play

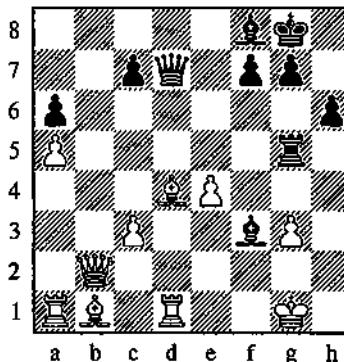
Carlsen played 25...exd3 and slowly ground down his opponent with great technique. But

while the game was going on, computers all over the world lit up.

Black had a tactical option in 25...Qxh3!, which cannot be taken. White has to take on e4 and we would quickly reach this interesting position: 26.dxe4 Qg5 27.g3 Qg4 28.f3



Many commentators, famous grandmasters included, felt that this was the point where Carlsen missed something. The winning point is quite nice, making use of the inactive rook on b8 (see *including all the pieces in the attack*, page 263): 28...Rb2!! 29.Qxb2 Qxf3



White cannot both save the king and the rook on d1. For example: 30.Rd2 Qh3 31.Qd3 Wxg3† 32.Qf1 Rh5 33.Qg2 Qxg2† 34.Wxg2 Wxd3† and Black wins.

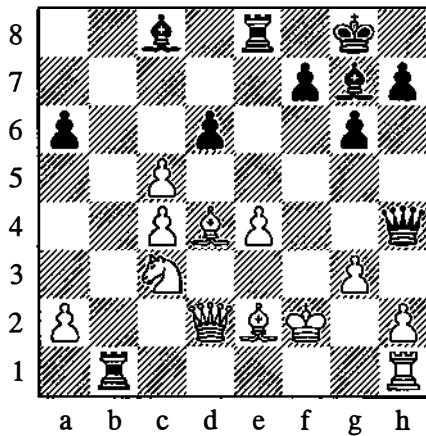
Had I not been in London, I would have made the same assumption as these GMs. But I attended the press conference and I saw

Carlsen's confusion when asked why he did not take on h3. "Where?" was his dumbfounded question. When pointed to the right position, he took ten seconds to calculate the variations, before concluding that the bishop sacrifice was "*completely winning*".

Obviously the now World Champion knew about sacrificing his bishop on h3, but what about the ... $\mathbb{B}b2!$ move? Look at this position for a second.

Smbat Lputian – Garry Kasparov

Tbilisi 1976



The 13-year-old Black player crowned a fine combination with 19... $\mathbb{B}b2!!$ 20. $gxh4$ $\mathbb{B}xd2$ 21. $\mathbb{Q}xg7$ $\mathbb{Q}xg7$ 22. $\mathbb{Q}e3$ $\mathbb{B}c2$ 23. $\mathbb{Q}d3$ $\mathbb{B}xc3\#$ 24. $\mathbb{Q}xc3$ $dxc5$, after which he won the superior ending with excellent technique.

We can assume that if I know this pattern, Carlsen does too. But the pattern application story is only a part of the story. It is *System 1* thinking. If Carlsen had slowed down and considered his options, rather than following his intuition, he would have seen the bishop sacrifice quite quickly and would have cut the game short. We know this, because of the press conference.

Training *seeing*

I cannot do anything complicated. At times, I can do a lot of simple things that when combined can look effective and maybe even impressive. I use this observation to simplify my training methods. When working with a student, I will ask him to focus on one or two things only. The way we work on calculation is by solving a lot of exercises and practising slowing down. Remembering to do it is not easy; it requires a lot of practice, but it is intensely rewarding.

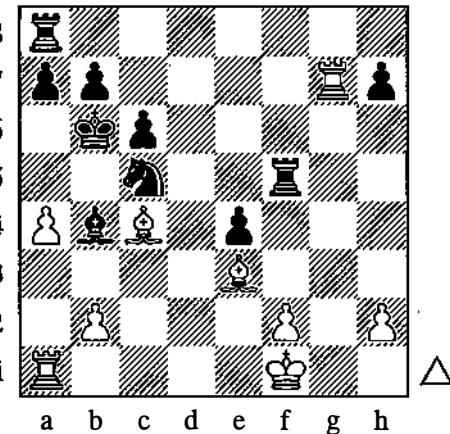
It requires patience and some discipline, but it is also fun. All of my students like to do this training, though at times it can be frustrating. Most importantly, they all improve and so far it looks to be permanently.

A few positions

Let us end this article with a few of the training positions I have given to strong grandmasters and discuss the mistakes they make. The first is a brilliant combination by the multi-talented Pavel Eljanov.

Pavel Eljanov – Anish Giri

Ohrid 2009

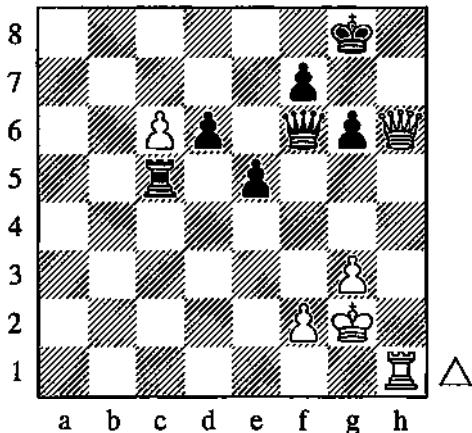


The most popular suggestion is 25.a5† ♜xa5 26.♗a4, which prepares b2-b4 and seemingly wins a piece. But here the technique of candidate moves (just looking for options) *at the point where we would normally stop*, is very important. If we see this idea, we also need to look for what could be wrong with it (see the end of the chapter).

In the game Pavel won after the brilliant 25.a5†! ♜xa5 26.♗xb7†! ♕xb7 27.♗xa5 and the pin along the fifth rank gave him a decisive advantage.

Ivo Timmermans – Toon van Laanen

Netherlands 2012

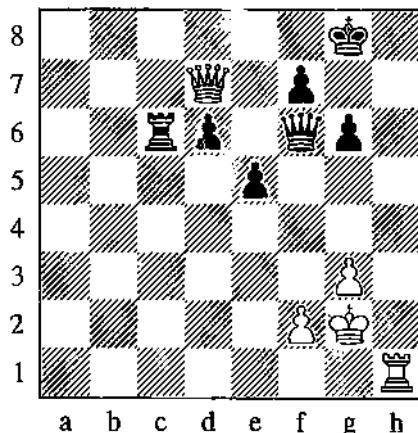


Playing in a team match, Ivo thought for almost 40 minutes determinedly looking for a win, seriously spooking his teammates. Eventually he found it.

44.♗h3!! ♜xc6

Black cannot allow a check on c8 and mate on h8. And after 44...♝f8 White wins with 45.♛c8† ♜e7 46.♛d7† ♜f8 47.c7.

45.♛d7



1–0

I recommend that anyone who wants to improve their calculation should start with practising slowing down and looking. It is not easy to do. Our monkey brain wants to run away for bananas all the time. Practising looking for ideas will elevate most people's playing strength more than anything else.

Advanced Calculation

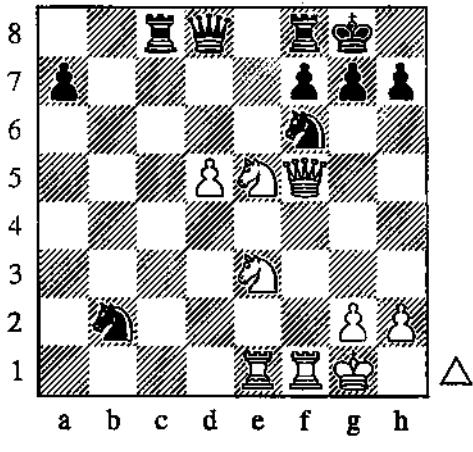
After working for a while with a player, we naturally move on to the calculation of complicated positions. We train techniques such as *elimination*, *comparison* and so on (see more at the start of the next chapter). But mostly we work on what I like to call the *compounding of candidate moves*. This is a fancy way of saying that we slow down frequently in our calculation, trying to see non-obvious ideas at more than one point in the calculation of variations.

To do so, we apply System 2 thinking with greater scope and precision. A few techniques and guidelines follow naturally from this, mainly slowing down and developing triggers to that will assist us with this.

The following is a typical training position.

Kacper Piorun – Michal Krasenkow

Stockholm 2013

25. $\mathbb{Q}c6$

This move is not difficult, but starting one move earlier can help stretch the student's mind. I am sure that Piorun played it without too much thought.

25... $\mathbb{W}d6$!

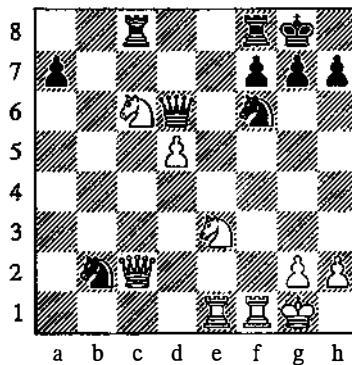
The only move that can confuse things. 25... $\mathbb{W}c7$ 26. $\mathbb{W}c2!$ and the knight is in trouble.

26. $\mathbb{W}g5!$

A brilliant candidate move. White is threatening not only $\mathbb{Q}f5$, but also $\mathbb{W}xg7\#$.

26. $\mathbb{W}c2?$

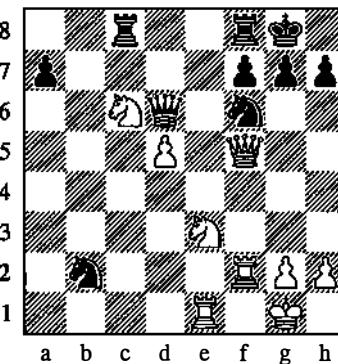
This looks like a winning move, but if you slow down and look carefully, you will see that Black can save the knight:

26... $\mathbb{Q}d3!!$ 27. $\mathbb{Q}d1$

One grandmaster believed that White was winning after 27. $\mathbb{Q}f5$, but there is a hole in his variation: 27... $\mathbb{Q}xe1$ 28. $\mathbb{Q}ce7\#$ $\mathbb{Q}h8$ 29. $\mathbb{W}xc8$ White would be winning if Black did not have 29... $\mathbb{W}b6\#$, when it is he who wins. An excellent example of why we need to slow down and look for options – also at the end of our variations.

27... $\mathbb{Q}b4$ 28. $\mathbb{Q}f5!$

White is still fighting for an advantage, though Black has reasonable drawing chances.

26. $\mathbb{Q}f2?$ 

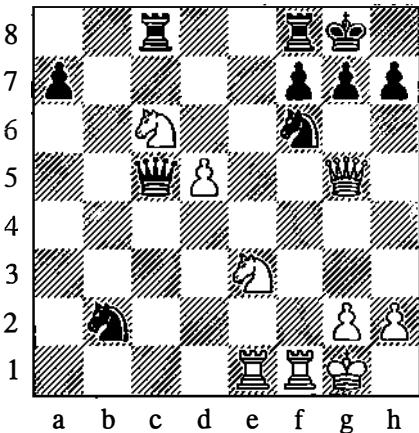
This looks strong after 26... $\mathbb{E}fe8?$ 27. $\mathbb{E}xb2$ $\mathbb{Q}xd5$ 28. $\mathbb{W}xd5$ $\mathbb{W}xd5$ 29. $\mathbb{Q}xd5$ $\mathbb{E}xe1\#$ 30. $\mathbb{Q}f2$ $\mathbb{E}ce8$ 31. $\mathbb{Q}ce7\#$ with good winning chances, as one student suggested.

But the method of comparison tells us to investigate 26... $\mathbb{E}ce8!$ as well, where Black is

fine, as further down the variations there is no rook hanging on c8.

26... $\mathbb{W}c5$

Trying to deal with White's two main threats, but this move has its own problems.

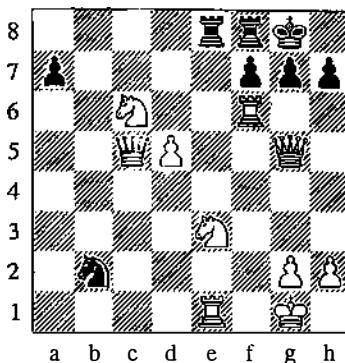


27. $\mathbb{E}xf6?!$

It is very tempting to take a free piece and Piorun could not resist it. However, 27. $\mathbb{E}c1!$ wins on the spot, as pointed out by one GM. A quick candidates sweep would have ended the game here.

27... $\mathbb{E}fe8?!$

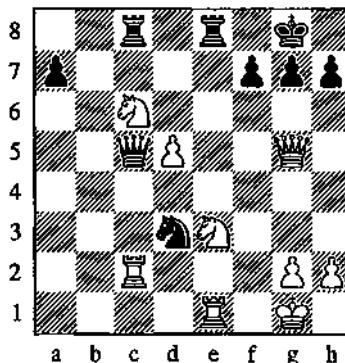
27... $\mathbb{E}ce8$ was also possible.



White only has one clear way to win the game: 28. $\mathbb{Q}h1!$ and White has an extra piece. A key line is 28... $\mathbb{E}xe3$ 29. $\mathbb{W}xe3$ $\mathbb{W}xe3$ 30. $\mathbb{E}xg6$ 31.d6 and the pawn steals the show.

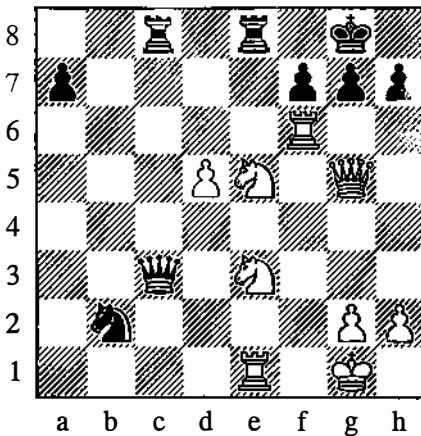
28. $\mathbb{Q}e5?$

White was still winning after: 28. $\mathbb{E}f2!!$ $\mathbb{Q}d3$ 29. $\mathbb{E}c2$



With the point 29... $\mathbb{E}xe3$ 30. $\mathbb{W}xe3$ $\mathbb{W}xc2$
31. $\mathbb{W}e8\#$.

28... $\mathbb{W}c3!$



29. $\mathbb{E}ef1?$

Trends are very difficult to reverse. 29. $\mathbb{Q}3g4$
 $\mathbb{W}xe1\#$ 30. $\mathbb{E}f1$ $\mathbb{E}xe5$ 31. $\mathbb{Q}xe5$ $\mathbb{W}e4$ 32. $\mathbb{Q}xf7$
would still have given Black practical problems.

29... $\mathbb{W}xe5$ 30. $\mathbb{W}xe5$ $\mathbb{E}xe5$ 31. $\mathbb{E}6f3$ $f6$

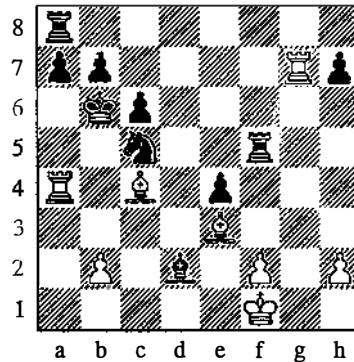
White now has to try to draw. More mistakes followed, in what was probably wild time trouble. Eventually the game did indeed end in a draw.

...½-½

Training attention to a new dimension of chess (as it is for most people I have encountered) is not dissimilar to learning something else in life. I like Jonathan Rowson's comparison of learning skills in chess to learning to drive (which is obsessive when you are doing it). You may be going 70mph down the motorway having a conversation. The action is automatic. Then something happens and you stop talking, stop listening and concentrate on using your skills in the best possible way. You apply System 2 attention and control to your System 1 patterns. This is exactly what we train.

The Adjournment

In Eljanov – Giri, the attempted combination with 25.a5† $\mathbb{Q}xa5$ 26. $\mathbb{E}a4?$ fails to 26... $\mathbb{Q}d2!!$.



Black has a big advantage. *Candidates, prophylaxis and System 2*. There are many ways to find this move. All of them require attention and that you slow down and look for it.

Conclusion:

There are many techniques that can be used to improve your calculation, but a proper understanding of how the brain works and how you can expand the number of candidates you see by slowing down and actually looking at the position, rather than following your runaway intuition down the rabbit's hole, is astounding and will transform your calculation more than all other ideas combined.

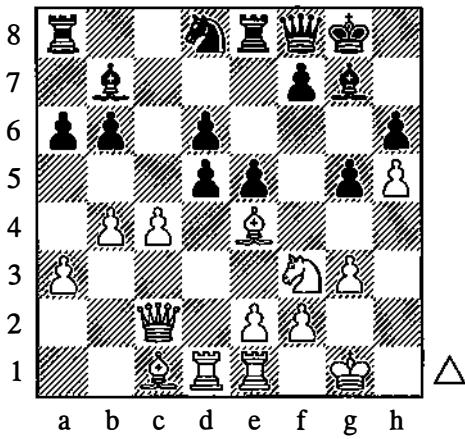


Chapter 8

The Calculation Process

Wouter Spoelman – Erwin L’Ami

Netherlands 2016

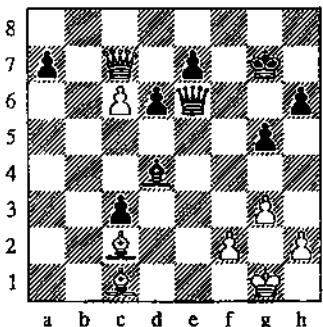


White to play

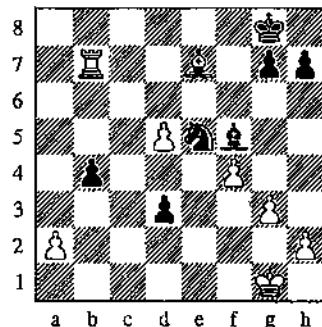
In strategy we have to calculate accurately too. Mark Dvoretsky once told me that old grandmasters make positional mistakes because of tactical oversights. People really should not provide me with any more excuses for what I do at the board; I abuse them relentlessly!

Test yourself against the book

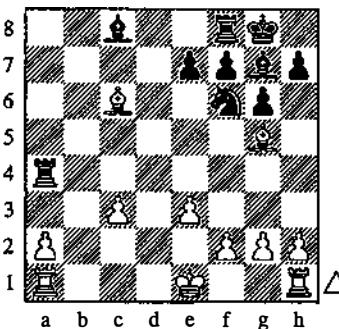
This book is not an exercise book, but an experienced trainer can always find interesting moments in games that can be more effective for the student if he thinks about them first. On this page, I have included a few positions from this chapter that you can look at, should you feel so inclined. As long as it does not make you put off reading the chapter!



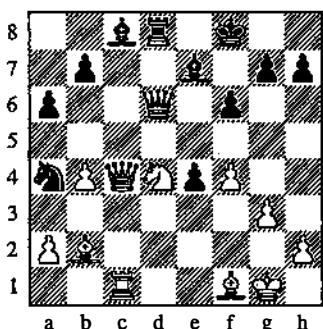
Secure the win!
(see page 171)



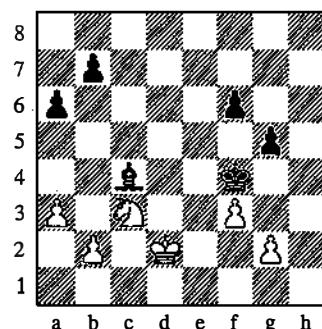
Calculate accurately!
(see page 191)



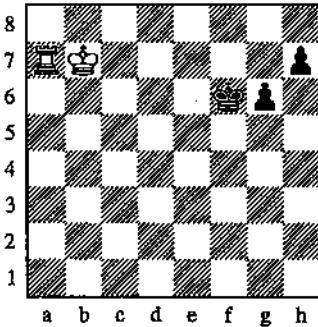
White can consolidate his
advantage with accurate play
(see page 167)



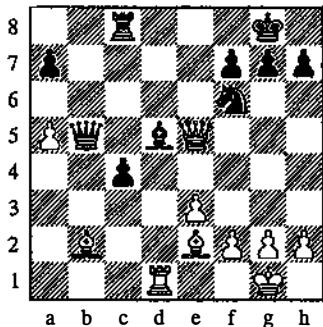
I love it when people fall
for my silly traps!
(see page 174)



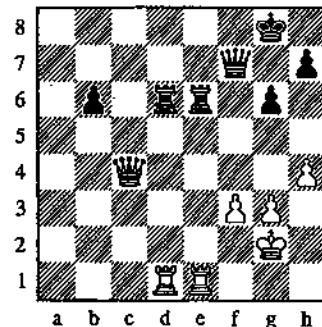
Can you evaluate this position
accurately, using calculation?
(see page 200)



Which pawn?
(see page 169)



Candidates!
(see page 186)



White to win.
Calculate till the end.
(see page 209)

In *Grandmaster Preparation – Calculation*, I describe the techniques of calculation, in bullet form, on pages 7–14. This includes a discussion of decision making, the importance of keeping things simple and the value of concentration. It also includes a debate of the eight techniques Mark Dvoretsky suggested I should focus on: *Candidate Moves, Combinational Vision, Prophylaxis, Comparison, Elimination, Intermediate Moves, Imagination and Traps*. I included them in a cheat sheet format, with the hope that people would read it more than once and use it, rather than wishing to give people a big theoretical understanding, of which they would make no practical use. I strongly favour a *learning by doing* process, although in this chapter I will start with a *learning by not doing* process...

Calculation is a part of decision making

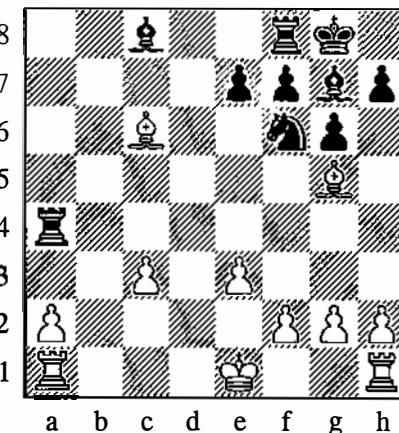
In the next chapter, we will look closely at one of my own failures regarding decision making. At this point we will look at another common mistake: over-calculation.

Once you have worked on your calculation, it is tempting to use calculation to solve all problems. But we should not forget that calculation is a tool to assist us in our decision making and not decision making in itself. In Chapter 5 I discussed the four types of decisions and which tools we should use to solve the different types of problems. One problem I skate past in that section is that we always have to end with an evaluation. There can be a temptation to continue calculating endlessly and to prefer variations that can be calculated over those that have to be evaluated. Our ambition should be to make the best moves possible in as short an amount of time as necessary. At times calculation simply takes a lot of time and does not help us make better decisions.

Sam Shankland – Gao Rui

Doha 2014

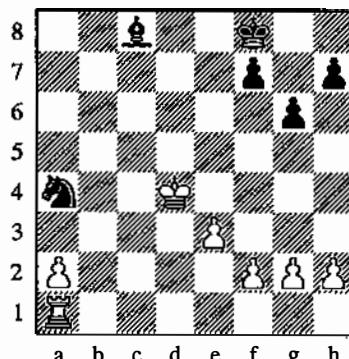
1.d4 $\mathbb{Q}f6$ 2.c4 g6 3. $\mathbb{Q}c3$ d5 4. $\mathbb{Q}g5$ $\mathbb{Q}g7$
 5.e3 c5 6. $\mathbb{Q}f3$ cxd4 7. $\mathbb{Q}xd4$ $\mathbb{Q}c6$ 8. $\mathbb{N}db5$
 $a6$ 9. $\mathbb{Q}xd5$ axb5 10. $\mathbb{Q}xb5$ 0–0 11. $\mathbb{Q}xc6$ $\mathbb{W}b6$
 12. $\mathbb{W}d4$ $\mathbb{W}a5$ 13. $\mathbb{W}a4$ bxc6 14. $\mathbb{Q}xc6$ $\mathbb{W}xc3\ddagger$
 15.bxc3 $\mathbb{Q}xa4$



The opening has gone well for Shankland and he has a clear choice between two concrete continuations. It is tempting, when you have gotten your calculation up and going, to calculate excessively and go for the longest possible line.

16. $\mathbb{Q}xf6\text{?!$

16. $\mathbb{Q}xa4!$ $\mathbb{Q}e4$ 17. $\mathbb{Q}xe7$ $\mathbb{Q}xc3\ddagger$ 18. $\mathbb{Q}e2$ $\mathbb{Q}xa1$
 19. $\mathbb{Q}xa1$ $\mathbb{Q}c3\ddagger$ 20. $\mathbb{Q}d3$ $\mathbb{Q}xa4$ 21. $\mathbb{Q}xf8$ $\mathbb{Q}xf8$
 22. $\mathbb{Q}d4$

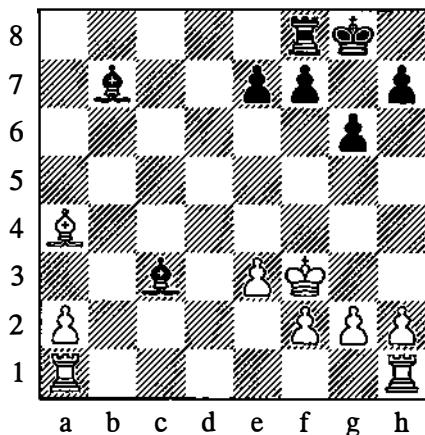


White has a technically winning ending. It will take time to win, but eventually Black will have to yield. The a-pawn will distract the black pieces, while White puts pressure on the kingside. The difference between this line and what Sam went for in the game is that you cannot calculate this till the end, you need to go by evaluation and experience. Sam has both, but at this point he had improved his calculation so much that he had a tendency to overuse it.

16... $\mathbb{Q}xf6$

16... $\mathbb{Q}a5$ 17. $\mathbb{Q}xg7$ $\mathbb{Q}xg7$ 18.0–0 $\mathbb{Q}a6$ 19. $\mathbb{Q}fc1$ $\mathbb{Q}c8$ 20. $\mathbb{Q}f3$ $\mathbb{Q}a3$ 21. $\mathbb{Q}d5$ $\mathbb{Q}xc3$ 22. $\mathbb{Q}xc3$ $\mathbb{Q}xc3$ 23. $a4$ with $g3$ and $\mathbb{Q}g2-f1$ coming would give White very serious winning chances as well.

17. $\mathbb{Q}xa4$ $\mathbb{Q}xc3\#$ 18. $\mathbb{Q}e2$ $\mathbb{Q}a6\#$ 19. $\mathbb{Q}f3$ $\mathbb{Q}b7\#$



20.e4?

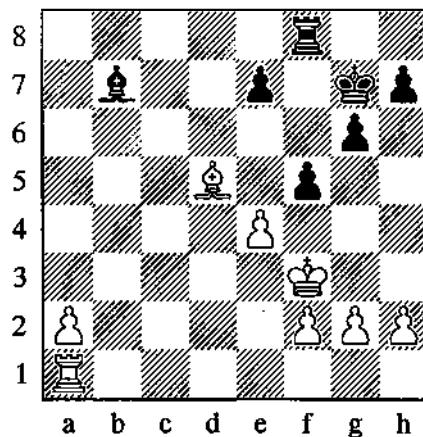
Sam is continuing with the long variation he had calculated.

There was still time to choose: 20. $\mathbb{Q}g3$ $\mathbb{Q}e5\#$ 21. $\mathbb{Q}h3$ $\mathbb{Q}c8\#$ 22. $\mathbb{Q}h4$ $\mathbb{Q}f6\#$ 23. $\mathbb{Q}g3$ $\mathbb{Q}e5\#$ 24. $f4$ $\mathbb{Q}xa1$ 25. $\mathbb{Q}xa1$ With an extra pawn, White still has excellent winning chances. But Sam believed too much in his calculation.

20... $\mathbb{Q}xa1$ 21. $\mathbb{Q}xa1$ f5 22. $\mathbb{Q}b3\#$ $\mathbb{Q}g7$ 23. $\mathbb{Q}d5$

All of this had been anticipated by Sam, who had continued his line far into the rook endgame. But no matter how well you calculate, there comes a time when you reach the end of your horizon and will be unable to calculate everything accurately.

Sam's first miss was at this point.



23...fxe4#

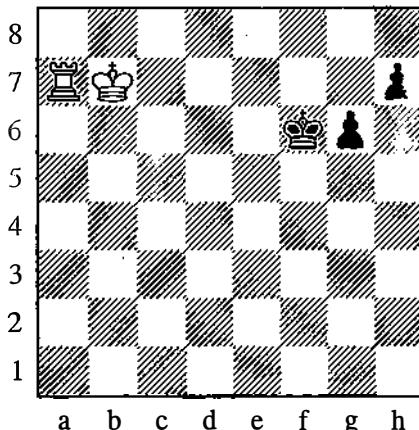
Bent Larsen famously said: "Long variation, wrong variation." In this case: 23... $\mathbb{Q}xd5$ 24. $exd5$ $\mathbb{Q}f6$ 25. $a4$ $\mathbb{Q}a8$ 26. $a5$ $\mathbb{Q}a6!$ was an important alternative for Black to consider.

As it happened, neither player noticed it, and nor did Sam and I when we analysed the game together after the tournament. So it is sort of irrelevant, although it does underline the limitations to calculation as a tool.

24. $\mathbb{Q}xe4$ $\mathbb{Q}xd5\#$ 25. $\mathbb{Q}xd5$ $\mathbb{Q}xf2$

It turns out that Black draws by one tempo. This may sound like a difficult task for Black, but it is not. He has exactly one choice on each move, making it very easy for him to play the position. Besides the line not working out to White's advantage, it also deprived his opponent of the chance to make a mistake.

26.a4 $\mathbb{B}xg2$ 27.a5 $\mathbb{B}xh2$ 28.a6 $\mathbb{B}d2\uparrow$ 29. $\mathbb{Q}c6$
 $\mathbb{B}c2\uparrow$ 30. $\mathbb{Q}d7$ $\mathbb{B}d2\uparrow$ 31. $\mathbb{Q}xe7$ $\mathbb{B}e2\uparrow$ 32. $\mathbb{Q}d7$
 $\mathbb{B}d2\uparrow$ 33. $\mathbb{Q}c7$ $\mathbb{B}c2\uparrow$ 34. $\mathbb{Q}b6$ $\mathbb{B}b2\uparrow$ 35. $\mathbb{Q}a5$
 $\mathbb{B}b8$ 36.a7 $\mathbb{B}a8$ 37. $\mathbb{Q}b6$ $\mathbb{Q}f6$ 38. $\mathbb{Q}h7$ $\mathbb{B}xa7$
39. $\mathbb{B}xa7$



For the first time since move 15, Black has to find the only correct continuation in order to hold the game. Gao Rui did not falter.

39...h5!

39...g5? would lose, as the white king is one step closer.

40. $\mathbb{Q}c6$ $\mathbb{Q}e5$!

Shouldering.

41. $\mathbb{Q}c5$ h4! 42. $\mathbb{Q}c4$ $\mathbb{Q}e4$!

More shouldering.

43. $\mathbb{B}h7$ g5 44. $\mathbb{B}h5$ $\mathbb{Q}f3$ 45. $\mathbb{Q}d3$ g4 46. $\mathbb{B}xh4$ g3 47. $\mathbb{B}h3$ $\mathbb{Q}f2$ 48. $\mathbb{B}xg3$ $\mathbb{Q}xg3$
½–½

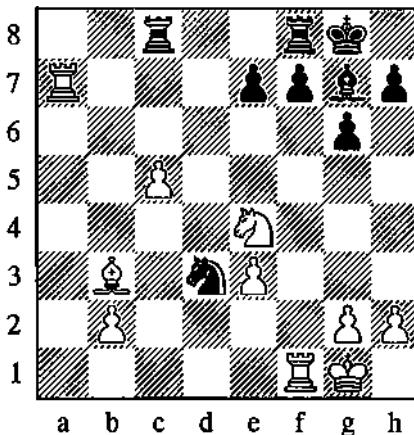
Calculation is a tool assisting us in making better decisions. When you work on your calculation, you should always keep this in the back of your head.

Controlling your impulses

One of the biggest problems I had when I was a hungry young player was to deal with sudden impulses. I would see an idea and play it without proper investigation, again and again. The following example still stands clear in my mind, 25 years later.

Nikolaj Borge – Jacob Aagaard

Helsingør 1991



I was on the run in the opening, but have here managed to escape to a decent position.

22... $\mathbb{Q}xc5$

It is hard not to play this move. You take a pawn and after a few exchanges all will be fine?

22... $\mathbb{B}b8$! was cleaner, but the text move is not actually that bad.

23. $\mathbb{Q}xf7\uparrow$!

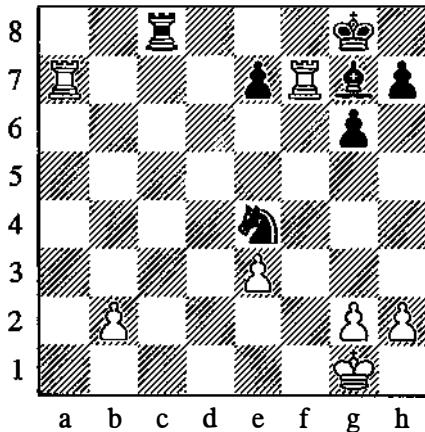
I did not see this coming. But what is more important is how I reacted to it. Because I was surprised, I quickly took the bishop, not realizing that there was an alternative option.

23... $\mathbb{B}xf7$?

It does not take a lot of calculation to see that 23... $\hat{Q}h8$ 24. $\hat{E}xe7$ $\hat{Q}xe4$ 25. $\hat{E}xe4$ $\hat{Q}xb2$ is a safe draw. The opposite-coloured bishops will save the day.

24. $\hat{E}xf7$ $\hat{Q}xe4$

24... $\hat{Q}xf7$ 25. $\hat{Q}d6\#$ is an important detail.



25. $\hat{E}xg7\#!$

I was too young to think about heart attacks when this game was played, but let's just say that I intuitively knew what one felt like after Nikolaj played this move.

I had only anticipated 25. $\hat{E}axe7$ $\hat{Q}xb2$, when Black is fine.

25... $\hat{Q}xg7$ 26. $\hat{E}xe7\#$ $\hat{Q}f6$ 27. $\hat{E}xe4$ $\hat{E}c1\#$

By some miracle I am able to recover one of the lost pawns.

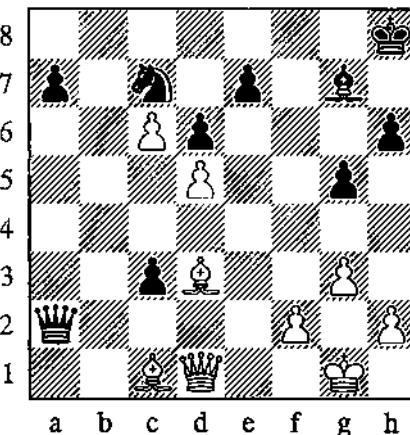
28. $\hat{Q}f2$ $\hat{E}c2\#$ 29. $\hat{Q}f3$ $\hat{E}xb2$

This endgame is unpleasant, but still within the drawing margin. After an additional 36 moves I managed to hold. Luck is a defining trait of the young player!

Looking through my early games is a total nightmare.

Jacob Aagaard – Steffen Pedersen

Lyngby 1991



This game had some clever ideas, but was generally of a low quality. At this point, I saw an idea and got excited. It did not take me long to play it.

26. $\hat{Q}c2?$

This move is not stupid, but it is not best.

A simple look at the position would have revealed 26. $\hat{W}g4!$, with the threat of $\hat{W}c8\#$, as very strong. After 26...e6 27. $\hat{W}b4!$ the game is over.

26... $\hat{W}xd5$

26... $\hat{Q}g8!?\pm$

27. $\hat{W}g4$

This was my plan, which begs the question why I did not see it the first time around. The answer is simple: I did not look for it.

27... $\hat{Q}d4?$

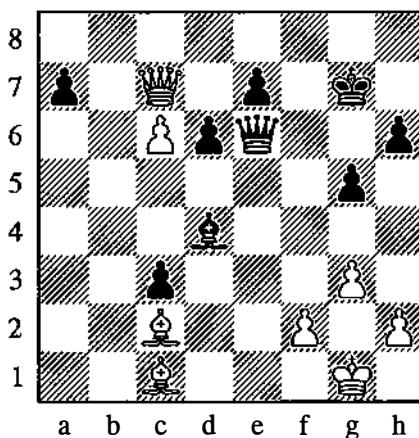
Steffen tries to solve his problems by creating counterplay. Objectively this does not work, but it would be wrong to criticise too much something that actually saved the draw.

27... $\mathbb{W}e6$ looks more logical, but White is still winning after 28. $\mathbb{W}b4!$ $\mathbb{W}g8$ 29. $\mathbb{Q}e3$. White will win the a-pawn, put his queen on b7 and win in the long run.

28. $\mathbb{W}c8\ddagger$

I took the piece without really understanding what my opponent was aiming to do. I tried a little to look for it, but did not look thoroughly enough to actually work out what was happening.

28... $\mathbb{Q}g7$ 29. $\mathbb{W}xc7$ $\mathbb{W}e6$



This was the idea. White cannot avoid an invasion on e2 or e1. I was immediately depressed and did not do the only thing that would have mattered: careful calculation of the various options. It is only when looking at this game now, twenty-five years later, that I understand that the next move was the final mistake.

30. $\mathbb{Q}f1?$

30. $\mathbb{Q}g2$ would have won the game. I rejected it on impulse, based on 30... $\mathbb{W}e2$ winning back the piece. The thing with impulses is that they can shut down your thinking process if you let them. In reality White wins instantly with 31. $\mathbb{Q}e3!$ $\mathbb{Q}xe3$ 32. $\mathbb{W}xe7\ddagger$.

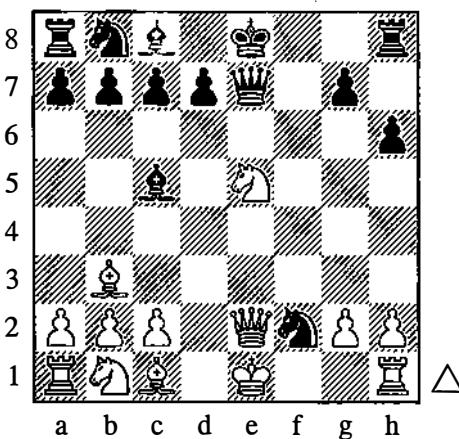
$\frac{1}{2}-\frac{1}{2}$

I had offered a draw with my last move, thinking the check on c4 would lead to a draw. It wouldn't – White still has this $\mathbb{Q}e3$ resource. Instead Black can play 30... $\mathbb{W}f7\ddagger$, when 31.f4 $\mathbb{W}c4\ddagger$ 32. $\mathbb{Q}e1$ $\mathbb{W}e6\ddagger$ is indeed a perpetual.

The pattern is relentless.

Jacob Aagaard – Eckhard Schmittdiel

Copenhagen 1992



Again, the same pattern as before. I saw an idea and got excited. I did not do a thorough examination of the merits of the idea, but just went over the variation in my head again and again, without slowing down and looking for problems with it.

12. $\mathbb{W}h5\ddagger??$

12. $\mathbb{E}f1$ $\mathbb{E}f8$ with roughly even chances was better.

12... $\mathbb{Q}d8??$

My opponent was as careless as me. If he had seen what was coming, he would also have taken the time to find the refutation. After 12...g6! 13. $\mathbb{W}xg6\ddagger$ $\mathbb{Q}d8$ Black just wins.

13. $\mathbb{Q}g5!$

This was my basic trick.

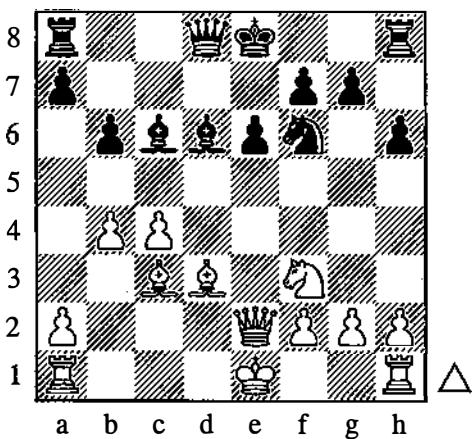
13...hxg5 14.♕xh8† ♕e8 15.♕xe8† ♔xe8
16.♖f1

White is of course winning here, but I played poorly and the game was drawn. It was not a good day.

And on and on...

Jacob Aagaard – Jens Jorgen Christiansen

Aalborg 1994



17.♕d4? ♕xb4!

Obviously, I had missed this move entirely. The game was annotated in a Danish newspaper by IM Bjarke Kristensen, who claimed that one of my limitations as a player was that I played too much for tricks and traps. I rarely react to what people write about me or my games, as they can never understand what is going on in our heads while we are playing, but can only give it a good guess. There is nothing wrong with this. But when there is an entirely wrong interpretation of who you are, it can feel a bit different.

Bjarke's mistake was a common one, which we have also seen in the example of Svidler – Carlsen, page 159. The commentator simply cannot believe that the player made a simple oversight. It is so obvious, afterwards...

17...♕b7 18.♕f5 with a slight edge was what I believed would happen. I had no element of falsification or candidate search going on.

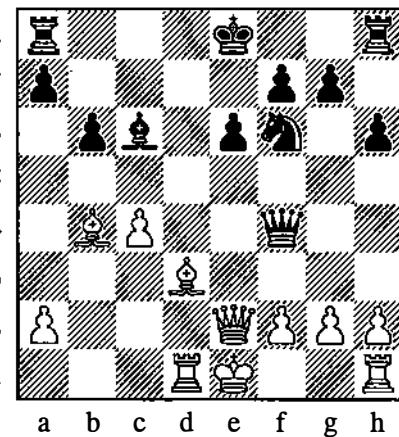
18.♕xb4 ♕xd4

OK, it was time to recover. I saw an attractive idea and went for it. And it worked.

19.♔d1 ♕f4??

Luckily our level was the same. Neither of us saw what the other guy was up to.

19...0–0–0 with an extra pawn would have been strong.



20.♕e6†!

Black resigned. 20...fxe6 21.♕g6#

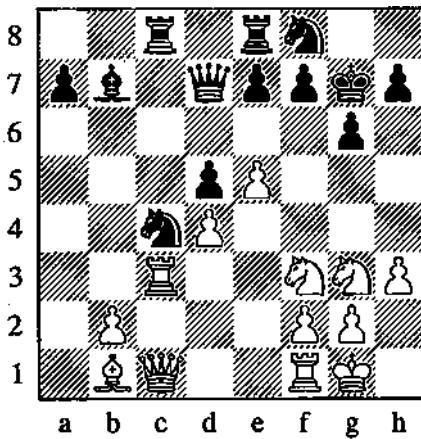
1–0

The most extreme example of my inability to deal with surprises and sudden impulses is the following game, which was an emotional low point in many ways. It started with great attacking play from my opponent.

Jens Ove Fries Nielsen – Jacob Aagaard

Copenhagen 1995

1.d4 g6 2.e4 ♜g7 3.♘c3 d6 4.h3 ♜d7 5.♘f3 c6 6.♗c4 b5 7.♗b3 ♜b6 8.0–0 b4 9.♘e2 ♜f6 10.♘g3 0–0 11.a3 bxa3 12.♗xa3 d5 13.e5 ♜fd7 14.♗f4 c5 15.c3 ♜e8 16.♗c1 cxd4 17.cxd4 ♜f8 18.♗h6 ♜b7 19.♗xg7 ♜xg7 20.♗a2 ♜d7 21.♗b1 ♜c4 22.♗c3 ♜ac8



23.♗h4 ♜e6?!

23...♜c6 24.f4 would also give White an overwhelming attack.

24.♗h5†! ♜g8

24...gxh5 25.♗g3† ♜h8 26.♗h6 and mate.

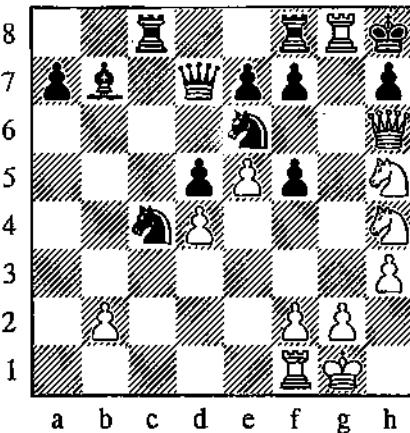
25.♗h6 ♜f8 26.♗f5! gxh5 27.♗g3† ♜h8

At this point, something very strange happened. I was expecting 28.♗g7 – and mate. But my opponent kept on thinking. And thinking and thinking.

28.♗g8†??

This made absolutely no sense to me. Reality did not make sense. I could not connect the dots in my head. It was a rather painful experience. I did not trust my

own senses. My emotions were jerking off in all directions. Tearing in the fabric of reality. I wanted it to stop. I took the rook and offered a draw, which my opponent immediately accepted.



28...♜xg8

½-½

Afterwards Jens Ove explained that he was planning ♜h5xf7#. His reality was shaky as well. People asked me why I had offered a draw. I gave some nonsense explanation about wanting to beat him in a fair game, rather than winning from a position where I was facing mate in two and my opponent was hallucinating. I was simply embarrassed by my reaction. To tell random people who could not make sense of my decision that I felt so confused that it felt like insanity was not something I wanted to do. At least that impulse was right! Luckily, I did manage to beat Jens Ove a few times fair and square on later occasions.

I do think learning to manage my emotions and my excitement/confusion better at the board was one of the most pivotal elements in my rise from a weak international master in 2002 to a strong grandmaster in 2007.

Naivety

An important element to understanding my mistakes in the previous examples is naivety. I saw an idea and somehow believed that my opponent had not seen it. Or more accurately, I did not think about my opponent at all.

Having seen examples where I was naive, let's see some examples where I have been happy enough to be on the receiving end of someone else's naivety. Working with many strong grandmasters, I can assure you that this is a common fault and that all we can do is to diminish its impact on our games; we can never truly get rid of this fault.

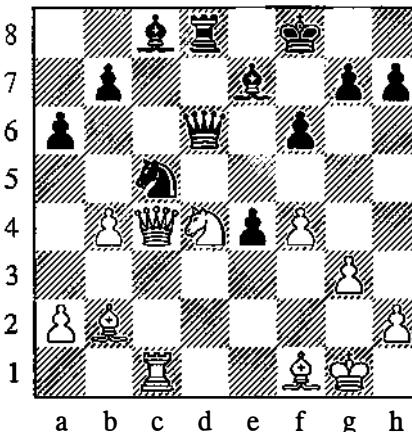
I never get tired of pointing out that the answer to the question *what was I thinking?* usually is that you weren't. I have been there many times (see above, or for my collected works there is a big database you can frequent). This is the main point about naivety. It is a lack of taking the opponent's intentions into consideration. At times this is because we *just forgot that the opponent might have plans of his own*, and at times it is a type of arrogance, where *we do not believe this idiot can tie his own shoelaces, let alone see something we do not*. We have all been there.

Still it feels harsh to provide examples for this section. So, I will start with my close friend and co-worker at Quality Chess, International Master Andrew Greet. Andrew is a strong player who is usually seated next to me in a team match. But this one time there were three Quality Chess employees on one side of the match and two on the other. Andrew and I were paired together on the top board and played a game that decided the match.

Earlier in the game I had advanced my c-pawn to c5, thinking that it could not be taken. Quickly it dawned on me that almost all of the black pieces were able to capture the pawn, with the notable exception of the light-squared bishop.

Jacob Aagaard – Andrew Greet

Glasgow 2015



I have just played 27.b4, which should ring the alarm bells with my opponent. It appears that I have allowed his knight to go to a4, after which everything will hang.

27...♞a4?

Andrew obviously never asked himself what my intention was behind my last move. If he had, he would of course have seen my intention; Andrew is no worse a player than me.

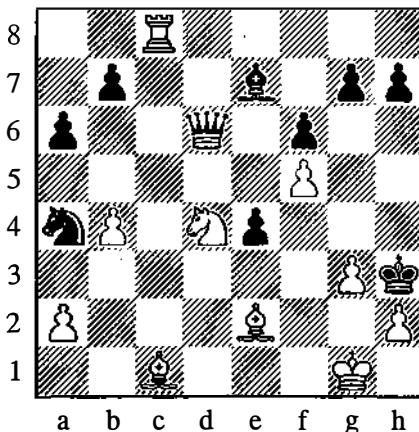
27...♝e6! with a solid extra pawn was the sensible move.

28.♛xc8!

Andrew was obviously surprised by this, but is it so surprising? Not if you wonder why your opponent would allow something like your last move. Obviously, I had confused him with my earlier blunder, which was indeed entirely inexplicable.

28...♜xc8

Black is already out of options. 28...♝xb2 29.♝e6† also loses.

29. $\mathbb{E}xc8\# \mathbb{Q}f7$ 29... $\mathbb{Q}d8$ 30. $\mathbb{E}xd8\#$ 30. $\mathbb{Q}c4\# \mathbb{Q}g6$ 31. $\mathbb{E}5\# \mathbb{Q}g5$ 32. $\mathbb{Q}c1\# \mathbb{Q}g4$
33. $\mathbb{Q}e2\# \mathbb{Q}h3$ 

The king is entirely trapped here. There are many wins, but I saw no reason to change from what I had planned on move 27.

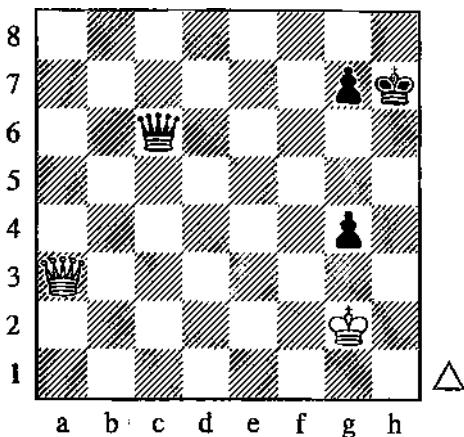
34. $\mathbb{Q}e6 \mathbb{W}b6\#$ 35. $\mathbb{Q}h1 \mathbb{Q}d6$ 36. $\mathbb{E}h8 \mathbb{Q}xg3$
37. $\mathbb{E}xh7\# \mathbb{Q}h4$ 38. $\mathbb{Q}f4\#$

After the match the teams went for a memorable dinner together, where we sang together with a rugby team. Andrew seemed beside himself, trying to answer that age-old question: *What was I thinking?...*

There might be some way in which a poorly played game can throw us off our senses. In my 2008 Olympiad game with Black against Simen Agdestein, I was doing quite well out of the opening and slowly outplayed my opponent. But from move 40 onwards, I played like a complete idiot. Blunder upon blunder in the queen ending. I tried to be careful, but nothing was working. We ended up in this position (which I am so fond of that I also used it in *Grandmaster Preparation – Calculation*).

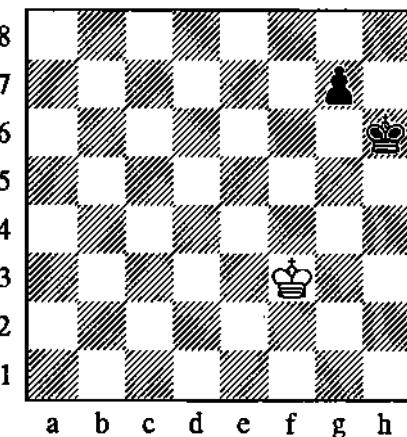
Simen Agdestein – Jacob Aagaard

Dresden (ol) 2008

76. $\mathbb{Q}g3?$

Simen was clearly excited when he played this move.

I believed that I was winning all the same. After 76. $\mathbb{Q}g1$ $\mathbb{W}f3$ 77. $\mathbb{W}b2$ $g3$ I was ready for 78... $\mathbb{W}f2\#$, with a winning pawn ending. When I showed the game to John Shaw afterwards, he immediately played 78. $\mathbb{W}xg7\#$ forcing stalemate. As so often, I had finished my short calculation with an evaluation and not a serious look at the position.

76... $\mathbb{W}f3\#$! 77. $\mathbb{W}xf3$ $gxf3$ 78. $\mathbb{Q}xf3 \mathbb{Q}h6!$ 

I played this immediately. Simen went grey in the face. It is a nice move for sure, but not something that was impossible to foresee.

79.♔g4 ♔g6

0-1

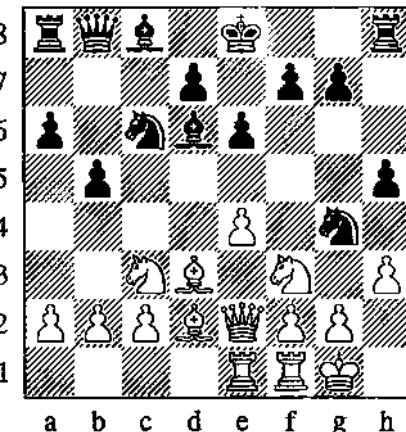
The tournament situation can also be confusing. The following game was played in the last round of a weekend tournament. I had won the first four games, while Colin McNab, playing Black, had given a draw away at some point. I would thus win the tournament with a draw. Colin would of course have liked to win the game, but he seemed to be less hell-bent on it than expected. Sadly, for him, I was not going to let a chance for a perfect score go away, if it was not going to seriously jeopardize my chances of winning the tournament.

Jacob Aagaard – Colin McNab

Perth 2007

1.e4 c5 2.♘f3 e6 3.d4 cxd4 4.♘xd4 a6
5.♘c3 b5 6.♗d3 ♕b6 7.♘f3 ♘c6 8.0-0
♗b8 9.♗e2 ♘d6 10.♗d2 ♘f6 11.♗ae1 ♘g4

12.h3 h5



13.a4 b4 14.♗d5

A typical idea in the Sicilian, which works here. The opening is maybe slightly better for White, but I would not think of it as a great success.

14...exd5?

I was certain Colin would play 14...♗b7, when I was planning 15.♘e3 in order to get the knight to c4. Colin rejected it on account of 15.♘b6?.

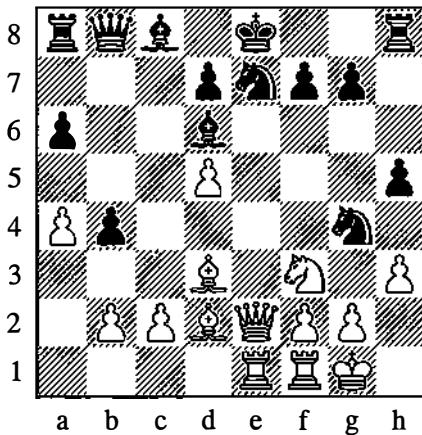


Take your training seriously. You never know who might be looking over your shoulder...



I would not have played this, on account of 15... $\mathbb{Q}c5!$ winning a piece. The tactical idea is 16. $\mathbb{Q}xa8 \mathbb{Q}d4$ and it is White who will need to resign.

15. $\text{exd5}\dagger \mathbb{Q}e7$

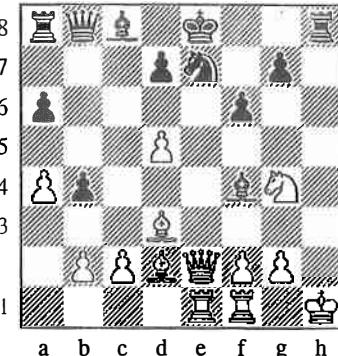


16. $\mathbb{Q}f4!!$

Colin had entirely missed this move. It is of course a quiet move in a position where White has just sacrificed a piece, which can be hard to see. It would take some determination to find it, some suspicion.

But Colin did not feel suspicious. He was expecting me to play 16. hxg4 hxg4 17. $\mathbb{Q}e5$, when 17... $f6$ 18. $\mathbb{Q}xg4 \mathbb{Q}h2\dagger$ 19. $\mathbb{Q}h1 \mathbb{Q}f4\dagger$ looks like the perpetual that would grant me first prize. I did not look at this line seriously during the game, as I found 16. $\mathbb{Q}f4!$ early on.

If I had, I hope I would have seen that even this is not the end of the line.

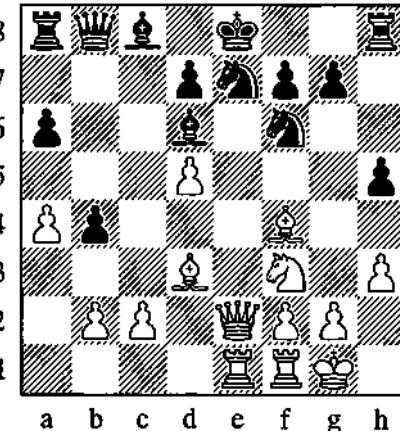


White has the surprising 20. $\mathbb{Q}h2!$.

The first point is that 20... $\mathbb{Q}xh2\dagger$? 21. $\mathbb{Q}g1 \mathbb{Q}d6$ once again runs into 22. $\mathbb{Q}f4!$, when after 22... $\mathbb{Q}h4$ 23. $\mathbb{Q}xe7\dagger \mathbb{Q}xe7$ 24. $\mathbb{Q}xb8$ White has a winning position.

For this reason Black would have to play 20... $\mathbb{Q}d6$, when after 21. $g3 \mathbb{Q}b7$ 22. $\mathbb{Q}e4$ White has a serious advantage.

16... $\mathbb{Q}f6$



17. $\mathbb{Q}xe7\dagger$

Everything works out perfectly.

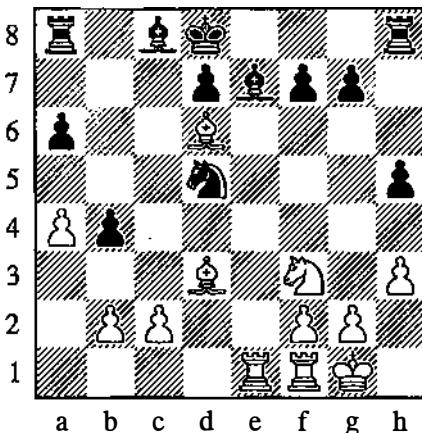
17... $\mathbb{Q}xe7$ 18. $\mathbb{Q}xb8 \mathbb{Q}xd5$

18... $\mathbb{Q}xb8$ 19. $d6$ also gives White a winning attack.

19.♕d6 ♔d8

This allows for a nice finish, but Black did not have any good moves available.

19...♝h6 20.♕e5! was my plan. The dual threat of ♕e4 and ♜xg7 gives a winning position.



20.♝xe7!

It was a great pleasure to be able to land a second sacrifice on this key square.

20...♜xe7 21.♞g5 ♚e8

Colin decided to allow checkmate, as after 21...♝f8 22.♝e1 it is all over anyway.

22.♞xf7#

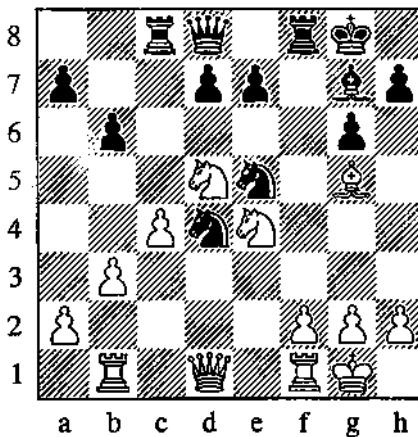
Falsification

A method to include in your calculation is called *falsification*. The word verification is probably more appropriate if we are talking semantics; we are trying to test the validity of the variation. But I prefer to use falsification, because what we are trying to do here is to find flaws with our thinking, not looking for anything to back it up. At times the emotional impact of words is more important than their literal meaning.

Let's look at a simple position.

Jacob Aagaard – Michael Trauth

Arco 2004



Black to play – Evaluate 20...♞df3#

The concept of falsification is not difficult to comprehend. You have calculated something that has some risk or uncertainty connected to it. It can be a long or a short variation. It does not have to be a combination, just something you sense might not be entirely bulletproof. Yes, this will mean that you should rely on your intuition – but you will never be a good chess player if you do not use this big tool from your tool box. You cannot do everything all the time, but some things you should do often. Falsification is one of them.

The position above is better for White if nothing happens. 20...♞dec6 is the only alternative to the knight check, as any rook move is answered with 21.♞d6. After the knight retreat, 21.♝g4 is pleasant for White. Trauth was not happy with a passive position like this and went for the tactical solution.

Incidentally my opponent was very happy with us having four knights in the centre of the board, something I did not notice at all in the heat of the battle.

20... $\mathbb{Q}df3\#?$

Rauth attempts to solve his problems with tactics.

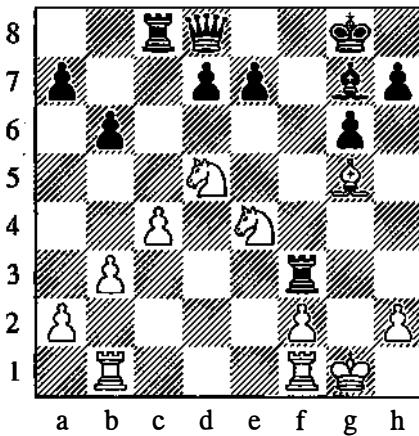
21.gxf3 $\mathbb{Q}xf3\#$

Rauth's idea is that after 22. $\mathbb{Q}h1?$ $\mathbb{Q}xg5$ 23. $\mathbb{Q}xg5$ e6 24.f4 h6! Black is all right.

22. $\mathbb{W}xf3!$

If he had looked carefully at the alternatives along the line his intuition provided him with, he would have seen that this was the most challenging option.

22... $\mathbb{E}xf3$



23. $\mathbb{Q}xe7!$

White wins. The next move is $\mathbb{Q}d6$ and the queen is trapped.

1–0

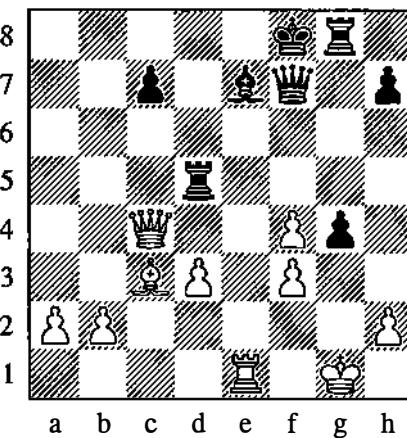
I know this description of falsification is crisp and short. If you look through the previous two sections, on impulses and naivety, you will see that they are all about falsification too. The solution to those problems – and many others – is falsification. To actively look for what you might have done wrong.

Going too fast

More than a decade ago I read in *Chess Today* that I was probably suffering from insomnia, because of the amount of work I was managing to get done. As always, when you hear this sort of nonsense, you feel a little better about your abhorrent procrastination, but maybe also realize that you are suffering from a different ailment, sloppiness. Especially at the board, where I tended to rush my decisions. The following is an all too common example.

Isacco Ibba – Jacob Aagaard

Porto Mannu 2007



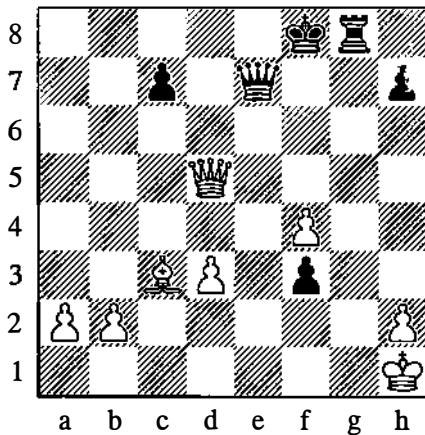
After a complicated game, where my opponent sacrificed a rook, I have finally managed to take full control of events. With a black counterattack coming and no compensation in sight, my opponent went for a desperate sacrifice.

31. $\mathbb{E}xe7?!$ $\mathbb{W}xe7?!$

I played this very quickly. Basically, my opponent was low on time and I got caught up in his sense of urgency. But it was also a general problem I was still struggling with at the time, as described in Chapter 4 on Decision Making.

31... $\mathbb{Q}xe7$ would not give White any serious counterplay. The move I made was of course the best move, but if we are not looking from a grading by the engine, but for how we should play better chess ourselves, it is only acceptable to sacrifice a rook when you have spent time evaluating the outcome.

32. $\mathbb{W}xd5$ $gxf3\#$ 33. $\mathbb{Q}h1$



I had completely overlooked that this move was possible. How can you overlook this move? By not looking of course.

33... $\mathbb{B}g1\#!$

I was extremely fortunate to have a winning shot here. Black hardly has an advantage without it.

After 33...f2 for example, White has 34. $\mathbb{W}f5\#$ with a perpetual.

34. $\mathbb{Q}xg1$ $\mathbb{W}e3\#$

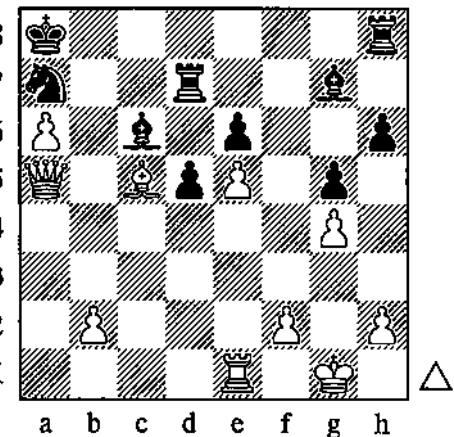
0-1

Again, the answer to this bad habit is falsification. If we look at the following example, we can see how this technique would have saved me.

Jacob Aagaard – Allan Stig Rasmussen

Hillerød 2010

Allan won his first Danish Championship after having been in the lead several times over the previous few years. He played well against the other GMs, but was especially savage against the IMs. As always, it takes a bit of luck to win a tournament and his luck came in Round Two, where his opponent (me) had not yet recharged his batteries after weeks with a young baby crying all night, refusing to let anyone sleep. This, however, does not in any way diminish Allan's overall performance; once the curse had been broken, he won the championship frequently and is still one of the favourites each year.



29. $\mathbb{Q}xa7??$

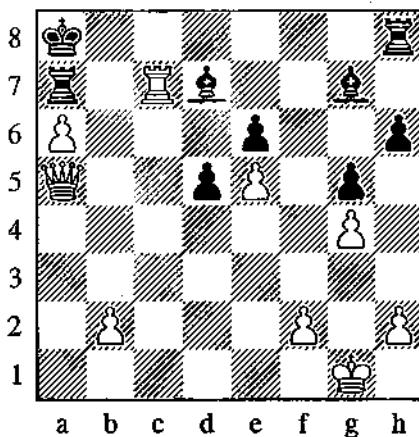
A complete lapse of concentration. I just missed 31... $\mathbb{Q}xe5$ and played way too quickly.

White was still winning after 29. $\mathbb{B}c1!$ with the threat of $\mathbb{Q}xa7$. For example: 29... $\mathbb{Q}c8$ 30. $\mathbb{Q}d6$ $\mathbb{Q}a7$ 31. $\mathbb{W}b6$ $\mathbb{B}c8$ 32.b4 and the black position collapses.

29... $\mathbb{Q}xa7$ 30. $\mathbb{B}c1$ $\mathbb{Q}d7$ 31. $\mathbb{B}c7?!$

Continuing down the losing path.

White is still in for a fight after 31. $\mathbb{B}c5$ with the idea of $\mathbb{W}c3$. After 31... $\mathbb{Q}xe5$ 32. $\mathbb{B}xd5!$ $\mathbb{Q}f4$ 33. $\mathbb{B}d1$ Black is better, but the position is a mess.



31... $\mathbb{Q}xe5!$

Black just wins.

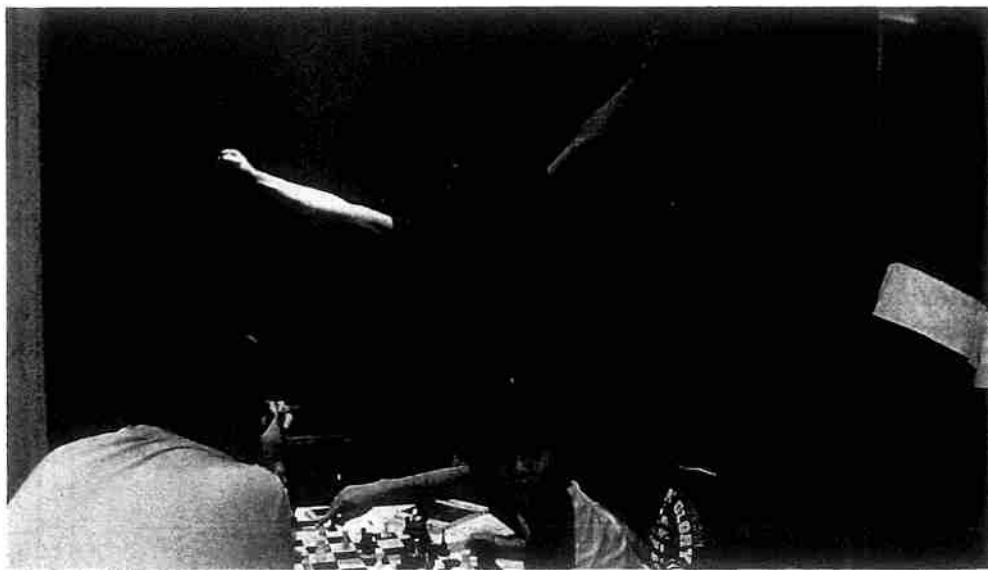
Allan also considered 31... $\mathbb{B}c8$ as playable, but I had actually seen that White wins after: 32. $\mathbb{B}xa7\#$ $\mathbb{Q}xa7$ 33. $\mathbb{W}el$ $\mathbb{Q}d4$ 34. $\mathbb{W}b4$ $\mathbb{Q}b6$ 35. $\mathbb{W}e7$ $\mathbb{B}d8$ 36. $b4$ $\mathbb{Q}xa6$ 37. $b5\#$ $\mathbb{Q}xb5$

0–1

Failing to realize you have a choice

I understand this chapter is going in circles, illuminating the same few points from different angles. This is intentional, as I don't want you to "read, nod and move on". I want you to understand how important these simple techniques are for the quality of your game.

One of the common failings in connection with using System 1 thinking only, is to fail to realize that you have a real choice. Again, if you do not look for it, you will not find it.



Happiness is always a possible choice. I firmly believe that there is nothing you can do with negative emotions that I cannot do at least equally well with a positive approach!

Jacob Aagaard – Paolo Tocco

Arco 2007

1.e4 e5 2.♘f3 ♘c6 3.♗b5 ♘ge7 4.♗c3 g6?!

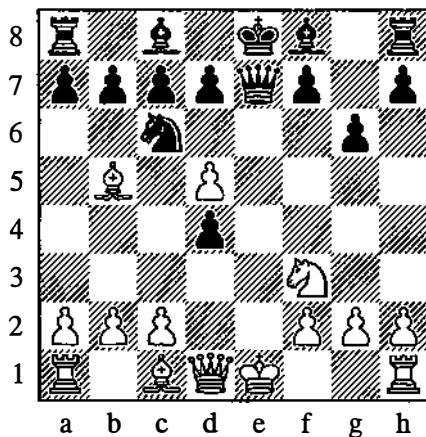
This variation is poor.

5.d4 exd4 6.♗d5! ♘xd5?!

Black is trying to solve his problems with faulty tactics.

Last time I looked, 6...♝g7 7.♝g5 h6 8.♝f6 ♖xf6 9.♗xf6† ♖f8 10.♗d2!± was a serious problem for Black.

7.♗xd5 ♖e7†



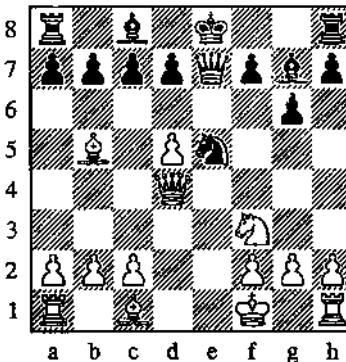
At this point, I made a quick move, without looking for an alternative. Exchanging queens was clearly out of the question and only a fool would move the king, right?

8.♔e2?!

So only this remains.

Well, of the four types of decisions, I classified this as type 1: an automatic move. But I did not yet know that this meant that I had to check if that was really the case. Well, I sort of knew. But I did not know-know. I did not have the clarity of mind I have now.

My notes from ten years ago state: "Again, a proof that I cannot calculate." It is accurate. 8.♔f1! was virtually winning already: 8...♝e5 (8...♝c5 9.♗e2† ♔e7 10.♗g5 is equally bad) 9.♗xd4 ♗g7



10.♗f4 f6 11.♗e1 White wins a pawn and later on, with great certainty, the game.

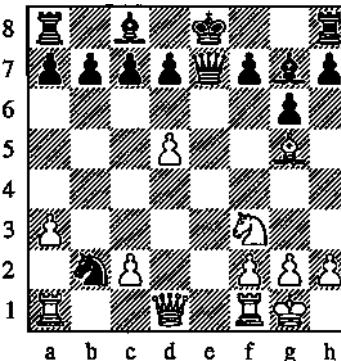
8...♝b4 9.0–0 ♘g7 10.a3 d3?!

I had not seen this move, but there was no real way to avoid it either.

10...♝xd5 11.♗c4 ♖c5 was what I was expecting. After 12.♗xd5 ♖xd5 13.♗e1† ♖f8 14.♗e2 ♖e6 15.♗b5! ♖b6 16.♗g5 f6 17.♗h4 White has a fine attacking position.

11.♗xd3 ♘xd3 12.♗g5 f6

During the game, I saw a desperado: 12...♝xb2?!



I found what I thought was an accurate refutation. It was not. What would you play here?

13. $\mathbb{W}xd3\#$

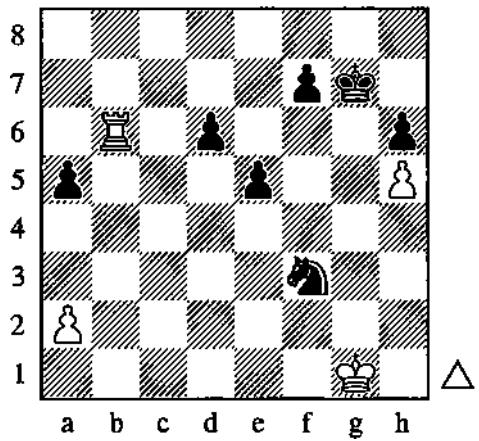
I managed to torture my opponent for another 65 moves, before he lost on time in a drawn pawn ending, where he had just found all the right moves. This despite us playing with a 30 second increment. He simply fell asleep.

When we signed the scoresheets, he mumbled something I did not fully catch. I said “Sorry” and he repeated something in Italian, relating to my mother’s choice of profession that was both news to me and rather impolite. I looked at the arbiter who pointed to the position on the board: “You win this position! What more do you want?” Fair point. I shook hands with my opponent and went for a glorious meal with a friend.

The next example is a good one for explaining why I was an international master for a full decade.

Jacob Aagaard – Vyacheslav Ikonnikov

Netherlands 2002



45. $\mathbb{W}f2?$

I played this move instantly and he made the reply instantly. I then realized that I had blundered badly. It is irritating that I still make this kind of mistake with 40 minutes remaining on the clock.

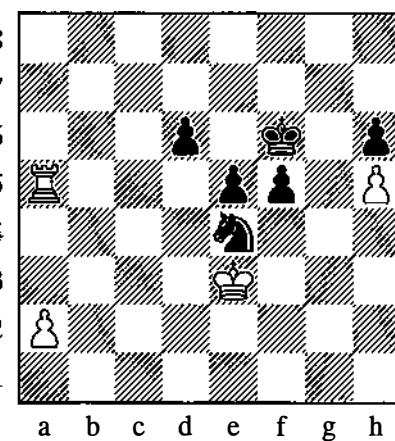
45. $\mathbb{W}g2!$ and there is no way for Black to defend the d6-pawn. After this, all counterplay will be short lived.

45... $\mathbb{Q}d2!$ 46. $\mathbb{B}a6 \mathbb{Q}e4\#$

My opponent is hoping for counterplay with his three connected pawns. This worked out well in the game, but objectively it should lose.

He could have played 46... $\mathbb{Q}c4$, but I doubt if the overall evaluation of the position changes much.

47. $\mathbb{W}e3 f5$ 48. $\mathbb{B}xa5 \mathbb{W}f6$



49. $\mathbb{B}a8?$

This is a typical mistake of laziness. I realized that 49. $a4$ was also possible, but did not have the clarity of thought to work out if there was a real difference. There are a few. First of all, Black does not have the ... $d5$ resource he has in the game. Secondly, it gives White the chance to put the rook on $b5$ in many lines, which is the best reply to 49... $\mathbb{W}e7$ for example.

One line goes: 49.a4 ♜e7 50.♗b5! ♜d7 51.a5 ♜c6 52.a6 and the pawn queens.

49...d5!?

49...♜e7 50.a4 ♜d7 51.a5 ♜c7 52.a6 ♜b6 53.a7 ♜b7 54.♗h8 still wins. You have to play rather poorly in order to ruin this position. Watch me in action!

50.a4 f4† 51.♗f3 ♜d2† 52.♗g4?!

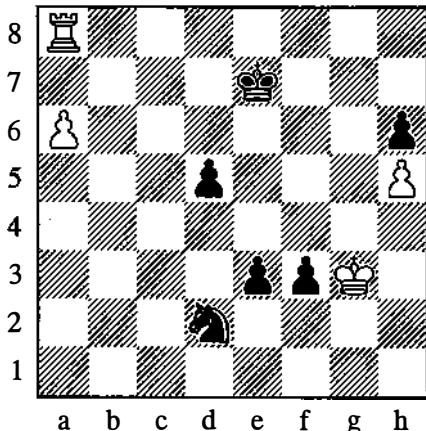
This seemed clear. The black king is limited and the white king keeps the f-pawn sort of under control. I played it without looking seriously for alternatives.

52.♗e2! is a direct win. For example: 52...♝b3 53.a5 ♜d4† 54.♗f2 e4 55.a6 e3† 56.♗f1 and the pawn will queen very soon.

52..f3 53.a5 ♜e7

53..f2 54.♗f8† is one of the few things I did see.

54.♗g3 e4 55.a6 e3



56.a7?

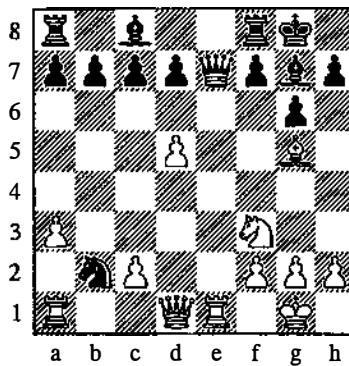
It is very natural to push the pawn, especially when you can see that you will get a queen with check. But if you do not stop to look beyond this point, your play will suffer accordingly.

If I had not rushed, I would have seen that 56.♗c8 f2 57.♗c1 wins trivially.

**56...f2 57.♗e8† ♜xe8 58.a8=♛† ♜e7
59.♛b7† ♜d6 60.♛b6† ♜d7 61.♛b7† ♜d6
62.♛b6† ♜d7
½-½**

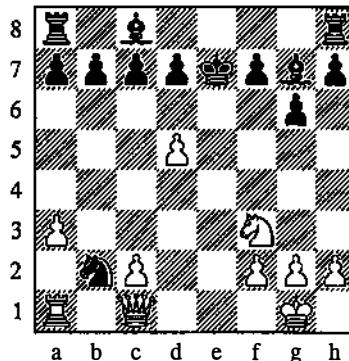
Let us return to the puzzle on the earlier page 182.

My intention was 13.♗e1?, when Black has the non-obvious: 13...0-0!!



Leading to a roughly level position after some exchanges.

The solution is: 13.♛c1! Only this square. If the queen goes to d2, the knight can come to c4, and if the queen goes to b1, there are no checks on e3 and g5 later. 13...♛c5 14.♗e1† ♛f8 15.♗e7† ♜xe7 16.♗xe7 ♜xe7



Black has three pieces for the queen, but they will not have the chance to join the game due to swift action from White. 17. $\mathbb{W}e3\# \mathbb{Q}f8$ 18. $\mathbb{Q}e1 \mathbb{Q}f6$ 19. $\mathbb{W}h6\# \mathbb{Q}g7$ 20. $\mathbb{W}h4$ and White wins.

With this, let's move on to focus more on the solutions.

Training Calculation

I do find the theory of calculation really fascinating and have plans to write a full book on it again in the future; however, in this space my intention is to get you on your way to improving your calculation before you go into all the various advanced techniques. What follows are examples of common mistakes/problems, as well as a proposed better way to do things. I think this will be more useful to most people.

I want to make a big point: **Calculation is the process by which we see the things we do not see automatically.** Therefore, the main recommendation is:

Slow Down

If you want to improve your calculation, there is nothing that will help you improve it more than training the ability to switch speed. We obviously do not want to stop seeing a lot of things automatically and effortlessly, but there is little danger of that. Concentration, the conscious steering of your attention and thought process, is demanding. You will let it go before you will ever consider allowing System 1 to get back in control.

Candidates

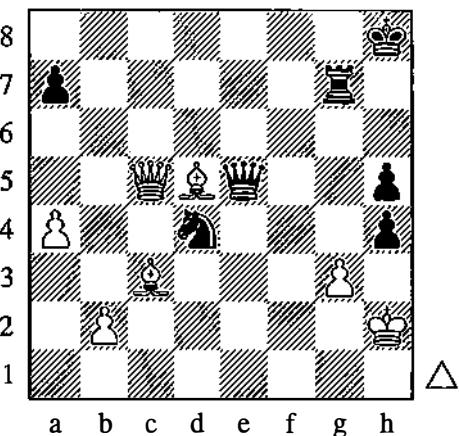
The most basic form is the candidate search. Kotov described this part of calculation

excellently in *Think Like a Grandmaster*, while the rest of his calculation narrative describes how a mechanical machine would think. Not suited for humans, and amusingly not suited for digital machines either.

Even in simple positions where only one move makes sense, it can be possible to miss it.

Wilfried Dehesdin – Jacob Aagaard

Cappelle-la-Grande 2005



My opponent had enough time, he just did not think there were any alternatives to giving the check. In all fairness, he had given up and was just making moves. This is something I see happening to my students as well from time to time. For example, they will sacrifice a piece based on some idea that does not really work out. They will then make heartless moves without really investigating the position, thinking they are lost. But actually, the positional compensation for the piece might be adequate. I am talking about a recent example, obviously.

A question is how much body language matters. I am not expert in this area, but it is commonly known that we convey and absorb a lot of subconscious information by body language. I believed I was winning at this

point and my opponent might have felt this confidence coming from me, influencing his lack of faith in his own chances.

45. $\mathbb{W}c8\#?$

45. $\mathbb{Q}h1!$ was strong. The knight is lost and Black does not have a serious attack. After something like 45... $\mathbb{W}e2$ 46. $\mathbb{W}xd4$ it is time to take a perpetual; or die...

45... $\mathbb{Q}h7$ 46. $\mathbb{Q}xd4$ $\mathbb{W}xg3\#$ 47. $\mathbb{Q}h1$ $\mathbb{W}e1\#$
48. $\mathbb{Q}h2$ $\mathbb{W}d2\#$ 49. $\mathbb{Q}h1$ $\mathbb{W}xd4$

I converted the advantage after an additional 25 moves.

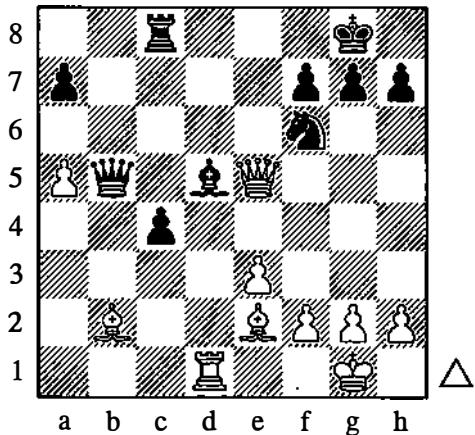
...0-1

You would think that famous grandmasters would have this elementary skill well honed. It is not necessarily so. We saw above how Carlsen could miss a rather elementary sacrifice. Not because there was any pattern he did not understand or recognize, and not because he was unable to race through the complications in seconds. But because he was not looking.

In the following game, neither player was in serious time trouble and they have nothing to excuse their inability to master the basics.

Mikhail Gurevich – Jacob Aagaard

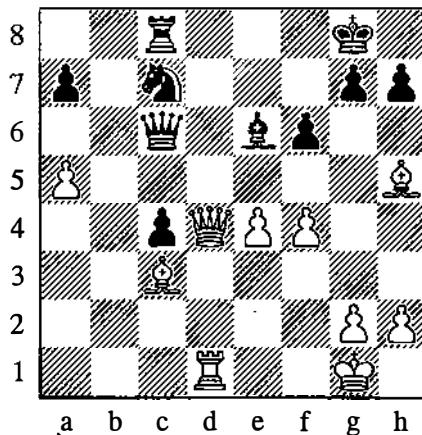
Torrelavega 2007



26. $\mathbb{Q}c3?$

26. $\mathbb{W}f5!$ and 27. $\mathbb{Q}xf6$ simply wins a piece. My teammate Narciso Dublan, sitting next to me, saw it even though he had plenty of problems of his own.

26... $\mathbb{W}c6$ 27. $f3$ $\mathbb{Q}e6$ 28. $e4$ $\mathbb{Q}e8$ 29. $f4$ $f6$
30. $\mathbb{W}d4$ $\mathbb{Q}c7$ 31. $\mathbb{Q}h5$



At this point it was my turn to prove that I also had not mastered the rather simple skill of looking at the board for options. This is especially embarrassing, as I had after all written a book about the importance of doing so.

31... $\mathbb{Q}f7?$

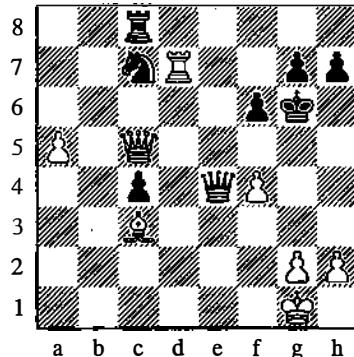
31... $\mathbb{Q}h8!$ and I would have been fully back in the game. I did not see this move, which you will understand if you look at it for a few seconds. Once a move appears in your mind and you pay attention to it, System 1, your intuition, will fill in moves automatically and you will see that as a start, this is at least not stupid. Sure, you will then focus to see if you can find something wrong with it, back to candidates/System 2 thinking. In this case I would have found nothing, as everything is all right.

32. $\mathbb{Q}xf7\#$ $\mathbb{Q}xf7$ 33. $\mathbb{W}xa7$ $\mathbb{W}xe4$ 34. $\mathbb{W}c5$

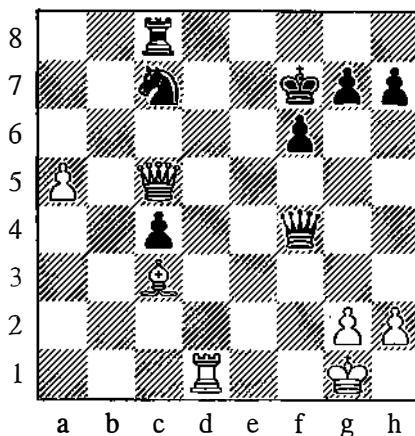
An unpleasant pin. Again I should have performed a candidate search.

34... $\mathbb{W}xf4?$

34... $\mathbb{Q}g6!$ was the right move. I might have seen this and rejected it on account of 35. $\mathbb{Q}d7$.



But if I had slowed down and focused, I would have had no problem finding 35... $\mathbb{Q}b5!!$, when the following forced line lets Black off the hook: 36. $\mathbb{W}xb5$ $\mathbb{W}e3\uparrow$ 37. $\mathbb{Q}f1$ $\mathbb{W}c1\uparrow$ 38. $\mathbb{Q}f2$ $\mathbb{W}xc3$ 39. $\mathbb{W}d5$ $\mathbb{W}c2\uparrow$ 40. $\mathbb{Q}f3$ $\mathbb{Q}h6$ 41. $\mathbb{W}f7$ $\mathbb{W}g6$ 42. $\mathbb{W}xg6\uparrow$ $\mathbb{Q}xg6$ 43. $\mathbb{Q}e2$ c3 44. $\mathbb{Q}d1$ $\mathbb{B}c4$ and Black should make a draw.



35.a6??

This is a very logical move, if pushing the pawn has been everything you have been thinking about for a while. At the same time, it is by far the most horrible move in an otherwise quite despicable game.

A candidate search will reveal that the basic 35. $\mathbb{Q}d7\uparrow$ $\mathbb{Q}g6$ 36. $\mathbb{W}e7$ is entirely winning. There is nothing complicated about it and nothing for a grandmaster to overlook. But of



course, if he does not look at all, he will be able to miss such a chance.

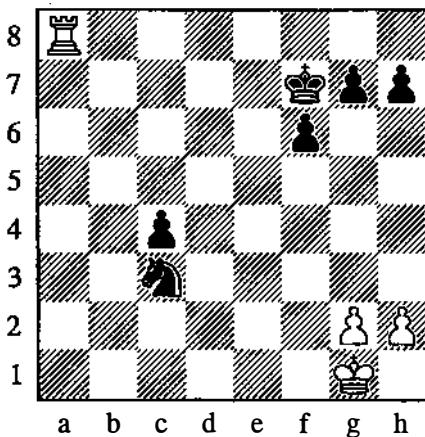
35... $\mathbb{W}g4?$

35... $\mathbb{E}e8!$ was stronger.

36. $\mathbb{E}a1?$

36. $\mathbb{E}d4$ $\mathbb{W}e6$ 37. $\mathbb{E}xc4$ would still have won a piece, due to the pin. This is a little less obvious and I would definitely forgive my opponent for missing this. It lacks the forcing nature the other direct wins enjoy.

36... $\mathbb{W}e6$ 37.a7 $\mathbb{Q}d5$ 38. $\mathbb{W}xc8$ $\mathbb{W}xc8$ 39.a8= \mathbb{W}
 $\mathbb{W}xa8$ 40. $\mathbb{E}xa8$ $\mathbb{Q}xc3$



This ending is a draw. My opponent was clearly disappointed not to win the game and when I offered a draw 57 moves later, he forced me to call the arbiter to claim it.

...½-½

I hope the lesson is clear. Learning and applying this technique will not elevate your positional play or improve your knowledge of combinations. But the chances are you already possess some skills in both areas and would like to get rid of that horrible feeling that you understand everything, you are just not doing it.

End your calculation with a look at the position

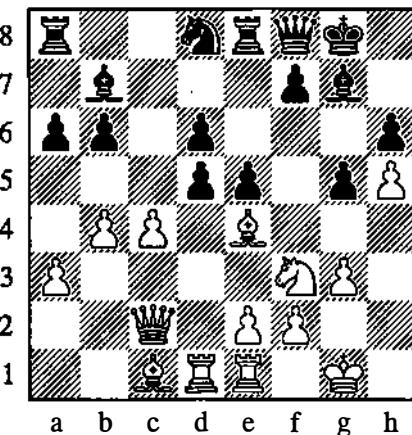
One of the most common errors in calculation is to end with a rash emotional evaluation of the position. This could be marked under impulses. When we start analysing a position, we will have some initial hopes of where our variations will take us. There might be bumps in the road; nasty surprises. We will look at them in the next section.

In this part, we will discuss what happens when we arrive at what feels like the end of the variation and we are disappointed with something about it. It is important to understand that this is a process of impulses that needs to be managed. We need to have a proper look at the position, rather than coming up with an emotional evaluation of the final position.

This is a very common problem for strong players as well. Remember, you can become a very strong player by developing a few strengths to great heights, yet still have glaring weaknesses in your game.

Wouter Spoelman – Erwin L'Ami

Netherlands 2016



White has an overwhelming position and has to decide how best to keep control of the position. If nothing happens, White will be able to organize a smooth invasion of the queenside and win effortlessly. The move White would like to play based on simple positional grounds is 25.cxd5. We can safely presume that Spoelman understood that the knight on d8 would be dead and Black would be defenceless if he could not create immediate counterplay. So this is what Spoelman worried about. In short, he wanted to be certain that Black would not be able to play ...f7-f5, trapping the white bishop.

So the decision elevated from a positional decision to a strategic decision. He needed both his positional judgement and some abstract thinking to make a plan and his calculation skills to evaluate its validity.

I am certain that Spoelman understood this. (I am sure he would have used his own words to describe it. Theoreticians use concepts, the players describe the decision right in front of them.) What Spoelman did was to calculate the variation extensively and see that he would lose a pawn, exactly as my students do.

25.♗xd5?

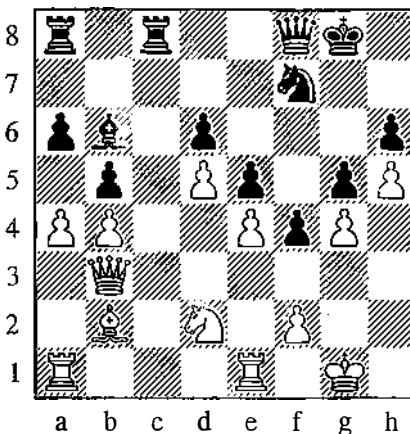
This is the wrong decision. Black is back!

25...♝xd5 26.cxd5

Spoelman goes for the simplified version of the strategic plan, but it is less effective here.

It was stronger to play 26.♗xd5 ♜c8 27.♗e3 b5 28.c5 ♜e6±, although White's advantage is not that great here either.

26...f5 27.e4 f4 28.g4 ♜f7 29.♗d2 ♜ec8 30.♗b3 b5 31.♗b2 ♜f6 32.a4 ♜d8 33.♗a1 ♜b6

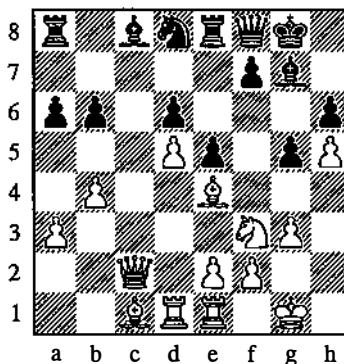


Black has managed to reorganize his pieces somewhat and thus managed to equalize. His knight on f7 is poor, but so is the knight on d2. Black eventually managed to win the game, but that is a different story altogether.

As you have already guessed by now, the right move would have been to take with the pawn. 25.cxd5!

Something along the lines of 25...♜c8 26.♗d3 is atrocious for Black and is not what made Spoelman hesitate. There was only one move he was concerned about.

25...♝c8

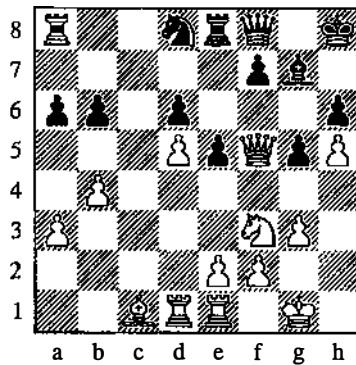


If White has time to play g4 and ♜h2, the control of the f5-square decides the game, so Black has no time to lose. The same goes for White allowing Black to play ...f5.

26.♕h7† ♜h8 27.♕f5

All very natural for a grandmaster.

27...♜xf5 28.♝xf5

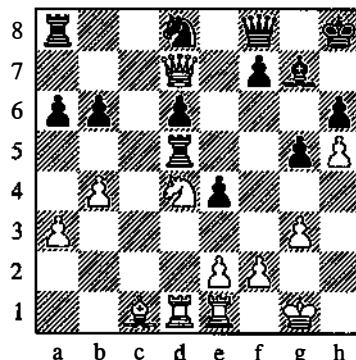


Some players might go for this variation without looking any further, but Spoelman did what he should do, which was to look that little bit further.

28...e4

Only this forcing move would prevent White from winning by simple means. Black now wins a pawn.

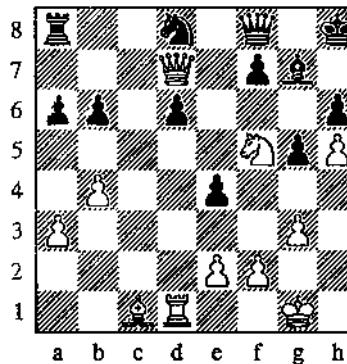
29.♕d4 ♜e5 30.♝d7 ♜xd5



I presume this is where Spoelman ended his calculations. He realized that he would lose his strong d-pawn and thus simply abandoned the line without further consideration. But we should not end our calculation with an evaluation based on impulses, which is frequently what happens. We need to take a calm look at the position.

In this case, it does not take many microseconds to realize that White is winning after:

31.♕f5 ♜xd1 32.♝xd1

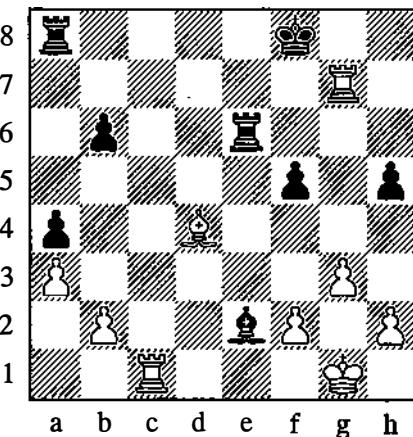


One look at the position makes further calculation obsolete. This would be OK, as it would be based on the configuration of the pieces on the board, and not an emotional impulse – over a double threat for example.

The following example is simpler, but is essentially the same story. White calculated too fast and did not stop to look at the moment of resistance.

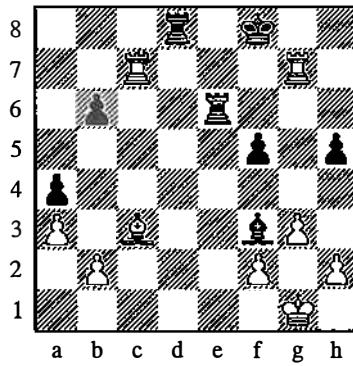
Nino Khurtsidze – Natalia Zhukova

Tehran (1.2) 2017



I saw this position live and was surprised by White's decision to go for a draw. With all the pieces actively placed and the black king exposed, I had the feeling a direct win might exist. I thought for a few minutes, a rare display of self-discipline for a trainer, and found the following line:

30.♗cc7 with the direct threat of 31.♗h7! and ♗h8# looked very tempting. The only move that bugged me a little was 30...♝f3, when I was thinking 31.♗c3 was the most natural. The threat persists, so again Black has to dig out an ambitious move. 31...♝d8 The threat of mate is recreated.



In my head, I tried some rook checks, but was instantly disappointed with their performance. Then I slowed down, looked at the position in my mind's eye for a moment and saw that 32.♗b4† decides the game at once. Not a difficult move, but the type of move we miss when we are following out intuition blindly. Mine was definitely preoccupied with doing something with those big powerful rooks.

30.♗h7? ♘f3 31.♗h8† ♘e7 32.♗h7† ♘f8
33.♗h8† ♘e7 34.♗h7†
½–½

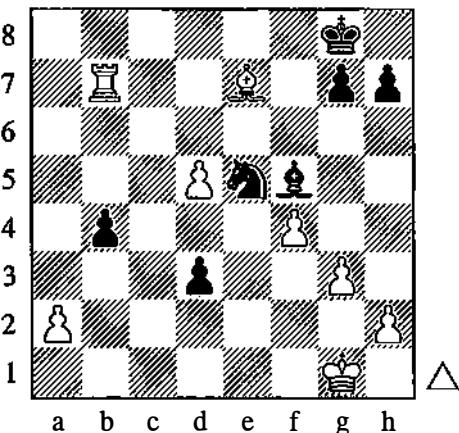
It was only later it dawned on me to check the score in the match. I was not surprised when

it turned out that Khurtsidze had won the first game. It would explain why she had gone for the draw and not slowed down enough to find the win: there was no motivation to do so...

The opposite is the case in the next example. White was fully motivated and used his desire and technique to calculate the lines accurately, avoiding a cunning trap on the way.

Filipe El Debs – Everaldo Matsuura

Brazil 2014

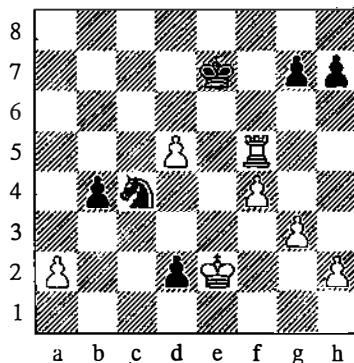


I worked with Brazilian grandmaster Filipe El Debs on his calculation for a while. Ending the calculation with an unprejudiced look at the position is one of the key points I kept driving home. At some point, Filipe showed me the following position, where he had applied this technique during a game.

27.♗xb4!

This loses a piece, but wins the game.

Filipe had wanted to play: 27.♗f2? d2 28.♗e2 ♘c4 29.♗b8† ♘f7 30.♗f8† ♘xe7 31.♗xf5



White has won the exchange, but is all well? Filipe slowed down, took a look at the position and realized that Black had not run out of resources: 31...d1=Q†! 32.Qxd1 Qe3† 33.Qd2 Qxf5 winning the rook.

Obviously, Filipe did not care if the endgame was a draw or lost, as neither result would be acceptable from the starting position. Things have gone the wrong way and the whole thing can be scrapped without further speculation. (I did check out of curiosity and can confirm that Black wins.)

27...d2 28.Qb8†

It is not apparent that throwing in these in-between moves helps, but at least they did not hurt.

28...Qf7 29.Qf8† Qg6 30.Qxd2 Qf3† 31.Qf2 Qxd2 32.Qe3 Qc4† 33.Qd4 Qb6 34.Qb8 Qd7 35.Qb7 Qf6 36.a4 Qe4 37.Qb6 Qf5 38.Qe6

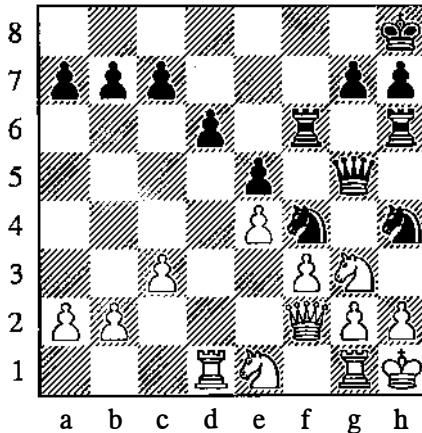
38.Qxf6†?! was a funny winning move, but of course everything wins.

1–0

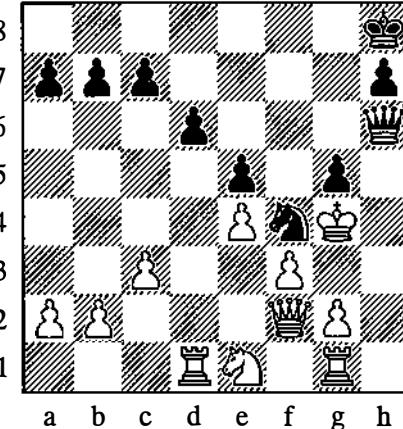
In the final example of this section, we shall see the author getting high on his own supply.

Ian Marks – Jacob Aagaard

Glasgow 2008



All the black pieces are ideally placed and the white king is exposed on the h-file. Ian avoided this variation, but I had done my duty and calculated the following combination till the end: 23...Qf5!! 24.Qxf5 Qxh2† 25.Qxh2 Qh6† 26.Qxh6 Qxh6† 27.Qg3 g5 28.Qg4



I quickly realized that 28...Wh5† 29.Qf5 g4† 30.Qf6 did not lead to an easy mate. Closer inspection shows that it does not lead to mate at all.

At the time, I had not yet discovered the concept of the killzone, but I understood that a simple way of checking the line was to work

backwards. 29... $\mathbb{Q}g7$ looked like a mate on the next move, so I had to find 30. $\mathbb{Q}h1!$, when I was stuck at a dead end again.

So I went an additional move backwards, finding 28... $\mathbb{Q}g7!$, which is mate. 29. $\mathbb{Q}h1$ $\mathbb{W}xh1$ does not change anything and I could find nothing else that alleviated the pain. Indeed, the engine confirms that mate is imminent.

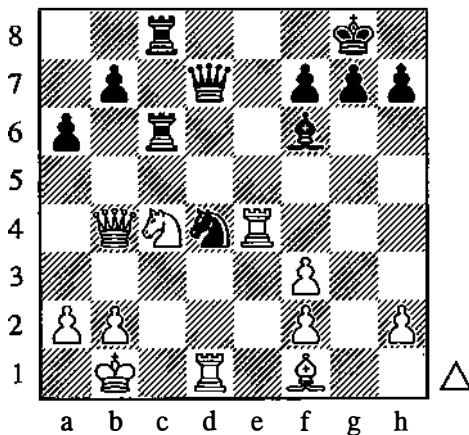
In the end, Ian went another way and I did not get the chance to demonstrate this rare moment of accurate calculation.

Resistance

Can you find the winning move here?

Nigel Short – Anthony Miles

Brighton 1984



One of the concepts I have been working with a lot over the last few years is that of *resistance*. Mainly because my students are strong players and have come to the point where they use the basic techniques of calculation with some sort of reliability (we all sometimes fail on doing the basics and we should always work on strengthening our use of them). But chess is not just mastering the basics. This is enough

against international masters most of the time, but in order to defeat grandmasters, you will need to see more than they do. You will have to solve really difficult problems; problems your opponent cannot solve.

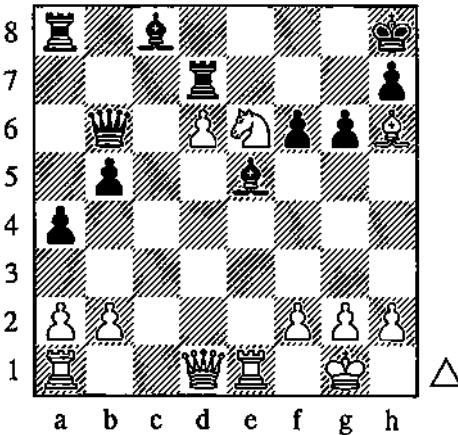
This can only be done by a comprehensive use of all the tools at your disposal. You need to do your candidate search and you need for your intuition to travel down variations like a speed monster, as it does if let free. You have to falsify your findings when you see something attractive, to make sure that you have not missed something fundamental.

The same *stop and look* policy that applies to the positions at the beginning and the end of our variations, also applies to the places where we hit upon obstacles, such as surprising moves or just what seems like a general roadblock at the end of Combination Street.

Let's keep it practical with the following example:

Harmen Jonkman – Jacob Aagaard

Groningen 1998



During the game Harmen looked at 23. $\mathbb{Q}c7$, when I would not be able to take the d6-pawn immediately, as White takes the rook on a8. I would have had to play 23... $\mathbb{B}b8$,

when he wanted to play 24. $\mathbb{E}xe5$ $f\times e5$ 25. $\mathbb{W}d5$, with ideas such as 25... $\mathbb{Q}b7$ 26. $\mathbb{W}xe5\#$ $\mathbb{Q}g8$ 27. $\mathbb{Q}e8!$, winning. But he saw 25... $\mathbb{W}xd6$ and decided to abandon the combination.

23. $\mathbb{E}xe5?$!

Frustrated at not making his original idea work, but sensing that this was indeed a critical moment, Harmen looked at more and more ludicrous ideas. Eventually he played one of them and his position fell apart with astonishing speed.

23... $f\times e5$ 24. $\mathbb{Q}f8??$

Meant to defend the d6-pawn, but losing to a simple double threat.

24. $\mathbb{W}f3?!$ $\mathbb{Q}b7$ 25. $\mathbb{W}f6\#$ $\mathbb{Q}g8$ might look scary, but White is not able to do real harm here.

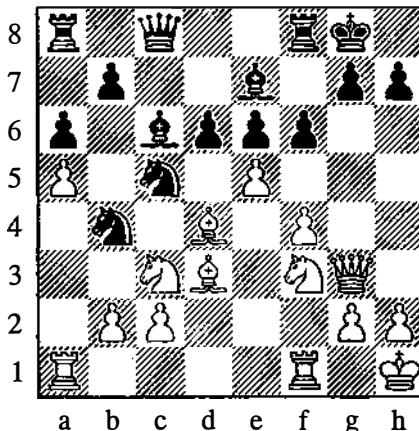
The strong move is 24. $\mathbb{Q}c7!$, which would transpose to the line given in the first note, were it not for Black's chance to play 24... $\mathbb{Q}b7$, cutting his losses and hoping to stage a comeback later on.

24... $\mathbb{E}f7$ 25. $\mathbb{Q}c7$ $\mathbb{W}xf2\#$ 26. $\mathbb{Q}h1$ $\mathbb{Q}b7$
27. $\mathbb{W}g1$ $\mathbb{E}axf8$ 28. $h3$ $\mathbb{W}g3$
0-1

Resistance is something that happens frequently to the variations your intuition provides you with. Your beautiful idea does not run smoothly and you lose faith. Most players go in a different direction when this happens. I remember following the following famous game live on the Internet (which was a new thing in 1995 and did not include live stream or anything like that, just a basic ICC chat room). At some point, I found a combination:

Viswanathan Anand – Garry Kasparov

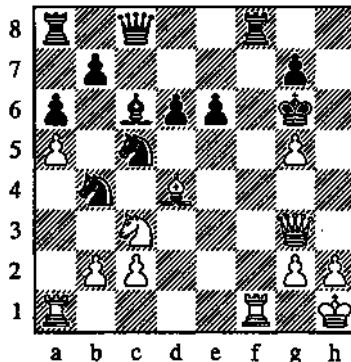
New York (3) 1995



Anand instead played 20. $\mathbb{Q}xc5?$ and the game was eventually drawn. In Copenhagen, it took me a few minutes to convince the other people in the chess club that the combination worked. Once everyone agreed that this was indeed winning, we commented on ICC that the line was winning.

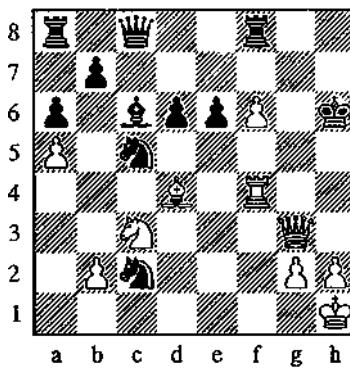
It took a few reposts before someone told us it did not, because of 23... $\mathbb{Q}g6$. We posted the full line and suddenly the grandmasters stopped debating various positional pointers, saying: "Hey, wait a minute..."

20. $exf6$ $\mathbb{Q}xf6$ 21. $\mathbb{Q}xh7\#$! $\mathbb{Q}xh7$ 22. $\mathbb{Q}g5\#$ $\mathbb{Q}xg5$
23. $f\times g5$ $\mathbb{Q}g6?!$



Objectively this is not the best, but when you are calculating the consequences of a combination, you are not wondering if you will be able to win with one of two extra pawns in the endgame. You solve one problem at a time. And this move was the one bugging people.

24. $\mathbb{E}f6\#!!$ $\mathbf{gxf6}$ 25. $\mathbf{gxh6\#}$ 26. $\mathbb{W}h3\#$ $\mathbb{Q}g5$
27. $\mathbb{E}f1$ $\mathbb{Q}xc2$ 28. $\mathbb{W}g3\#$ $\mathbb{Q}h6$ 29. $\mathbb{E}f4$



Black is checkmated.

Anand wrote in his annotations to the game: "Amazingly, I had seen this in my calculations. Unfortunately, I didn't linger long enough to realize how strong White's attack is." I always wondered what it was Anand missed, or if he saw the idea earlier and simply did not return to it. I have never had the guts to ask.

What is clear to me is that the other grandmasters following the game on ICC saw something that felt like resistance. And as Kasparov was Black, they did not have the imagination to believe that a Greek Gift sacrifice would work. Surely the World Champion had it all under control? This form of naivety does not exist in the 21st century. Everyone works with engines and has seen the number of times Magnus Carlsen has been in trouble. Even some of his opponents could not fail to notice this, and in some cases exploit it.

Returning to Short – Miles from above, I have

to confess that I had added a pawn on a6 to make it a proper exercise.

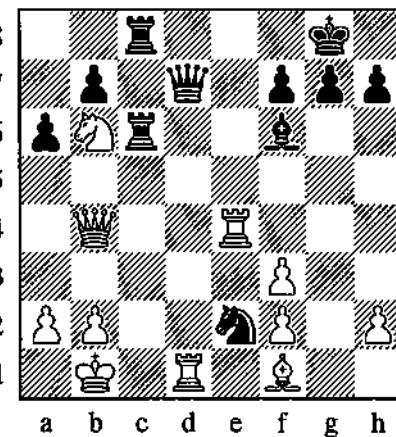
In the game, Short had an extra pawn and therefore less motivation to find a tactical solution. He played 22.a3 and won in the long run. Without such an extra pawn, it would be sensible to look at that knight fork on b6:

22. $\mathbb{Q}b6!$

Obviously both players saw this simple move, forking the queen and the rook.

22... $\mathbb{Q}e2!$

A desperado with the idea 23. $\mathbb{Q}xe2$ $\mathbb{W}xd1\#$ 24. $\mathbb{Q}xd1$ $\mathbb{E}c1$ mate. This is enough to scare any player with an extra pawn away. Short moved the a-pawn and avoided being back ranked. But if he had not been motivated to keep things simple with an extra pawn, he might have looked deeper and found that there is one more surprise.



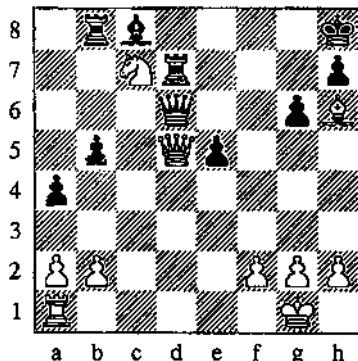
23. $\mathbb{W}f8\#!!$

White wins.

Water always follows the easiest path and we have a tendency to do the same. If our glorious idea meets resistance, we are more likely to abandon it than fight for it. It is in our nature, I suppose. But as argued before, we were not created to play chess. We have to twist our

nature in order to make it work – reprogram ourselves, so that we notice resistance and use it as a trigger to look for candidates.

If Jonkman had done this, he would have found a really beautiful move at the end of his main line:

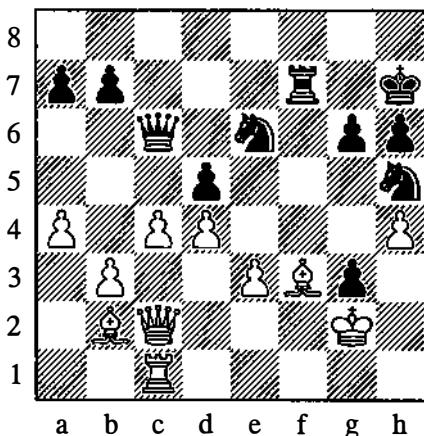


26.♕g7†! wins the queen and the game.

One of the most grotesque examples of resistance I have ever experienced saw me on the receiving end of diabolical good fortune.

Jacob Aagaard – Vladimir Burmakin

Helsingør 2012



I had been struggling for a lot of the game, but had sort of recovered, when my opponent decided to go for a dangerous piece sacrifice.

32...♝ef4†! 33.exf4 ♛xf4†

We were both low on the clock and this left me with a difficult choice. I could not see a winning plan for my opponent after what I played in the game, so I went for it.

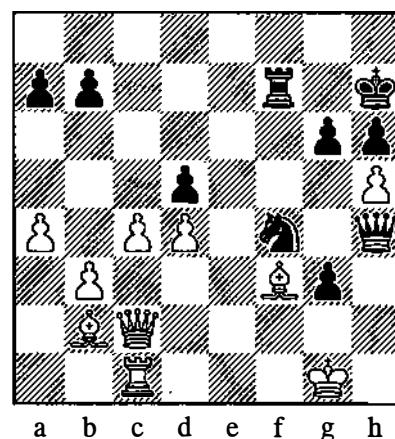
34.♗h1?

It turned out that I did not look far enough after: 34.♗xg3! ♜c7 35.♗f2 ♛h5 36.♗g1 (36.♗c3 also holds, which I think very few humans would see) 36...♛h2† 37.♗g2 ♛xh4† 38.♗g1 ♜xf3 I believed I was lost here. What I failed to see was that I would have 39.♗xg6†. But then I did not really look for it, as I never realized I was lost after my choice in the game.

34...♛f6 35.h5 ♛h4† 36.♗g1

My opponent wisely repeated moves to gain another minute on the clock.

36...♝h3† 37.♗g2 ♛f4† 38.♗g1



My opponent was thinking and thinking here, with the clock ticking and ticking. I was showing signs of naivety, thinking I was going to make the draw, so when it happened, I was not surprised.

38...♝h3†? 39.♗g2 ♛f4†
½-½

I tried to talk to my opponent, but he was in another world entirely. He pushed my king to g1 and said something like: "I need to know if this works!" 38... $\mathbb{E}e7$? 39.cxd5 $\mathbb{Q}e2\#$ 40. $\mathbb{Q}f1$ He looked at the position for a few seconds and started cursing in Russian, making the move 40...g2#, which indeed does win everything, on account of 41. $\mathbb{Q}xg2$ $\mathbb{W}f4\#$.

At dinner Cheparinov told me I had been very lucky. He had been in time trouble on an adjacent board, but had still seen this win. Only I was entirely oblivious.

I should add that 39...g2 also works. The whole thing is a shambles. How I survived in a position where my opponent got all the right signals from his intuition (there is a win here), found the first move and had more than a minute to see that it was worth the risk, is beyond me.

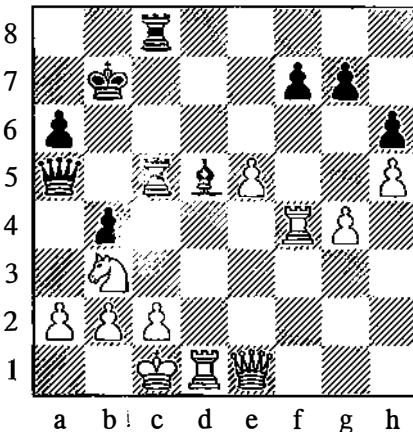
Grit

There are two purposes to the set-up of four types of decisions. The first of them is based on certain actions, the second is about allocation of time. Focusing on the second topic, there are moments in our games where we have to find the right move, or our position will never be the same. I have noticed over the years that a lot of players treat these critical moments as if they were just any other moves. They are not. They are the moment of pivotal importance. Who cares if you will be short on time after finding the only good move in these situations? Having plenty time and a totally lost position does not lead to good feelings.

Let us look at one such moment.

Jacob Aagaard – Bartosz Socko

Helsingør 2008



I had managed to create a lot of problems for my opponent by following Peter Leko's example in the opening, after realizing that the game started one hour earlier than I originally had thought and I only had five minutes to prepare.

At the moment where we come in, my opponent has done some suffering and has gone quite low on time.

28... $\mathbb{Q}xb3$

Black has no choice.

28... $\mathbb{E}xc2\#?$ 29. $\mathbb{Q}b1$ $\mathbb{Q}xb3$ was anticipated. My plan was to play 30. $\mathbb{E}xb4\#$ $\mathbb{Q}a7$ 31. $\mathbb{E}b7\#!$, winning.

29. $\mathbb{W}xb4\#$

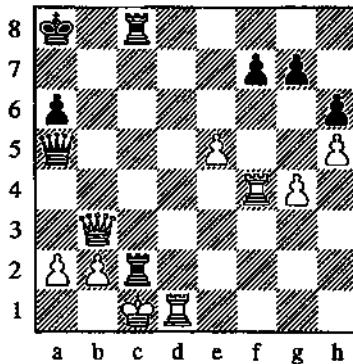
But at this point Black has a choice. He should invest as much time as he can spare in order to get it right. What he played in the game leads to an endgame with only marginal drawing chances. What Socko needed to show was grit, refusing to go into a horrible situation.

29... $\mathbb{W}xb4?$

This move appears to be very natural, but it leads to a lost endgame.

I also had control over 29... $\mathbb{E}b5?$ 30. $\mathbb{E}d7\#!$, when after the exchange of queens, White wins.

What I failed to see was that after 29... $\mathbb{Q}a8!$ 30. $\mathbb{W}xb3 \mathbb{E}xc2\#$ I would have to enter an endgame where it is not certain that the two rooks will be strong enough to overpower the agility of the black queen.



What both Socko and I missed was that 31. $\mathbb{Q}b1\#?$ can be met with 31... $\mathbb{E}xb2\#!$ and 32... $\mathbb{E}b8$ with equality.

You can call it what you want: candidate at the end of the line, resistance, grit. As long as you find this type of move in your games, I don't care if you call them "Gary", except that this word has already been stolen by vegan cheese here in the UK...

30. $\mathbb{E}xb4\# \mathbb{Q}a8$ 31. $\mathbb{W}xb3!$

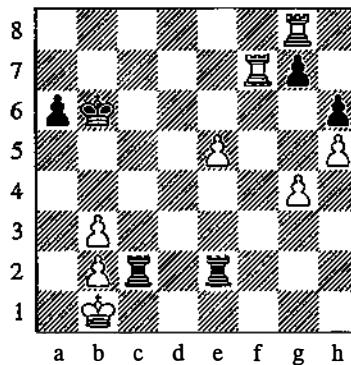
Time is of the essence, so a loophole is created for the king.

31... $\mathbb{E}xc2\#$ 32. $\mathbb{Q}b1 \mathbb{E}e2$

White is winning in all lines, it appears.

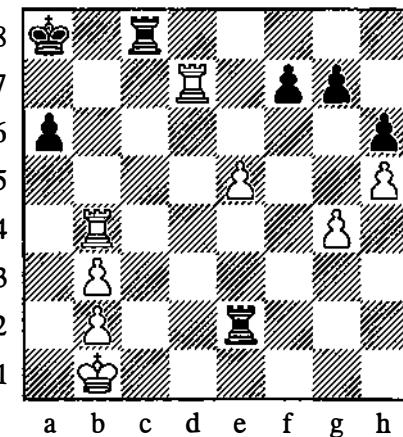
After 32... $\mathbb{E}8c7$ 33. $\mathbb{E}f4 \mathbb{E}e2$ 34. $\mathbb{E}d8\# \mathbb{Q}a7$

35. $\mathbb{E}g8$ White looks in great shape. The counterplay does not work: 35... $\mathbb{E}cc2\#?$ 36. $\mathbb{E}xf7\# \mathbb{Q}b6$



37. $\mathbb{E}b8\# \mathbb{Q}a5$ 38. $\mathbb{E}d7\#!$ winning. For example: 38... $\mathbb{E}xb2\#$ 39. $\mathbb{Q}c1 \mathbb{E}ec2\#$ 40. $\mathbb{Q}d1 \mathbb{E}c5$ 41. $\mathbb{E}d4$ and Black is mated or losing a rook.

33. $\mathbb{E}d6\# \mathbb{Q}a7$ 34. $\mathbb{E}d7\# \mathbb{Q}a8$ 35. $\mathbb{E}d6 \mathbb{Q}a7$ 36. $\mathbb{E}d7\# \mathbb{Q}a8$

**37. $\mathbb{E}c4?$**

My endgame play is suboptimal, but good enough to win. This only illustrates the necessity of showing grit earlier.

The following tactics were beyond me: 37. $\mathbb{E}f4\#$ $\mathbb{E}cc2$ 38. $\mathbb{E}d8\# \mathbb{Q}b7$ 39. $\mathbb{E}xf7\# \mathbb{Q}b6$ 40. $\mathbb{E}d6\# \mathbb{Q}a5$ 41. $\mathbb{E}b7\#$ Black has no defence against $\mathbb{E}d5\#$ and $\mathbb{E}d4$.

37... $\mathbb{E}f8?$

The only chance was 37... $\mathbb{E}xc4$ 38.bxc4 $\mathbb{E}xe5$ 39. $\mathbb{E}xf7$ $\mathbb{E}g5$ 40. $\mathbb{E}f4\pm$, but I suspect that White is winning anyway. For example: 40...g6? 41. $\mathbb{E}f8\#$ $\mathbb{Q}b7$ 42. $\mathbb{E}f7\#$ $\mathbb{Q}c8$ 43. $\mathbb{E}g7\#$

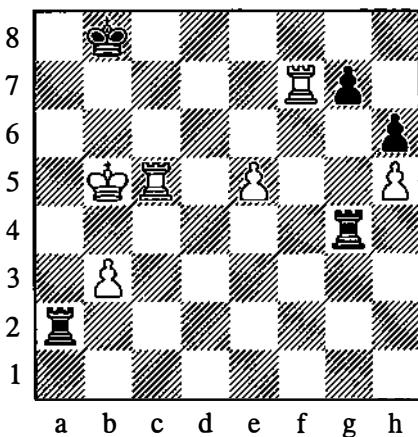
38. $\mathbb{E}e7!$

The game is effectively over.

38... $\mathbb{Q}b8$ 39. $\mathbb{E}c6$

39. $\mathbb{E}f4$ looks better.

39...a5 40. $\mathbb{E}c5$ $\mathbb{E}d8$ 41. $\mathbb{E}b5\#$ $\mathbb{Q}c8$ 42. $\mathbb{E}xa5$ $\mathbb{Q}b8$ 43. $\mathbb{E}b5\#$ $\mathbb{Q}c8$ 44. $\mathbb{E}c5\#$ $\mathbb{Q}b8$ 45. $\mathbb{E}xf7$ $\mathbb{E}dd2$ 46. $\mathbb{Q}a2$ $\mathbb{E}xb2\#$ 47. $\mathbb{Q}a3$ $\mathbb{E}a2\#$ 48. $\mathbb{Q}b4$ $\mathbb{E}e4\#$ 49. $\mathbb{Q}b5$ $\mathbb{E}xg4$



50.e6

50. $\mathbb{E}fc7\#$ was directly mate.

50... $\mathbb{E}e2$ 51. $\mathbb{E}d5!$ $\mathbb{E}g5$

51... $\mathbb{Q}c8$ 52. $\mathbb{E}f8\#$ $\mathbb{Q}c7$ 53. $\mathbb{E}d7\#$

52. $\mathbb{E}xg5$ $hxg5$ 53.e7 $\mathbb{Q}c8$ 54. $\mathbb{E}xg7$ $\mathbb{Q}d7$ 55.h6 $\mathbb{E}e5\#$ 56. $\mathbb{Q}a4$

1–0

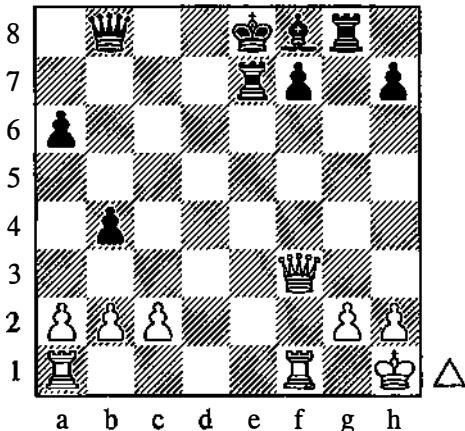
The most important ability to develop when it comes to calculation is indeed *grit*. When I talk about water flowing along the easiest path, it is a metaphor for average human discipline. If we

do not steer ourselves in a different direction, we will go down the drain.

There are many interesting psychological studies on our inability to fight manipulation; for example, school kids that know the answers to a test, but answer incorrectly because the kid next to them answers it incorrectly. It is very easy to allow the noise in the hall, the gaze of the team captain, a memory of a time where we lost on time and so on influence our decisions. When the 11th World Champion was a young man, the following happened to him:

Robert James Fischer – Mikhail Tal

Bled/Zagreb/Belgrade 1959



Fischer had gained an advantage out of the opening, but had misplayed it somewhat. At this point he was about to bring the rook into the attack, when he saw Tal talking to some other players, looking at the board and making a joke. Everyone laughed. Fischer lost his nerve and after further thinking decided to give a check with the queen.

22. $\mathbb{W}c6\#?$ $\mathbb{E}d7$ 23. $\mathbb{E}ae1\#$ $\mathbb{Q}e7$ 24. $\mathbb{E}xf7$ $\mathbb{Q}xf7$ 25. $\mathbb{W}e6\#$ $\mathbb{Q}f8$ 26. $\mathbb{W}xd7$ $\mathbb{W}d6$ 27. $\mathbb{W}b7$ $\mathbb{E}g6$ 28.c3 a5 29. $\mathbb{W}c8\#$ $\mathbb{Q}g7$ 30. $\mathbb{W}c4$ $\mathbb{Q}d8$ 31.cxb4 axb4 32.g3 $\mathbb{W}c6\#$ 33. $\mathbb{E}e4$ $\mathbb{W}xc4$

34.♗xc4 ♘b6 35.♔g2 ♘f6 36.♔f3 ♘e5
 37.♔e3 ♘g5† 38.♔e2 ♘d5 39.♔d3 ♘f6
 40.♔c2 ♘e5 41.♔e2 ♘f6 42.♔c2 ♘f3†
 43.♔e2 ♘f7 44.♔d3 ♘d4 45.a3 b3 46.♔c8
 ♘xb2 47.♔d8† ♘c6 48.♔b8 ♘f3† 49.♔c4
 ♘c3† 50.♔b4 ♘c7 51.♔b5 ♘a1 52.a4 b2
 0–1

After the game, Tal asked why he had not included the rook in the attack. The teenager complained that Tal had laughed at him for almost playing the move. Talk about outside influence!

22.♗ae1! is the right move, and not only because it follows some basic notion of including all the pieces in the attack; involving the rook is exactly what is needed at this point.

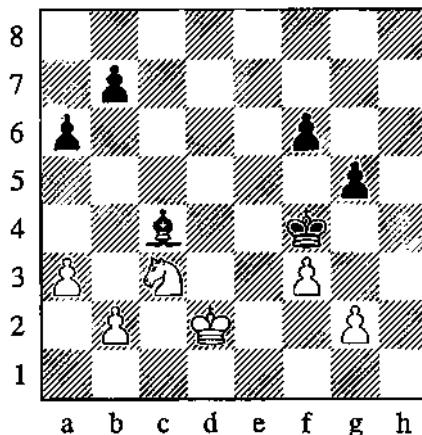
The variation I saw in an old book went:
 22...♗g6? 23.♘xf7† ♘d7 24.♔d1†! ♘d6
 25.♗xd6† ♘xd6 26.♗f6† ♘e5 27.♘xf8 and White has serious winning chances in the rook endgame, though Black's active pieces will give him some saving chances. The conclusion was therefore that Fischer would have won the game, had he included the rook.

It is hard to know with certainty, but other sources from back then may have given 22...♗d8! (or d7) 23.♔d1† ♘c7! and Black survives. Either way, White has a perpetual check by exchanging on e7 and giving a check on d4 or f5.

Psychology really matters. There are some players who have resigned drawn positions more than once. Everyone knows who they are – and if not, I am sure they do not need me to remind me of these incidents. But I will make one exception, because it involves myself and a player with both thick skin and a great sense of irony.

Tiger Hillarp Persson – Markus Ragger

Helsingør 2015



I was sitting in the commentary room together with a hundred of my closest friends, looking over the games. Because it was a Danish tournament, there was a lot of love for the Swedish grandmaster playing White, who lives only 50 miles from the venue. Moreover, Danes and Swedes are generally considered brother-nations; Sweden being the big brother of course, and the Danes being unruly, annoying punks who think they are funny. But there was no love for Tiger's position. Black is threatening ...♗g3 and ...♗f1. There is no choice but to enter a dangerous pawn ending.

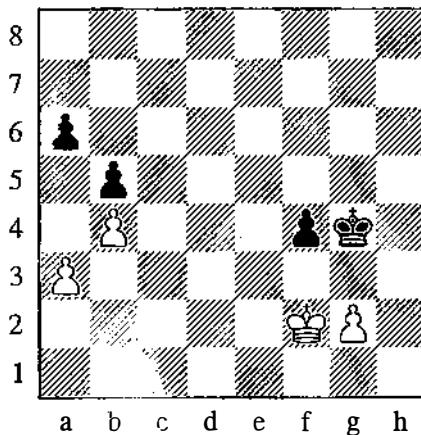
38.♗e2† ♘xe2

Not strictly necessary, but it is hard to imagine that Black will break through without this exchange.

39.♔xe2 ♘g3 40.♔f1 b5 41.b4 f5 42.♔g1 g4 43.fxg4 ♘xg4 44.♔f2 f4

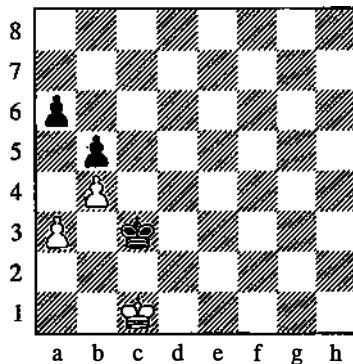
Tiger thought for a while and resigned.

0–1



FM Per Andreassen, the seasoned commentator, was explaining to the audience why Black was winning. I think I might have been a part of this initially, but I could not stop calculating. Maybe because there was nothing else to do? Or was there some dim recollection of a pattern? Or was it because I had previously had some great successes with solving things from those comfortable sofas in the commentary room? I don't know. What I do know is that I found the draw after a few minutes:

45.♗g1 ♗g3 46.♔f1 f3 47.gxf3 ♗xf3 48.♔e1 ♗e3 49.♔d1 ♗d3 50.♔c1 ♗c3



51.a4! ♗xb4 52.axb5 axb5 53.♔b2 and we have a text book case of the opposition.

What was interesting was that Ragger also believed that he was winning. We know that the unconscious body language of the

opponent matters a lot. Tiger did not see the draw and his subconscious was picking up an "it's over" from his opponent. He gave in and gave half a point away.

Hillarp Persson recalls:

"The funny thing was that, as I walked away from the game, someone came up to me and told me I had resigned in a drawn position. At that moment, I could suddenly recognize the position I had as a problem in a book that I had read (which I mistakenly thought was Nunn's Endgame Challenge). -- Ahh, a4!!"

Triggers

It is important that we develop *character* – mental strength. I know players that would have complained about someone giving them the bad news; as if it would be less unpleasant to find out when looking at the game back in the room. Tiger Hillarp Persson does not mention this angle at all. He chooses to focus on the game and his own decisions. This is a sign of experience and character.

It is important to develop mental stamina. In my personal experience, it is something that takes a long time to develop for most people. It is not about confidence; you can be confident when you are young. You can be confident and wrong. Mental stamina is about withstanding all types of pressure, of dealing with a situation in the optimal way.

Resistance is the most difficult thing to overcome. The temptation to look in a different direction is immense. You don't see the option. Your brain wants to avoid the pain of pushing through the resistance. Your ego wants to believe that you have seen all there is to see.

The only thing you have going for you would be a trigger: recognizing that you are facing resistance and that this should lead to the behaviour of slowing down and having a proper look at the position. This is difficult to develop, but the rewards are near endless.

Emotions

Another thing that can be really difficult to deal with is our emotions. There are many reasons why we may be anxious during a game. But there are also other ways our nervous system can fail us.

The following game features Gata Kamsky with Black. It is now more than twenty years ago that he played a World Championship match against Karpov and ten years since he won the World Cup. Having announced his retirement from the American national team years ago, he is still a very active player, travelling all over the world to play all the time. At the moment, he is the most active American grandmaster.

I have always admired Kamsky's tenacity and quick adjustment to circumstances. He might not be the most imaginative player, his opening play is incredibly poor and I am sure he does not work on chess outside the playing hall; but once he is at the board, he fights till the end.

Aleksandar Indjic plays White. I do not know a lot about him, but have noticed that this young man is on the up. Despite his disappointment in this game, he scored 1.6 above his expected score in this tournament.

The game has three acts and is certainly a tragedy.

The first act is the opening, which we shall ignore. Then comes a grave positional error by Kamsky, which I am sure was based on a miscalculation or misassumption and not lack of understanding.

In the second act, Indjic is all over Karnsky. It is a bit like the one time I played the game *Civilisation*, and I had progressed to the Bronze Age and got invaded by tanks.

The third act starts at move 40. It is a total tragedy. All you need to know at this stage is that the players got an extra 30 seconds per move made and another 50 minutes at move 41.

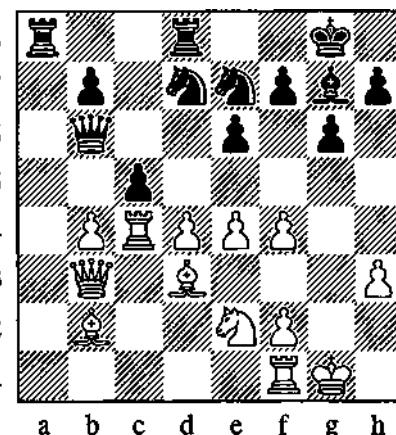
Aleksandar Indjic – Gata Kamsky

Moscow 2017

1.d4 d5 2.c4 c6 3.♘f3 ♘f6 4.♗c3 a6 5.e3 g6
 6.b4 ♜g4 7.♗b3 ♜g7 8.h3 ♜xf3 9.gxf3 0-0
 10.f4 dxc4 11.♕xc4 ♘bd7 12.a3 e6 13.♕b2
 ♘b6 14.♕d3 ♘bd5 15.♗e2 a5 16.0-0
 ♜b6 17.e4 ♘e7 18.♖ac1 ♜fd8 19.♖c5 axb4
 20.axb4 ♘d7 21.♗c4 c5?!

This is the end of the first act. Black got out of the opening with a solid position, but then overplayed his hand with this pseudo-active move. I am not sure what Kamsky missed. Maybe it was just one of those moments that are hard to explain.

After the solid 21... $\mathbb{Q}c8$ 22. $\mathbb{Q}c2$ $\mathbb{Q}d6$ Black would be at least equal.



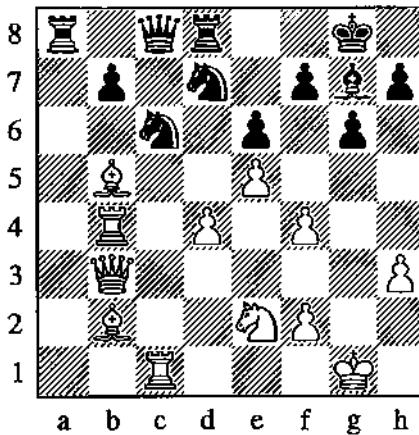
22.e5

Shutting out the g7-bishop and preparing ♜e4.

22...cx b4 23.♗xb4 ♖c6 24.♕b5 ♖c8?!

24...♗d5 25.♕c4 ♖e4 was better. Black has to do something to change the narrative. But perhaps Kamsky had not yet realized how bad things were.

25.♗cl ♗c6



26.♗d3!

Clearing the b5-square for the rook and reorganizing the bishop.

26...♗a7 27.♗b5 ♗db8 28.♗e4 ♖d7 29.d5

Black's position is collapsing.

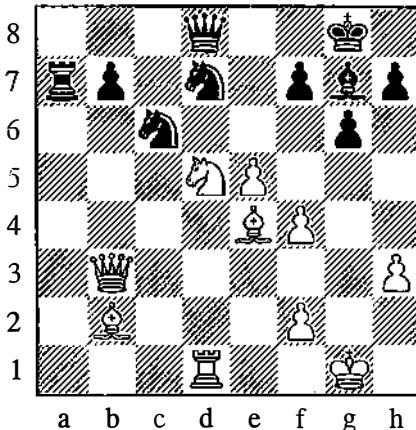
29...exd5 30.♗xd5 ♖e8 31.♗xd8 ♖xd8
32.♗d1?!

Even stronger was 32.♗d5 ♖e7 33.♗g3!, which gives Black no defence against the knight going to d6 or g5 with devastating effect.

32...♖e7 33.♗c3 ♗d7 34.♗d5 ♖d8?!

34...♖e8 with a very unpleasant position was necessary.

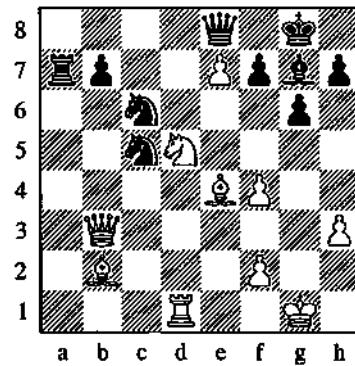
The moment has arisen; White has a combination.



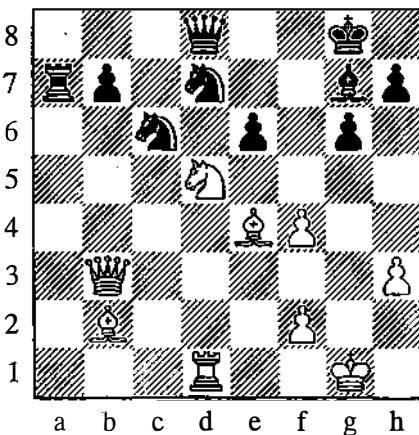
35.e6! ♖xe6

From this point, Kamsky plays the only move repeatedly. They are not good moves, more like what-else moves. But it puts the challenge of finding the win in his opponent's court. And it is quite possible to lose focus and think that a win will just show up. There is no guarantee; you need to find them.

35...♗c5 can either be met with 36.exf7+ ♖xf7 37.♗c4 or the more natural: 36.e7! ♖e8 (36...♖b8 37.♗f6† ♖xf6 38.♗xf6 followed by ♗d8† is devastating. Black can try 38...♗xe7, but after 39.♗b6 he will lose a knight at least.)



37.♗xg7 ♗xb3 38.♗f6† ♖xg7 39.♗xe8† ♖h6
40.♗xc6 bxc6 41.♗c7 and White wins.



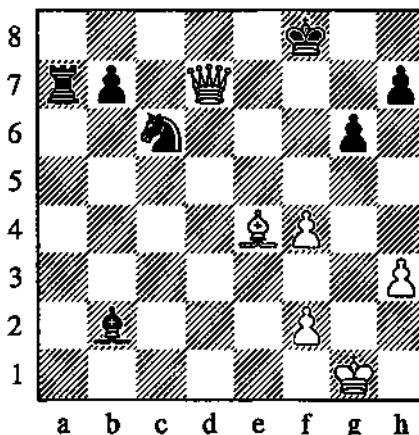
Around here something happened to Indjic. He clearly believed that the game was over and that Kamsky was playing on through inertia only; the inability to accept defeat and resign. The moves floated from Indjic's hand freely and confidently, one presumes.

36.♕f6† ♜xf6 37.♗xe6† ♜f8 38.♗xd7

And you can understand why. The devastation to the black position cannot be described as minor.

38...♗xd7 39.♗xd7 ♜xb2

White had played the last couple of moves quickly and accumulated a few minutes on his clock.



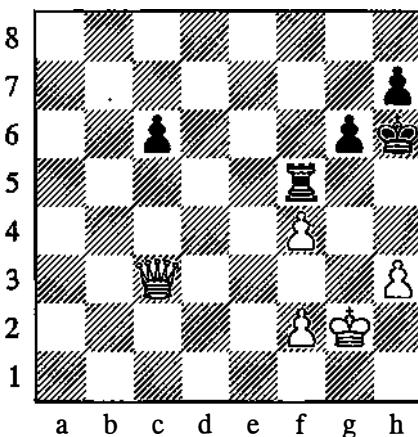
40.♗xc6?

If Indjic had not perceived the game to be over, he would have slowed down – even if he did not know about automatic moves and the importance of making sure that we are not missing stuff. Here this would have revealed 40.♗d5! to him. After this move, the game would indeed be immediately over.

40...♝a1† 41.♗g2 bxc6 42.♗c8† ♜g7 43.♗b7† ♜h6 44.♗xb2

It is easy to understand why Indjic felt that the game was over. But here the boxer would focus and knock out his opponent once and for all. Instead, Indjic continued to make quick moves.

44...♝a5 45.♗c3 ♜f5



46.♗xc6?

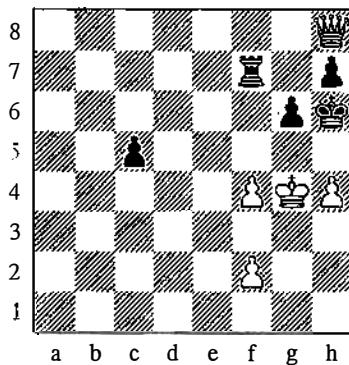
This is a really bad decision and an entirely unnecessary one. And Indjic made it very quickly again.

In chess, winning is 1–0 no matter the margin. The only thing a big margin will do for you is to ensure that you actually do win. I have made this point before in my career and not always found an audience. I remember debating the game Anand–Ponomariov, Wijk aan Zee 2005, with Jonathan Rowson and Jonathan Speelman.

Both found Anand's play in the game excellent, while I thought if you had a mating attack on move 25, you should not win in the endgame at move 64.

My main point is always that you should follow good habits, as you will be glad of them the day you need them. As Indjic needed them in this game. Anand has many great habits and is one of the most amazing chess players of all time, but I always found that his mental stamina was impaired by his immense talent. If things had been a bit harder for him to start with, maybe he would have defeated Kasparov in 1995!?

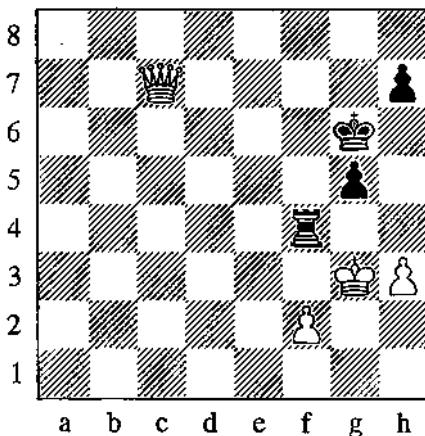
I would not have exchanged pawns unless I saw something very easy. My winning line would be: 46.♗g3 c5 47.♗g4 ♘h8 48.♗f5 49.h4 ♘f7



50.h5! White gets two passed f-pawns. The rest is going to be incredibly easy. There will be no blockade.

46...♝xf4 47.♛c1 g5 48.♝g3 ♚h4 49.♛c2
♝f4 50.♛c6† ♚g7 51.♛c7† ♚g6



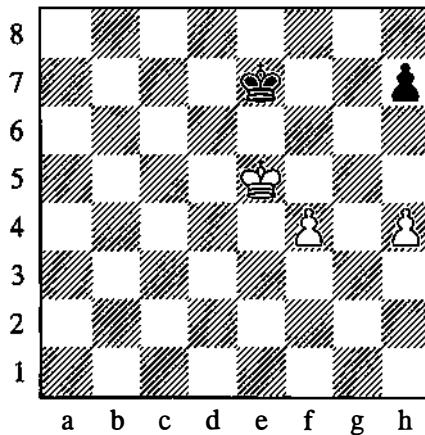


Kamsky has done all he can and established a very fragile fortress. Indjic thought for a minute and accepted the consequences of his previous play.

52. $\mathbb{W}xf4$ $gxf4\#$ 53. $\mathbb{W}xf4$ $\mathbb{Q}f6$ 54. $h4$ $\mathbb{Q}e6$
55. $\mathbb{Q}g5$ $\mathbb{Q}f7$

At this point, a well-chosen moment, Indjic thought for a few minutes, deciding on how to proceed. The first few moves went well.

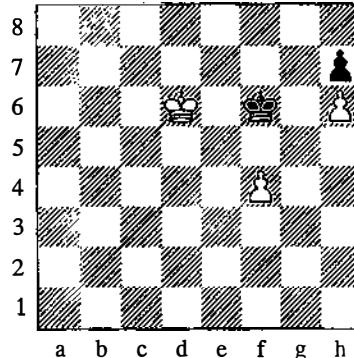
56. $\mathbb{Q}f5$ $\mathbb{Q}e7$ 57. $\mathbb{Q}e5$ $\mathbb{Q}f7$ 58. $f4$ $\mathbb{Q}e7$



59. $f5?$

But this is a horrible move. White could still win, but had to either know that this is a theoretical position (and how to play it), or think carefully to find the win.

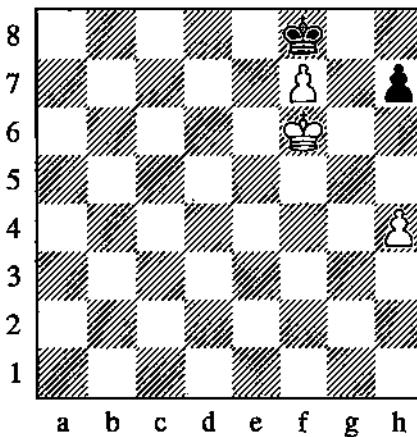
59. $h5$ $\mathbb{Q}f7$ 60. $\mathbb{Q}d6$ $\mathbb{Q}f6$ 61. $h6!$



This is the first key move. 61... $\mathbb{Q}f5$ 62. $\mathbb{Q}e7$ $\mathbb{Q}xf4$ 63. $\mathbb{Q}f6!$ And this is the second, shouldering the black king away, winning the game by a tempo.

I cannot quantify the number of times I have heard someone tell me that they had a winning position, but they missed something like this, only for me to look at the game and wonder why they did not mention that they had a mating attack and an extra queen!

59... $\mathbb{Q}f7$ 60. $f6$ $\mathbb{Q}f8$ 61. $\mathbb{Q}e6$ $\mathbb{Q}e8$ 62. $f7\#$ $\mathbb{Q}f8$
63. $\mathbb{Q}f6$



This was what Indjic had been heading for. He must have missed the next move, which, in all fairness, is not the only legal move in the

position, so it is possible to imagine from afar that the opponent will make the other, but losing, move.

63...h6 64.♔g6 h5
 $\frac{1}{2}-\frac{1}{2}$

Fischer was right of course...

I am sure someone will one day prove me wrong and write a great book on chess psychology, but as far as I am concerned, Fischer nailed it when he said he “believed in the psychology of good moves”. The psychology of chess in my universe is mainly about forcing ourselves to not follow the water down the path of least resistance, to be aware of the various properties, as for example the four different types of decisions, which can inspire us to look at positions in different ways. Or other triggers, such as feeling resistance, or getting surprised at the end of a variation. There is naivety, another excellent trigger: “Gosh this is easy; what a moron my opponent is...” – Ten minutes later: Splash!

Having said this, I should say that I was psychologically outplayed many times in my youth. Especially by International Master Nikolaj Borge, who retired from his pursuit of the grandmaster title after making one norm. So it was against his close friend, Grandmaster Sune Berg Hansen, that I delivered my revenge. We were playing a local league game around 1999. I was White and tried to attack his Sicilian with a pawn sacrifice. He refused the pawn twice. Later, the computers indicated he should have taken it, both times. At move 30, when we were both down to five minutes on the clock, I took off my orange blazer jacket, to reveal a purple tie and a Hawaii green shirt. Palm trees. Cocktails. The whole thing. The next ten moves were a disaster for Sune. It was almost as if he was struggling to concentrate.

I won the game on move 50.

About a week later, I asked Grandmaster Lars Schandorff if he wanted to be on a rapid-play team together with me. He accepted, on the condition that I would not show up dressed as the Joker...

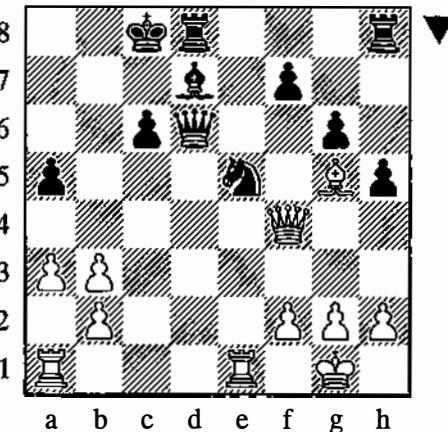
I do not find this type of behaviour appropriate, but I also feel no remorse for this incident. Another time an opponent showed up to a game against me with a rainbow-coloured baseball cap with a propeller on top. I mated him in 18 moves. Fischer was right.

Back to grit

It is important that we train and build an ability to go beyond our limitations. I knew my career was coming to an end when I felt this ability go.

Marat Dzhumaev – Jacob Aagaard

Tromso (ol) 2014



I had played an interesting novelty in the opening and had a good position, but my opponent was in excellent form in this Olympiad and had created a lot of problems for me with a piece sacrifice. At this point I knew that I had to do something, or I would lose.



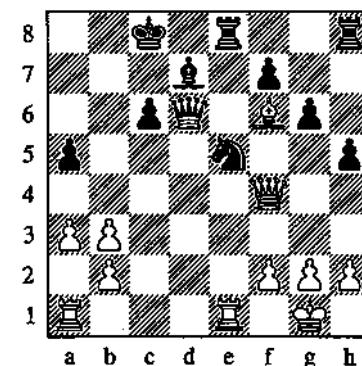
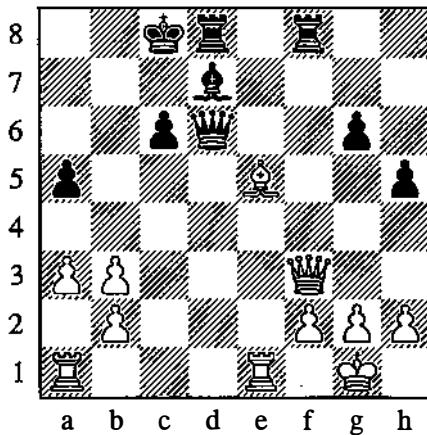
At the Barua Academy, the mothers of all the kids were waiting in the hall in the hope that I would pose for a photo. Happy to oblige.

But I was out of shape and did not show the resilience I should have; or anywhere near it. In the end, I came up with something that gave me a fighting chance. And fight I did. All the way until the only people remaining in the hall were the team captains, the arbiter and two confused cleaning ladies who were wondering why we were still there, now the tournament had been over for hours...

21...f6? 22.Qxf6 Qf3† 23.Qxf3 Qhf8 24.Qe5

I admit to being somewhat confused in this variation. I was not sure if I was winning a piece or not. I had some hazy idea that I would be able to take on e5 here, winning a piece. Obviously, the queen is defended on f3. My thinking was not straight, because of being in poor physical shape and not having worked on my chess for years and years.

24...Qxf3 25.Qxd6 Qxb3 26.Qe5
...1-0, 92



Grit and careful, slow, calculation would have revealed the following line to me: 21...Qde8 22.Qf6

22... $\mathbb{Q}c4!!$ Obviously, I did not see this move. But did I look for it? Not hard enough, clearly; I did not find it after all. After 23. $\mathbb{W}xc4$ $\mathbb{W}xf6$ White has nothing else than 24. $\mathbb{W}a6\#$ $\mathbb{B}b8$ 25. $\mathbb{W}b6\#$ with perpetual check.

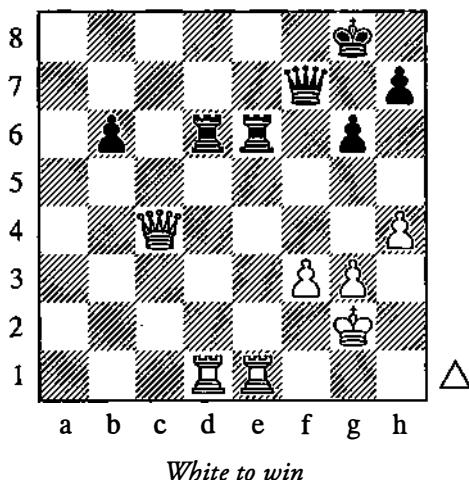
It is my firm belief that grit is something that is developed in the study. You do not show up to a tournament and develop grit simply because you want it. You must work on the ability to recognize resistance and overcome it continuously. This is one of the main reasons why working with me includes a lot of solving. The main focus is not on getting the right moves, but in understanding the nature of the positions and recognizing what the task at hand is.

Solving an exercise

For this reason, I want to end this chapter with us solving an exercise together.

Artem Chernobay – Mikhail Demidov

Moscow 2013



This position was reached after move 40 in a Moscow league game. White is a grandmaster

while Black is one of those international masters who should have had the GM title long ago. Do not be fooled, these two guys are good players.

I do not know if there was a time control at move 40 and if the players were awarded an extra hour at this point. For the sake of the exercise, let us presume that this is so, so you can compete against the grandmaster.

Approaching this position, I would start with some general observations. I quickly notice that White is not in danger of losing, if he plays decently. The second thing is that the position will not be won by technical means. White might win the b-pawn, but only a pawn ending would give White winning chances.

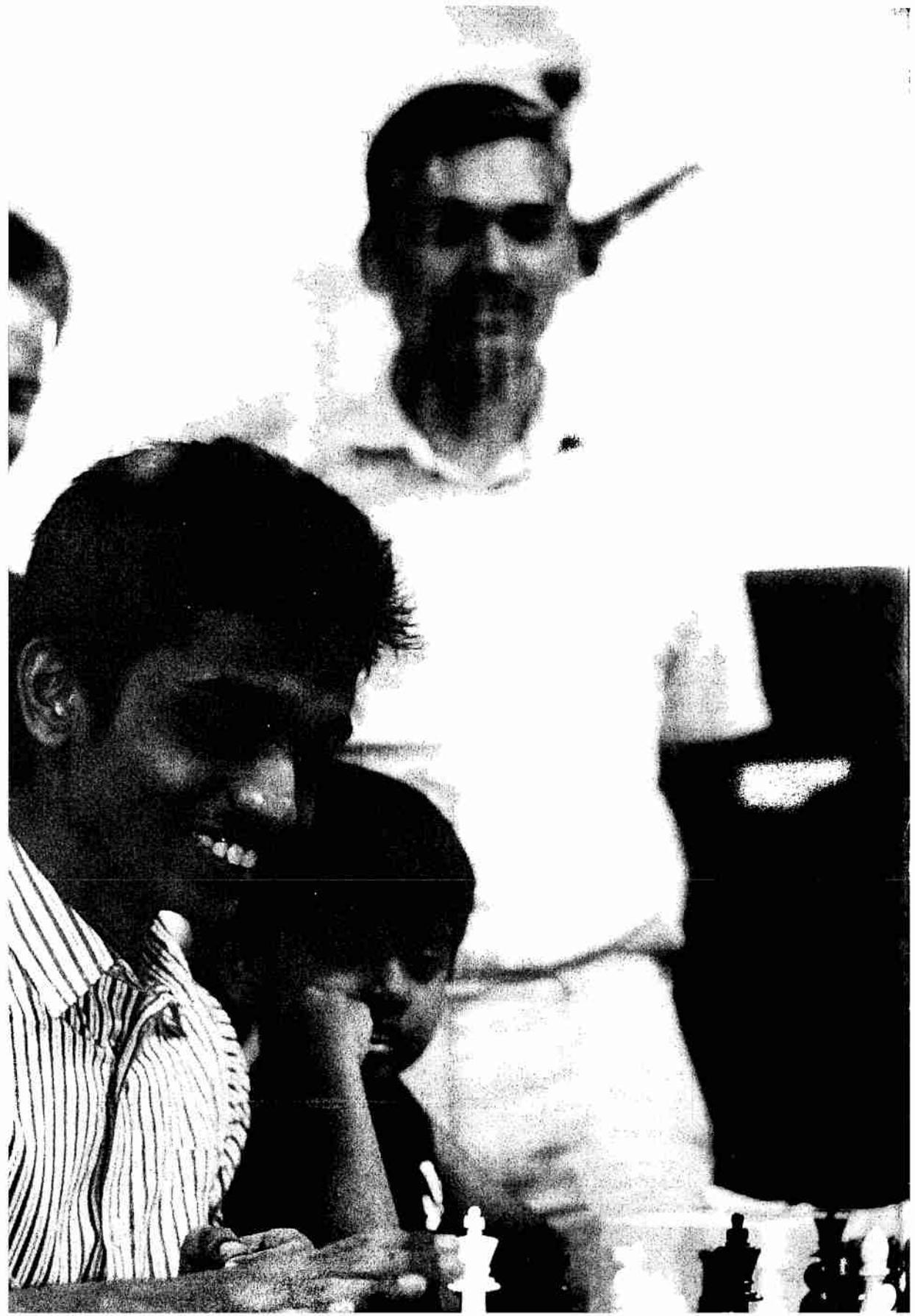
There are some captures and checks possible and the black king is somewhat exposed. Any hopes for more than a draw lie in this direction. It is all reliant on concrete moves. Maybe there is nothing, but it is the only direction worth investigating and it makes sense to throw lots of time into this moment, as if there is nothing there, exchanges and a draw will follow. This is exactly what happened in the game.

41. $\mathbb{W}c8\#$ $\mathbb{B}g7$ 42. $\mathbb{E}xe6$ $\mathbb{E}xe6$ 43. $\mathbb{E}d7$ $\mathbb{E}e2\#$
 44. $\mathbb{B}h3$ $\mathbb{E}e7$ 45. $\mathbb{W}c3\#$ $\mathbb{B}g8$ 46. $\mathbb{E}d8\#$ $\mathbb{E}e8$
 47. $\mathbb{E}xe8\#$ $\mathbb{W}e8$ 48. $\mathbb{W}b3\#$ $\mathbb{W}f7$ 49. $\mathbb{W}xb6$
 $\mathbb{W}xf3$ 50. $\mathbb{W}d8\#$ $\mathbb{B}g7$ 51. $\mathbb{W}e7\#$ $\mathbb{B}g8$ 52. $\mathbb{W}e8\#$
 $\mathbb{B}g7$ 53. $\mathbb{W}e7\#$ $\mathbb{B}g8$
½-½

I recently looked at this position with a talented FM, who had gotten nowhere while trying on his own. I helped to steer his calculation.

41. $\mathbb{E}xd6$

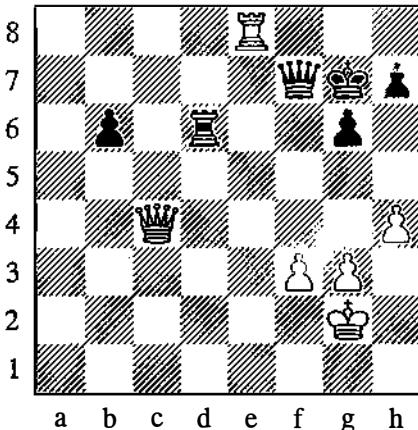
There are no other moves that give any chances. This does not mean we should play this move without calculating the consequences first. We probably could, but there is no reason not to think deeply.



41... $\mathbb{E}xd6$

The only move. 41... $\mathbb{E}xe1$ 42. $\mathbb{E}d8\#$ $\mathbb{Q}g7$
43. $\mathbb{W}c3\#$ and White wins.

42. $\mathbb{E}e8\#$ $\mathbb{Q}g7$



43. $\mathbb{W}c3\#$!

No other move gives serious winning chances.

43. $\mathbb{W}e4$ $\mathbb{E}d2\#$ 44. $\mathbb{Q}h3$ $\mathbb{W}f5\#$ leads to a drawn rook endgame. 45. $\mathbb{W}xf5$ $gxf5$ 46. $\mathbb{E}e7\#$ The simplest way for Black to play is probably 46... $\mathbb{Q}g6$ 47. $\mathbb{E}e6\#$ $\mathbb{Q}g7$ 48. $\mathbb{W}xb6$ $\mathbb{E}f2$ 49. $\mathbb{E}b3$ $h5$ and it is time to shake hands.

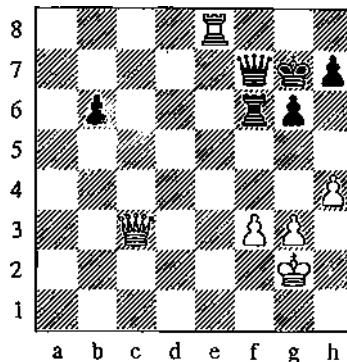
43. $\mathbb{W}e2$ is a bit more dangerous. Black's best defence is to force a queen ending with 43... $\mathbb{E}d2!$ 44. $\mathbb{W}xd2$ $\mathbb{W}xe8$, and he can hold after 45. $\mathbb{W}d4\#$ $\mathbb{Q}g8$ 46. $\mathbb{W}xb6$ $h5$, when White cannot improve his position without exchanging pawns.

After the text move, things are suddenly not so simple for Black.

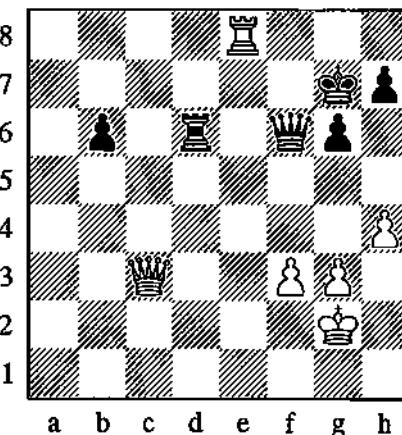
43... $\mathbb{W}f6$

43... $\mathbb{Q}h6$ loses instantly to 44. $\mathbb{W}e3\#$ $\mathbb{Q}g7$
45. $\mathbb{E}e7$.

43... $\mathbb{E}f6$ is equally bad.



44. $\mathbb{W}e5!$ White wins. This took some time to find.



This is a resistance point. I asked him to slow down and look. After some time, he came up with:

44. $\mathbb{W}c7\#$

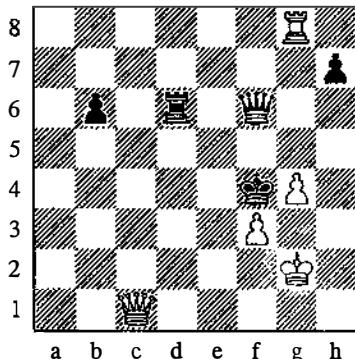
44. $\mathbb{E}e7\#$! is probably simpler. White will win the ending after 44... $\mathbb{Q}f8$ 45. $\mathbb{W}xf6\#$ $\mathbb{W}xf6$ 46. $\mathbb{E}xh7$, although it will take time. The tricky thing here is probably to realize that the king can only go to f8.

44... $\mathbb{Q}h6$ 45. $g4$

It took him some time to see this idea. Again, we slowed down in order to make sure we did not miss any of Black's options.

45... $\mathbb{E}d2\#$

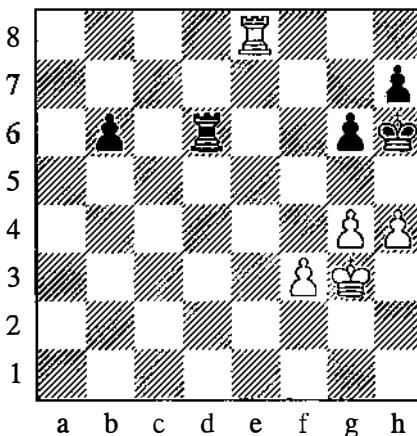
45...g5 46.hxg5† $\mathbb{Q}xg5$ 47. $\mathbb{E}g8\#$ $\mathbb{Q}f4$
48. $\mathbb{W}c1\#$ gives White a strong attack.



It is not easy to calculate, but we can see that it is very promising. This is good enough for me. We cannot calculate everything; especially in positions where there are many possibilities. We have to rely on our intuition at such times.

The computer gives us the following line:
48... $\mathbb{Q}e5$ 49. $\mathbb{E}e8\#$ $\mathbb{Q}d5$ 50. $\mathbb{E}e2$ and the black king is totally trapped. White wins in more ways than there is space for in this book.
50...h6? 51.f4 $\mathbb{E}e6$ 52. $\mathbb{E}d2\#$ $\mathbb{Q}e4$ 53. $\mathbb{W}c4\#$
 $\mathbb{Q}e3$ 54. $\mathbb{E}e2\#$

46. $\mathbb{Q}g3$ $\mathbb{W}d6\#$ 47. $\mathbb{W}xd6$ $\mathbb{E}xd6$



At this point the FM wanted to give up. But I reminded him to end by looking for options, rather than giving up at the sight of resistance. This trigger should inspire us to look for options, not to give up.

Looking for a few moments gives us the chance to see:

48. $\mathbb{E}e7!$

The threat of mate is real. Black has only one move.

48...g5 49.hxg5† $\mathbb{Q}xg5$ 50. $\mathbb{E}xh7$

White wins.



Chapter 9

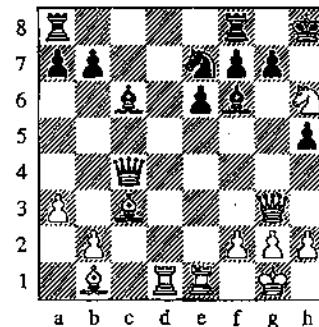
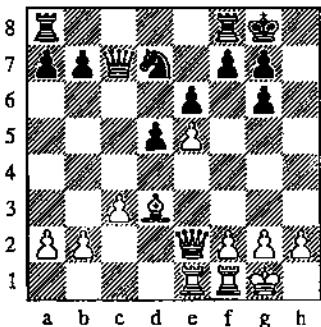
Abstract Thinking



Three generations of excellence. Grandmasters Barua, Ganguly and Ghosh working hard in Kolkata...

Test yourself against the book

This book is not an exercise book, but an experienced trainer can always find interesting moments in games that can be more effective for the student if he thinks about them first. On this page, I have included a few positions from this chapter that you can look at, should you feel so inclined. As long as it does not make you put off reading the chapter!



Simple decision.

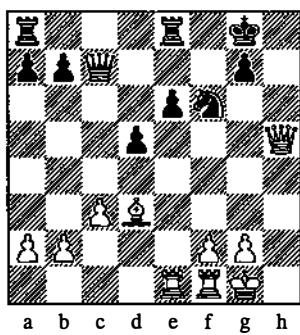
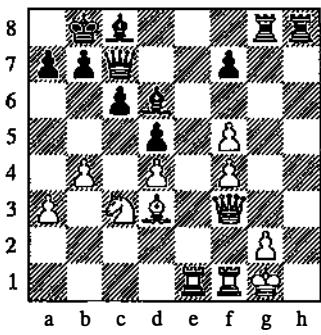
White's next move?

(see page 224)

I had planned a logical move.

At least as far as I see it!

(see page 228)



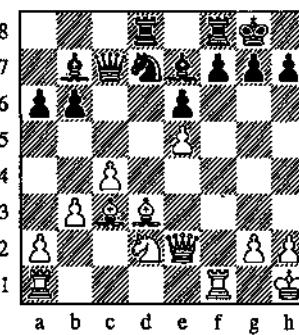
A critical moment. Can you find the clear path to the win?

(see page 218)

Simple, but not easy.

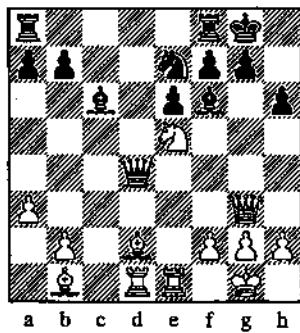
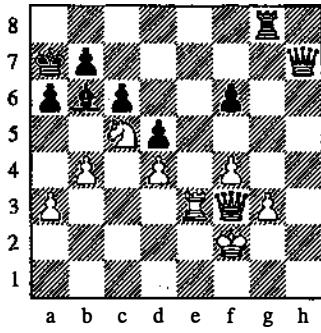
Hint, it's prophylaxis...

(see page 224)



Basic positional play!?

(see page 231)



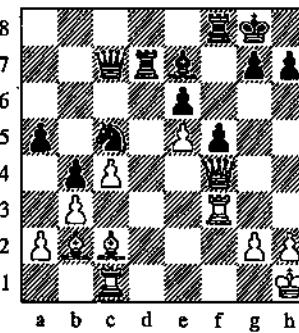
How should Black continue?

(see page 220)

Black has just stolen a pawn.

What do you do about it?

(see page 227)



How should White react to 25...f7-f5!?

(see page 232)

As we have established, I was a very intuitive player. This left me with two challenges. As a player, there were certain things I did not sense automatically, which I needed to learn. And as a trainer, there were things I understood on a pre-verbal level, that I wanted to communicate to my students. I had to learn the vocabulary of chess strategy and, in doing so, my level automatically increased. The reason for this is easy to understand for someone with training in theoretical grammar. When we learn to talk, to read and to write, we start by learning the letters, then words, sentence structure and eventually higher-level language, like metaphors or irony, although not everyone gets that far...

But language is not just a tool we use to explain the world we see around us. It also reshapes the world we see. Language divides the world into animals and plants, objects and subjects, chess players and really, really sad people. The objects in a room are connected only by a concept we learn from language. We might have had a vague feeling of this concept if it was not uttered, but before we get a word for it, it will not have the same consequences and lead to the same actions.

The same is the case in chess. If we do not have a strong understanding of what a weakness is, we will not see it when we look at the board. We will not see the limitations the bad bishop is facing, if we do not understand what a bad bishop is. If we do not see these features and their impact on the position, we will not be able to make decisions that improve our long-term chances.

The following game was played after I had already retired from tournament chess once. My abilities had certainly declined greatly already but, just as a person might recall the meaning of a word he had forgotten if you put it in front of him, I had not forgotten what is important in a position.

Simon Bekker-Jensen – Jacob Aagaard

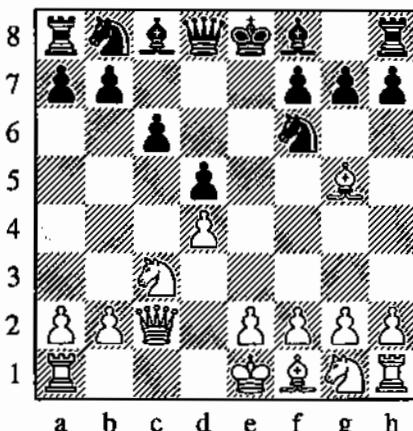
Skorping 2014

My opponent is a strong Danish international master. We play in the same team and have known each other for almost thirty years. I first lost to him in a friendly game when he was around seven years old. I always expected him to become a grandmaster, but somehow it never happened. Grandmaster Sune Berg Hansen once said that there comes a moment when you should pay the boatman Charon to take you across the River Styx. Many players take their natural talent to a certain level, working in a way that is natural for them, only to hit a plateau: At some point you must work on your weaknesses in order to make them strengths, as debated on page 325. Based on this game, Simon has similar deficiencies in his game as those I had in the early 2000s.

1.d4 d5 2.c4 e6 3.♘c3 ♘f6

Nikos Ntirlis had helped me prepare the Queen's Gambit for this tournament. I won my first three games with Black, this being the first one. With White I also had some great positions, but poor play meant that I spoiled my positions and eventually my chances for a good result.

4.cxd5 exd5 5.♗g5 c6 6.♗c2



Nikos had pointed to this move as being dubious, because of what I played in the game. This is a grave exaggeration. What I played was merely an interesting new possibility. But this sort of confidence should not be dismissed. I felt that Simon had fallen into a positional trap and that the game was going my way. He was soon on the back foot, facing new problems and the pressure of sitting across the table from a confident opponent.

6...h6 7.Qh4 Qe6!? 8.e3 Qbd7 9.Qd3 g5
 10.Qg3 Qh5 11.Qge2 Qxg3 12.Qxg3 h5
 13.0–0 h4

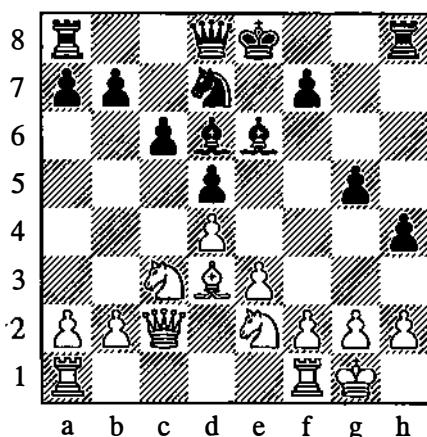
I was still in preparation, even though we had left opening theory behind a few moves back.

14.Qge2?!

This is a rather passive move, and one we had not looked at.

Against 14.Qf5 I was planning to play 14...Qf6, but I am not sure this is the best move now. Maybe 14...Qc7 is more flexible. In either case, the position is probably around equal.

14...Qd6



15.f4!?

This is an easy move to criticize, but also an easy move to understand, if you try hard enough. In the long term White will be unhappy with a weak e-pawn, a weak square on e4 and, in all respects, an inferior pawn structure. This is what happened in the game.

But we should also understand that Black has the two bishops and, once he gets developed, he will be able to generate an attack against the white king. The long-term prospects for White are not promising in either case. But the short-term qualities in his position are not that poor. He is ahead in development and none of his pieces are placed entirely stupidly.

The standard strategic reaction should be to try to change the nature of the position before it becomes static, and to keep the momentum going.

15...Qf6!

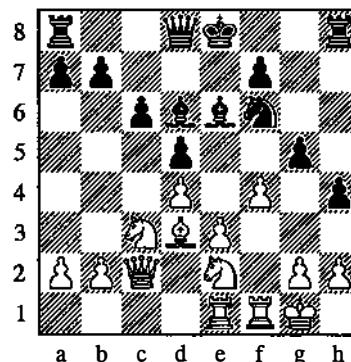
I think Simon missed this move entirely.

16.Qd2?

This is the antithesis of what I was saying before. Black is now allowed to fix the pawn structure to his advantage and White did not manage to bring in the a1-rook in order to support urgently needed action.

16.fxg5? Qg4 also did not work.

White should have tried 16.Qae1! with the intention of doing something immediately.



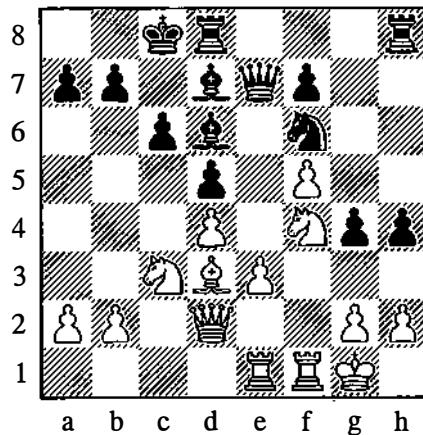
One of the possible lines that show the potential of the white position would be: 16... $\mathbb{W}e7$ 17. $f\text{x}g5$ $\mathbb{Q}g4$ 18. $\mathbb{Q}f4$ $\mathbb{W}xg5$ 19. $h3$ $\mathbb{Q}xe3$ 20. $\mathbb{Q}xe6!$ $\mathbb{W}g3$ (20... $f\text{x}e6?$ 21. $\mathbb{W}d2$ would give White the advantage) 21. $\mathbb{W}e2$ and objectively, Black should settle for the perpetual check while it is available.

So instead Black should probably play 16... $\mathbb{W}c7$, when he is somewhat better. But after 17. $b4!$, with such ideas as 17... $g4$ 18. $b5$, White has managed to use the energy of his position to create weaknesses in his opponent's set-up. In that case, the play would have taken an entirely different path than in the game.

16...g4! 17.f5 $\mathbb{Q}d7$ 18. $\mathbb{Q}f4$

Where is the knight going? I also do not see it.

18... $\mathbb{W}e7$ 19. $\mathbb{Q}ael$ 0–0–0



White has great looking pieces, but what are they actually doing? Is he pushing e3-e4? If so, what next? I could not see his intentions, so I decided to improve my own position further. But first it is Simon's turn.

20. $\mathbb{W}c2$

The only thing I can see the queen is doing here is to force me to put my own king on a safer square.

20.e4 $d\text{x}e4$ 21. $\mathbb{Q}xe4$ would be met with 21... $\mathbb{W}f8!$, when White has no follow-ups. 22.d5?! $c\text{x}d5$ 23. $\mathbb{Q}fxd5$ $\mathbb{Q}c6$ would land him in devastating pins. Even if he manages to not lose a piece immediately, he will fall prey to ... $\mathbb{Q}c5\uparrow$ and ... $\mathbb{Q}h5-g3\uparrow$, with death and destruction to follow.

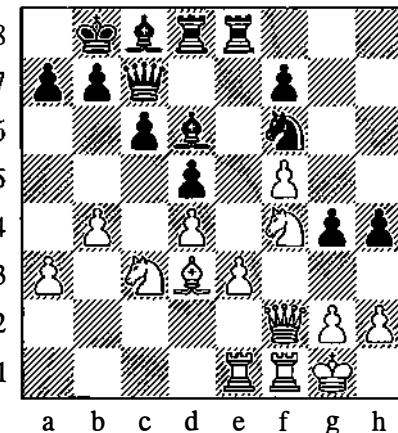
20... $\mathbb{Q}b8$ 21.a3

Finally, White begins action on the queenside.

21... $\mathbb{Q}c8$ 22.b4 $\mathbb{W}c7$ 23. $\mathbb{W}d2$

White is lacking a plan. This is what can happen when you are struggling to look at the long-term aspects of the position.

23... $\mathbb{Q}he8$ 24. $\mathbb{W}f2$



The third queen move in five. While the previous two moves were merely a waste of time, this last one allows Black to open up the kingside with a small pawn sacrifice.

24...g3! 25.hxg3 hxg3 26. $\mathbb{W}xg3$ $\mathbb{Q}h5?$

Rather concrete and, as such, an indicator of lacking confidence. I wanted to get my pawn back.

26... $\mathbb{Q}h8!$ is more natural. The rooks will go to the open files and something concrete will arise soon enough.

27.王h4

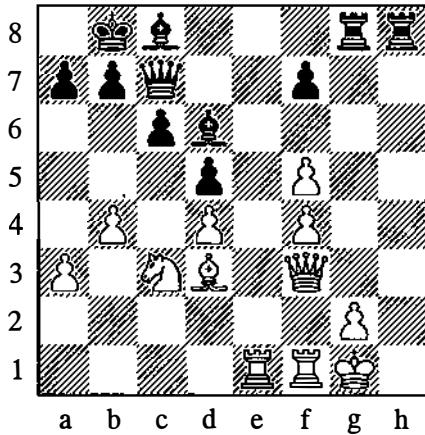
Against 27.王f3 I had planned 27...Qxf4 28.exf4 Qxel 29.Qxe1 Qxf4, when the weakness of the dark squares and the split pawns alone would be enough to give Black a big advantage. The weak white king is just a bonus.

27...Qxf4 28.exf4 Qh8 29.Qg3?!

A strange move.

29...Qdg8

I was happy to get this extra tempo as well.

30.Qf3

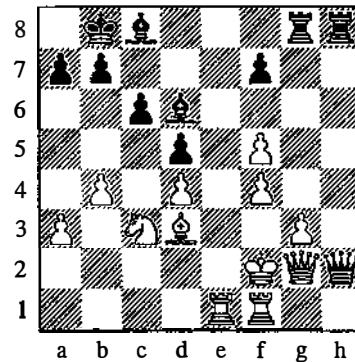
At this point I understood very well that I should calculate. All my pieces are active and my opponent's position is compromised; it would be natural if there was a direct win. Sadly, I was entirely out of practice and too lazy to force myself to do all the things I understood I needed to do.

30...f6?

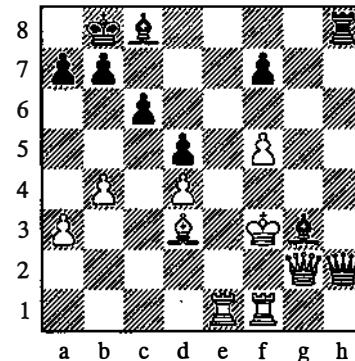
This is slow and wastes a good opportunity. The only good thing I can say about it is that it does not totally ruin the position.

I looked at 30...Qd8!, but was concerned about 31.g3 Wh4 32.Qf2 Wh2† 33.Qg2, when I did

not see what to do next. Let's ignore the many alternative wins on the way here.



This is good old fashioned resistance: I saw an idea and I saw a road block. As an old stunt-driver, I should have crashed my way through it. Or in chess terms, I should have stopped, looked carefully and seen 33...Qxf4!, which wins on the spot. I would have been unconcerned about 34.Qe2, as I would have won my pawn back and kept all that is good about the position. But for your entertainment, I should mention: 34...Qxg3! 35.Qxg3 Qxg3† 36.Qf3

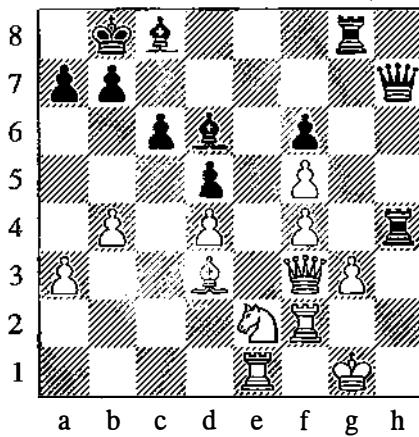


36...Wh5† White has a nasty choice between a hopeless endgame with two poor rooks against a rampant queen and 37.Qe3 where anything wins, but the engine has a sadistic preference for 37...Qg4!, when ...Qh2 will decide the game.

Obviously, there are other variations, but if I was my own trainer and if I was able to receive

instruction, I would focus on what prevented me from making the right decision.

31.♕e2 ♘h4 32.g3 ♘h7 33.♕f2

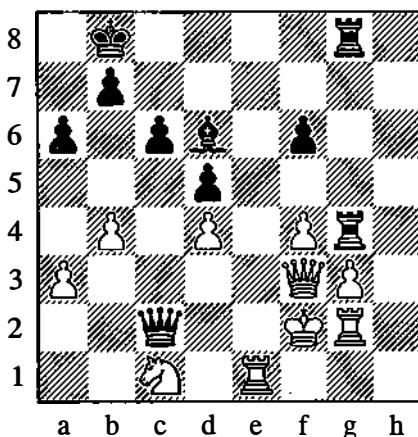


33...♕xf5

This does not ruin anything yet, but things are slowly getting closer and closer to something White might manage to hold.

33...♕h3 34.♕g2 ♘e8 is stronger according to Stockfish. I am sure I could work out why, if I invested a lot of time in it. But would it make me a better player? I doubt it. In this phase of the game, Simon managed to improve his position more than I did. I had my chance and knew it. Things were slowly falling apart.

34.♕xf5 ♘xf5 35.♕g2 ♘hg4 36.♕f2 a6
37.♕c1 ♘c2†



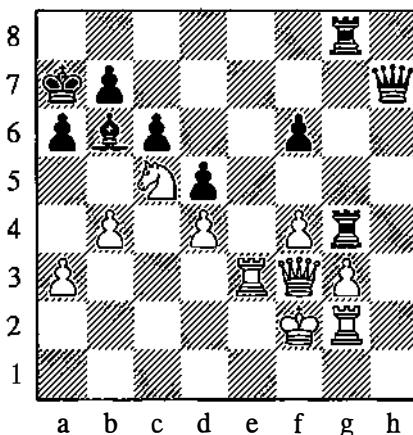
38.♔g1 ♘h7?!

38...♘c4 is more unpleasant.

39.♔d3 ♘c7 40.♔f2 ♔a7 41.♔e3 ♘b6
42.♔c5

This knight has been awful for all the game, but now you could imagine that it could assist an attack against b7.

Black still has the advantage but, with the trend pointing downward, I was starting to wonder how I would feel about a draw. Three years previously, I had completely outplayed Simon in similar fashion and eventually failed to win a position with two extra pawns. I knew his resilience very well. And I was not unaware that I could overplay my hand and lose the game.

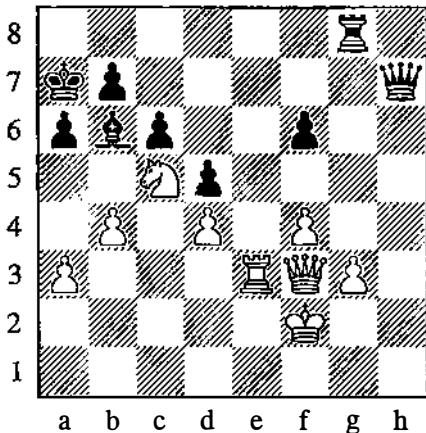


Thinking thoughts like these, I started to wonder what it would take for my attack to become irresistible. I realized that White is reliant on a rook defending the king on both sides, meaning that the exchange of a rook would make White's defensive task much more difficult. Would this be enough to win? I had no idea. But this sort of abstract thinking was much more beneficial in this position than raw calculation.

42...♗4g7 43.♗e2 ♘f5 44.♗h2?

44.♗d3! would give me some problems keeping the advantage.

44... $\mathbb{B}h7!$ 45. $\mathbb{B}xh7$ $\mathbb{W}xh7$ 46. $\mathbb{W}f3$



46... $\mathbb{B}g6!$

It takes a long time for the engine to agree that this is the best move. But if you know your strategic concepts, this one being Alekhine's cannon, you know that the rook belongs in front of the queen on the open file.

47. $\mathbb{Q}e6$

The engine says that 47. $\mathbb{Q}g1$ $\mathbb{B}h6$ 48. $\mathbb{B}e1$ was the best defensive try. White is unlikely to survive in the long run, of course, but it would have made the task harder for Black. I think the right plan relates to putting the pawn on f5, queen on h8 and bishop on f6. But achieving this without allowing counterplay is also a consideration.

47... $\mathbb{B}h6$

The rest of the game was easy to play.

48.f5 $\mathbb{B}h2\#$ 49. $\mathbb{Q}e1$ $\mathbb{B}a2$ 50. $\mathbb{B}e2$

We can easily see now that the white king would be happier with a rook protecting it from each side.

50... $\mathbb{B}a1\#$ 51. $\mathbb{Q}f2$ $\mathbb{W}h2\#$ 52. $\mathbb{W}g2$ $\mathbb{W}h5$ 53.g4
 $\mathbb{W}h4\#$ 54. $\mathbb{Q}e3$ $\mathbb{B}xa3\#$ 55. $\mathbb{Q}d2$ $\mathbb{B}g3$ 56. $\mathbb{W}f3$
 $\mathbb{W}xg4$ 57. $\mathbb{Q}c2$ $\mathbb{B}f3$
0-1

This game is an example of someone who has thought about chess strategy, winning against one of the leading Danish cancer scientists of his generation. If Simon had spent some of the energy he spent on biology on understanding chess strategy, his play would not have been so aimless at times. All the time we make choices with long-term ramifications...

Aesthetic moves

One of the problems I have with the idea that chess is calculation, pattern recognition, and opening preparation, is what I like to call aesthetic moves. If we look at White's position at move 20 in the game above superficially, it looks glorious. All his pieces are active, he has more space and his rooks are in the middle. In reality, his position is strategically bankrupt. The beauty of his pieces is entirely optical. There is no coherent plan of action on the horizon. What has led to this is what I like to call *aesthetic moves*. These moves look good and feel right, all based on pattern recognition.

And the real problem is that when you have played chess for a long time and spent a lot of time looking at your openings, you will have a pretty good pattern recognition. Although an obvious asset, this can also be a liability; if it makes you believe that pattern recognition can replace thinking about chess strategy. I have met many strong players who have been limited because of this. Much stronger players than myself, I hasten to add, but still unfulfilled potentials.

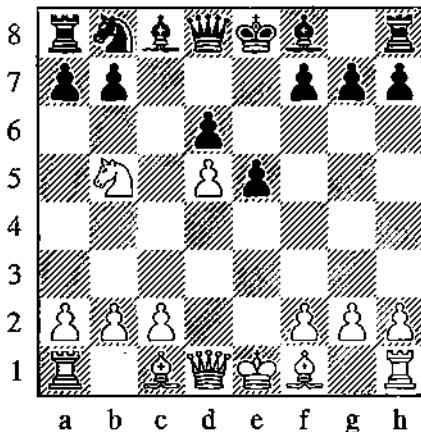
Jacob Aagaard – Enamul Hossain

Dresden (ol) 2008

1.e4 c5

This was the end of my preparation for this game. I had seen that my opponent had played some deep theoretical duels in other openings.

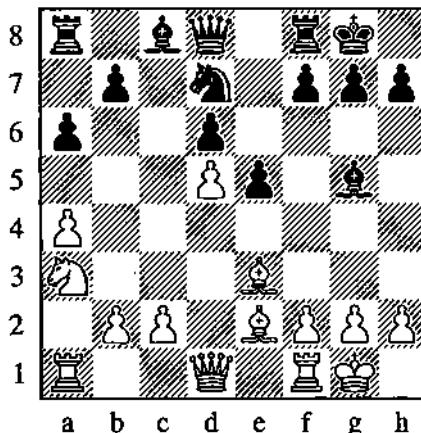
2. $\mathbb{Q}f3$ $\mathbb{Q}c6$ 3. d4 cxd4 4. $\mathbb{Q}xd4$ $\mathbb{Q}f6$ 5. $\mathbb{Q}c3$ e5
 6. $\mathbb{Q}db5$ d6 7. $\mathbb{Q}d5$ $\mathbb{Q}xd5$ 8. exd5 $\mathbb{Q}b8$



9.a4

There are days when you do not want to play a theoretical discussion, but would rather play an equal position. This line is not great, but it has some simple positional concepts that I felt could be useful against a player of even level to myself who possessed deep opening preparation.

- 9... $\mathbb{Q}e7$ 10. $\mathbb{Q}e2$ 0–0 11. 0–0 $\mathbb{Q}d7$ 12. $\mathbb{Q}e3$ a6
 13. $\mathbb{Q}a3$ $\mathbb{Q}g5??$



This is a natural-looking move; Black exchanges his bad bishop after White has spent time moving his bishop to e3. But it is a grave

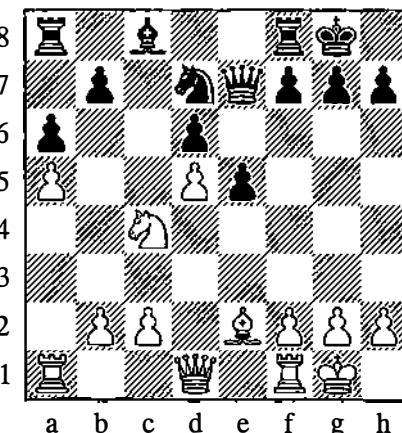
positional mistake from which there is no comeback. White wins an important tempo, making it difficult for Black to develop his queenside. The absence of the bishop makes the d6-pawn weak, at least for a moment, allowing White to fix the queenside to his advantage.

13... f5 is the right move, with even chances.

14. $\mathbb{Q}xg5!$

I did not have the slightest inclination that this was a novelty. It is only now when I am researching for this book that I see that someone played 14.f4 here.

- 14... $\mathbb{W}xg5$ 15. $\mathbb{Q}c4$ $\mathbb{W}e7$ 16. a5!



This leaves White better. Black will have an unpleasant choice about what to do with the b6-square. I was happy to leave it to him entirely. The engine says that White is only a bit better, which is of course nonsense; his position is entirely overwhelming.

16... $\mathbb{B}b8$ 17. b4 $\mathbb{Q}f6$

17... b6 18. axb6 $\mathbb{Q}xb6$ 19. $\mathbb{Q}a5$ is also deeply unpleasant for Black.

18. $\mathbb{Q}b6$ $\mathbb{Q}d7??$

I cannot see that the exchange of the knight

is helping Black much; but his position was disgusting no matter what.

19.c4 ♜xb6 20.axb6 f5

I am not sure what he was imagining this was doing for his position.

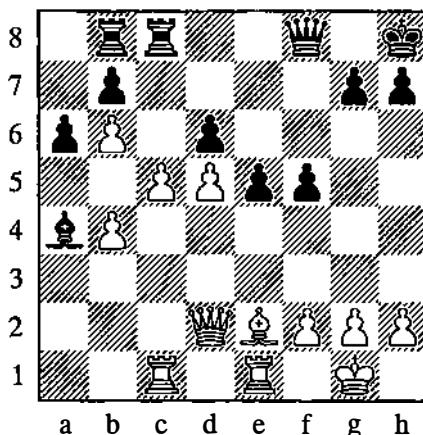
21.♗d2 ♛d7 22.♗ac1

22.♗fc1?! was maybe more precise, but it does not really matter.

22...♗fc8 23.c5 ♔h8 24.♗fd1

24.c6! bxc6 25.♗xa6 would have decided the game already, but there is nothing wrong with what I played.

24...♔a4 25.♗e1 ♗f8



26.♗a2 ♛b5 27.♗xb5 axb5 28.♗a7!

The game is over.

28...♗e8 29.c6 ♘a8 30.♗xb7 ♘eb8 31.♗c7

I was looking forward to 31...♗c8 32.♗xc8?! ♘xc8 33.b7, winning.

1-0

Although I am an activist – an intuitive, dynamic player—I appreciate the power of being systematic. From the moment I understood that my great deficiency in positional play was to do with not properly understanding

such topics as weaknesses and other long-term factors, I became fascinated with it. At the time, I was already an International Master and had been one game away from a grandmaster norm. Many promising players are greatly deficient in one or more areas of their play. When he was in his early 20s and storming up the world rankings, Hikaru Nakamura performed poorly in the endgame. Then at one point his play in the endgame improved sharply. It is of course possible that this happened because he matured generally, but I saw serious effort in his moves.

Planning

I was never a great strategic player. I handled dynamics very well, but found slow positions harder to deal with. With my great leap in 2007, I managed to move beyond this weakness. The main reason for this was that I made these decisions abstractly, rather than by intuition. The following game is a good illustration of a simple plan prevailing over a move-by-move approach to the game.

Jacob Aagaard – Peter Dittmar

Arco 2007

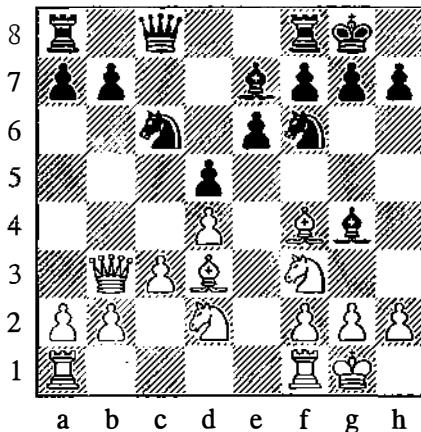
1.d4 d5 2.♗f4

The London System, before it became fashionable. I had been teaching it to a very young student in order to get him out of the opening alive, though with limited success. The lesson I learned from this is not to develop the c1-bishop too early if you struggle with surviving the opening. Losing the b2-pawn is a bad idea.

2...c5 3.e3 ♜c6 4.c3 cxd4

With this move Black transposes to the Caro-Kann, which is well-known territory for him.

5.exd4 ♜f6 6.♕d3 ♜g4 7.♗b3 ♜c8 8.♕d2
e6 9.♗g3 ♜e7 10.0–0 0–0



This is the first time I stopped to think in the game. I sensed that 11.♖ae1 was the obvious move and indeed it is the main line, where White can, with some assertion, play for an advantage. But I wanted to create my own path.

11.♗e5!?

Although the ideas behind this move work well in the game, it is not a path to an advantage.

11...♝h5

11...♝xe5! was the right move, as those with a database can work out. I had missed some finesse that means that 12.dxe5 is less strong than I thought. The position should be about even.

12.♝g5!?

This was my idea. I wanted to play f2-f4-f5, forcing Black to play ...exf5, leaving the d5-pawn soft. White could also use the open f-file to develop threats on the kingside. This is not a path to a great advantage, but when you play the London you are counting on your opponent's fallibility.

12...♝e8!?

I expected him to go to d7, but this is fine too.

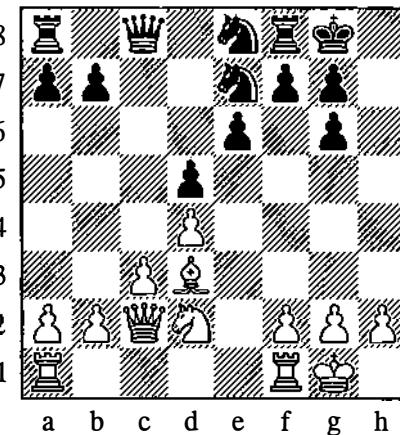
13.♗xe7 ♜xe7 14.♗c2

This was my second point. I wanted to get a bishop vs. knight advantage and to create a hook on g6.

14...♜g6

I believed 14...♝h8!? to be a more flexible option. 15.f4, following the plan, was my intention. Dittmar chooses to go for the solid option but, as so often in chess, being solid comes at a price.

15.♗xg6 hxg6

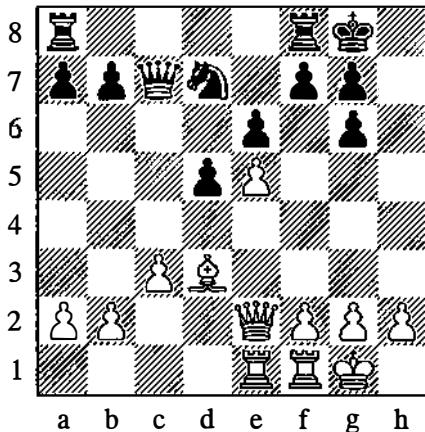


16.♖f3

This position is probably the most interesting in the game. White has a pretty straightforward plan of putting a rook on h3 and a queen on h4. Also, he has the plan executed in the game. Black needs to come up with something to counter this and at the same time create counterplay on the queenside. Dittmar did not really try to do so, but quickly played his next four moves. Though he had a chance later on in the game, it is clear that he lost the game because he failed to realize that this was the moment

where he should lay down a plan. Admittedly, this would be difficult. This is what happens when you make concessions, rather than solving your problems.

16... $\mathbb{Q}f6$ 17. $\mathbb{W}e2$ $\mathbb{Q}c6$ 18. $\mathbb{B}ae1$ $\mathbb{W}c7$ 19. $\mathbb{Q}e5$
 $\mathbb{Q}xe5$ 20. $dxe5$ $\mathbb{Q}d7$



Everything has gone according to plan. My plan. I have a bishop-against-knight advantage, a pawn on e5 that limits Black's defensive options, and have created a hook on g6. Without just one of those small achievements, White's advantage would not be anything special.

21.h4!

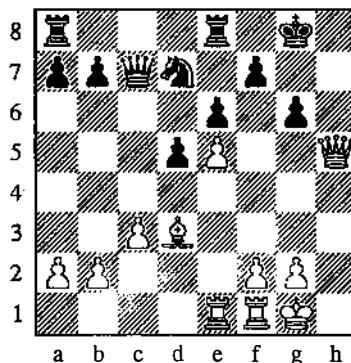
Attacking the weakness on g6, which was created as a result of my strategy laid down at move 11. Only now did Dittmar realize the power of the attack.

21... $\mathbb{B}fe8$ 22.h5 $gxh5$

22...g5 is answered by 23. $\mathbb{W}e3$ and f2-f4, with a strong attack.

23. $\mathbb{W}xh5$ f5

23...g6 loses by force:



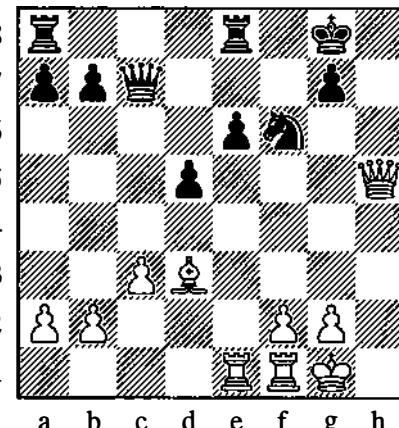
24. $\mathbb{Q}xg6!$ $fxg6$ 25. $\mathbb{W}xg6\#$ $\mathbb{Q}f8$ 26. $\mathbb{B}e3$, when he has to take on e5: 26... $\mathbb{Q}xe5$ 27. $\mathbb{W}f6\#$ $\mathbb{Q}f7$ 28. $\mathbb{B}h3$ $\mathbb{Q}g8$ Now the principled way to win is by bringing in the last piece with 29. $\mathbb{E}e1!$, although it is not the only way.

During the game, I did not have full control over this line. I had no reason to calculate this accurately, as it would not make me change my previous decisions.

24.exf6

24. $\mathbb{B}e3$? also existed, but I wanted to be sure that there were permanent weaknesses, in case the attack failed.

24... $\mathbb{Q}xf6$



25. $\mathbb{W}h4?$

Part of a mutual blind spot. I should have played 25. $\mathbb{W}g5!$, which would not have been

quite as effective against normal play, but would have been good prophylaxis.

25... $\mathbb{W}f7?$

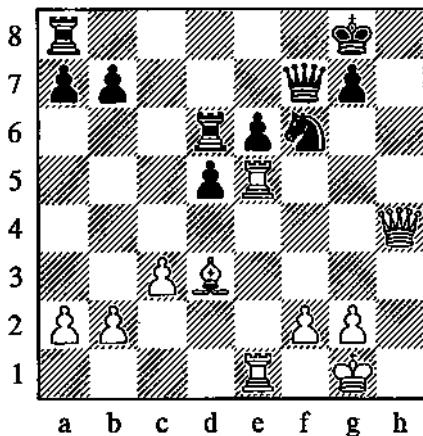
Even though g6 is Black's weakest square, neither of us considered 25... $\mathbb{W}f7!$, when the position is about even. Black will play ... $\mathbb{E}h8$, ... $\mathbb{E}h6$ and ... $\mathbb{E}h8$, with counterplay.

There are times when you see top grandmasters do something reckless or lay a silly trap for their opponent, when they are in trouble. The thinking is simple: they know that if they are unable to change the direction of the game, they will lose. And they will try anything to do this. In this game Dittmar did not fight hard enough against the trend and lost without offering much resistance.

26. $\mathbb{E}e5$

I did not want to allow ... $\mathbb{W}h5$, even though it loses an exchange. I considered the position easily winning and lost my concentration a little bit.

26... $\mathbb{E}ed8$ 27. $\mathbb{E}fe1$ $\mathbb{E}d6$



28. $\mathbb{E}1e3$

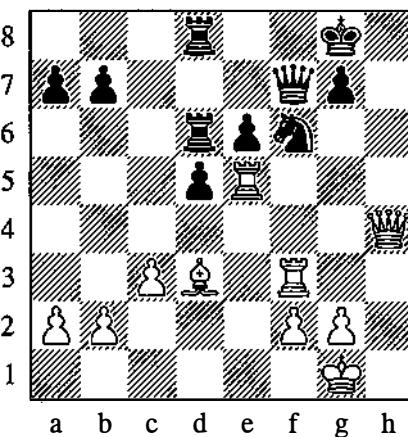
Activating the last piece.

28... $\mathbb{E}ad8$ 29. $\mathbb{E}g3$ $\mathbb{W}e4$ 30. $\mathbb{E}f3$

I could also have taken on e4 and played $\mathbb{E}h5$, but I preferred to go for a position where there was minimal calculation needed.

30... $\mathbb{Q}f6$

30... $\mathbb{g}5$ was the only idea that offered resistance and caused me real problems (that is, once I had found a square for my queen after 30... $\mathbb{W}e7$ – oh yes). I eventually understood that after 31. $\mathbb{E}xg5\#$ $\mathbb{Q}xg5$ 32. $\mathbb{W}xg5\#$ $\mathbb{W}g7$ I could move the queen, after which there would be no defence against 34. $\mathbb{E}g3$.



31.g4!

Doing as I teach: including a pawn in the attack to increase the firepower. I actually believed my opponent would resign here, but we played a few more moves.

31...d4 32.c4 $\mathbb{W}c7$ 33.g5 $\mathbb{E}6d7$ 34.gxf6 gxf6
35. $\mathbb{E}g3\#$ $\mathbb{E}g7$ 36. $\mathbb{W}h7\#$
1-0

Abstract thinking and dynamics

In Chapter 11 we discuss the main strategic concepts of attacking play. As stressed again and again, this is not with the intention of you following “rules”, but so that you can both improve your intuition and consider the strategic consequences. Or in other words: abstract thinking.

The next game is one of the most important I ever played and my success in the game is owed mainly to strategic thinking.

Jacob Aagaard – Spyridon Skembriis

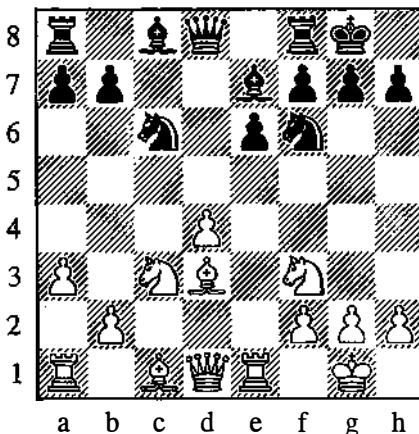
Arco 2004

My opponent sought me out at my dinner the night before, offering me a draw. The pairings were not yet up, but he had worked out that we would face each other in the last round. This is technically against the rules, but is not considered unethical by a lot of grandmasters, contrary to throwing the game, which very few would ever consider doing. I did not mind him offering, but I declined. However, I did find it incorrect that he started arguing for why it was also in my interest to agree to this prearrangement. It is one out of two times this has happened to me. The second time I caved and regretted it deeply afterwards. This time however, I had an easy counter argument: “Sorry, I am playing for the my final grandmaster norm.” My opponent apologized and wished me good luck with a wink.

1.e4 c6

I had prepared a nice novelty in the Ruy Lopez, which I never got a chance to play.

2.c4 d5 3.exd5 cxd5 4.cxd5 $\mathbb{W}xd5$ 5. $\mathbb{Q}c3$ $\mathbb{W}d8$ 6.d4 $\mathbb{Q}f6$ 7. $\mathbb{Q}f3$ e6 8. $\mathbb{Q}d3$ $\mathbb{Q}c6$ 9.0–0 $\mathbb{Q}e7$ 10. $\mathbb{E}e1$ 0–0 11.a3



11... $\mathbb{Q}d5?$

My opponent is not familiar with the Caro-Kann and for this reason believed that this was the theoretical move, confusing it with the position after 4... $\mathbb{Q}f6$ 5. $\mathbb{Q}c3$ $\mathbb{Q}xd5$ 6.d4 e6 7. $\mathbb{Q}f3$ $\mathbb{Q}e7$ 8. $\mathbb{Q}d3$ 0–0 9.0–0 $\mathbb{Q}c6$ 10. $\mathbb{E}e1$, where 10... $\mathbb{Q}f6$ 11.a3 would transpose to the game and 10... $\mathbb{Q}f6$ would lead to the variation Skembriis believed we were playing in the game.

11...b6 is the theoretical move.

12. $\mathbb{Q}e4$

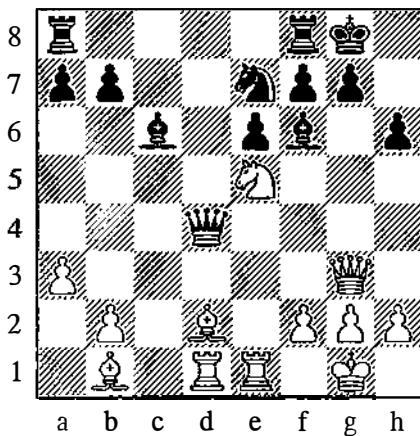
12. $\mathbb{Q}c2$ was probably objectively stronger, but I wanted to keep my opponent in the illusion that we were playing a known variation.

12... $\mathbb{Q}f6$ 13. $\mathbb{W}d3$ h6 14. $\mathbb{Q}d2$ $\mathbb{Q}ce7$ 15. $\mathbb{E}ad1$ $\mathbb{Q}d7$ 16. $\mathbb{Q}e5$ $\mathbb{Q}xc3$ 17. $\mathbb{W}xc3$ $\mathbb{Q}c6$ 18. $\mathbb{Q}b1$ $\mathbb{W}d5$ 19. $\mathbb{W}g3$

Despite being two tempos down on a theoretical variation, Black is not doing too badly here. White is better, but the game goes on.

19... $\mathbb{W}xd4?$

It takes a while for the 2017 version of Stockfish to work out that this is horrible for Black.

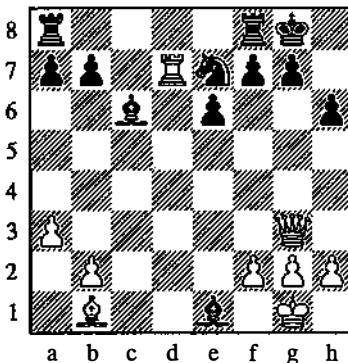


I had sacrificed the pawn on purely intuition. My feeling was that all my pieces are in an ideal position and if I was able to win an extra tempo or two, my attack would be winning. I tried to calculate the complications, but they were beyond my ability to calculate.

20. $\mathbb{Q}g4!$

Again, played on logic rather than calculation. I had to win the game, so all lines leading to a draw were useless to me. For this reason, I had no qualms about sending my knight to certain death on h6.

20. $\mathbb{Q}d7?$ was the choice of my laptop at the time. It is a really bad move. 20... $\mathbb{W}xd7?$ 21. $\mathbb{Q}c3 \mathbb{Q}xc3$ 22. $\mathbb{B}xd7 \mathbb{Q}xe1$

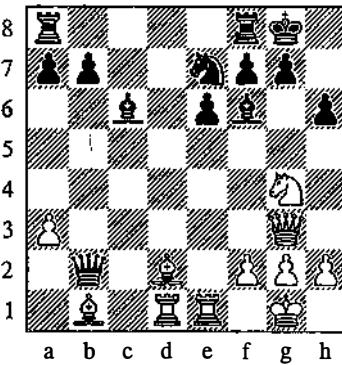


After this I wrote “White cannot seriously threaten Black, while the black bishops will

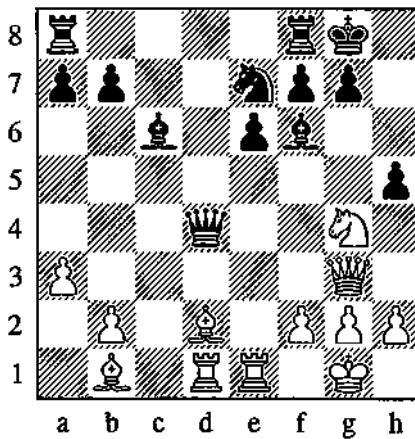
take control over the entire board” in 2004. The 2017 version of the number cruncher says that White loses after 23. $\mathbb{B}xe7 \mathbb{B}ad8!$ with ... $\mathbb{B}d1$ or ... $\mathbb{B}d2$ coming.

20... $\mathbb{h}5!$

20... $\mathbb{W}xb2$ was a move I could not refute at the board, even though experience told me there would be something for White. The black queen is leaving the scene of action for the low price of a pawn.



Sure enough, after 21. $\mathbb{Q}xh6\#$ $\mathbb{Q}h8$ 22. $\mathbb{W}h3!$ Black can do nothing but resign.



21. $\mathbb{Q}h6\#!$

The most logical move, except that the knight is unlikely to come home alive at first glance. But if we look deeper, we will see that Black never gets time to take the knight.

My opponent's idea behind taking on d4 had relied on 21. $\mathbb{Q}xf6\#$ $\mathbb{W}xf6$ 22. $\mathbb{Q}g5$, when White appears to win a piece. But Black equalizes with 22... $\mathbb{Q}f5!$, when 23. $\mathbb{Q}xf6$ $\mathbb{Q}xg3$ 24. $\mathbb{Q}xg7$ leads to an endgame that is almost certain to be drawn.

21. $\mathbb{Q}f4?$ was another move I considered, but I found nothing after the geometric manoeuvre: 21... $\mathbb{W}xb2$ 22. $\mathbb{Q}c1$ $\mathbb{W}c3!$ 23. $\mathbb{Q}e3$ $\mathbb{W}a1!$ White does not have nearly enough for the pawns.

21... $\mathbb{Q}h8$ 22. $\mathbb{Q}c3$

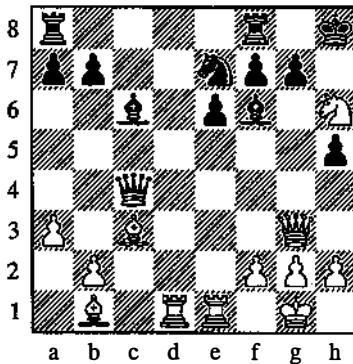
Aiming at the black king.

22... $\mathbb{h}4?!$

I was in full control of 22... $\mathbb{W}h4$ 23. $\mathbb{W}d3!$ $g6$ 24. $g3$ and Black will not be able to keep up the defence of the f6-bishop.

The only move I was unsure about during the game was:

22... $\mathbb{W}c4$



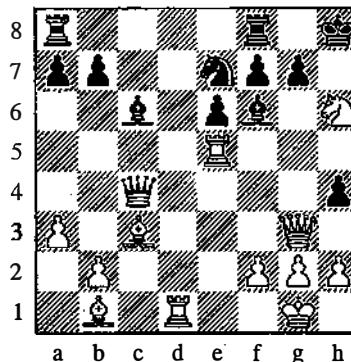
I failed to see that 23. $\mathbb{Q}xf6$ $gxf6$ 24. $b3$ works eventually, but I had seen a more energetic and logical move. My strategic mind told me that I had to include all the pieces in the attack. And the rook on e1 is currently doing very little. So, for this reason the strongest move is:

23. $\mathbb{Q}e5!$ $h4$

23... $g6$ 24. $\mathbb{Q}xh5!$ $\mathbb{Q}xc3$ 25. $\mathbb{Q}h4$, with a

deadly attack for free, is what I had seen during the game.

I completely blocked 23... $\mathbb{Q}f5$ during the game, but the refutation is simple: 24. $\mathbb{Q}xf5$ $exf5$ 25. $\mathbb{Q}xh5$ $\mathbb{W}g4$ 26. $\mathbb{W}xg4$ $hxg4$ 27. $\mathbb{Q}h5\#$ $\mathbb{Q}g8$ 28. $\mathbb{Q}h7\#$ $\mathbb{Q}h8$ 29. $\mathbb{Q}xf6$ $gxf6$ 30. $\mathbb{Q}d4$ and White has a winning endgame.



My opponent had gone back to his hotel room after our post-game chat to check this with the computer. This had led him to believe that the game would have ended in a draw after 24. $\mathbb{Q}h5$ and White gives a perpetual check once Black takes the queen. I told him I had planned to play another move, which turns out to be entirely winning.

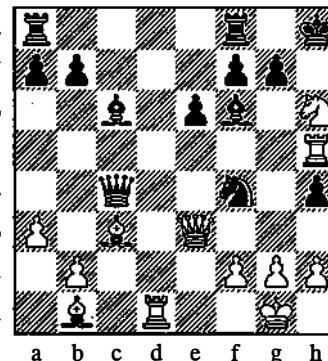
24. $\mathbb{W}e3!$

During the game, I had calculated a few lines, with the main resistance coming after:

24... $\mathbb{Q}g6$ 25. $\mathbb{Q}h5$

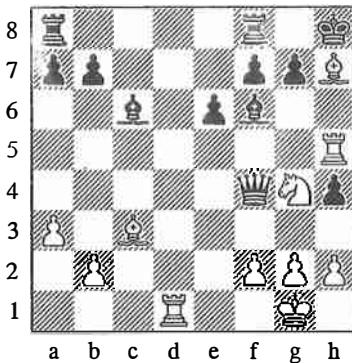
These days we can see that 25. $\mathbb{Q}d4$ wins on the spot.

25... $\mathbb{Q}f4$



This was as far as I had got in my calculation's, when my opponent went in a different direction. While waiting for the prizegiving, I turned on the digital monster of the time, Fritz 8, which showed me one of many different ways to win the game, and certainly the most beautiful one.

26. $\mathbb{W}xf4!$ $\mathbb{W}xf4$ 27. $\mathbb{Q}g4\#$ $\mathbb{Q}g8$ 28. $\mathbb{Q}h7\#$ $\mathbb{Q}h8$



29. $\mathbb{Q}f5\#$!

The key move.

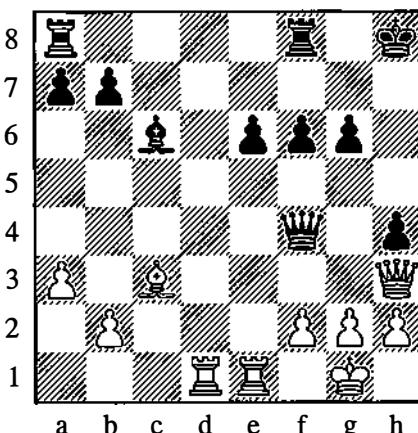
29... $\mathbb{Q}g8$ 30. $\mathbb{Q}xf6\#$ $gxf6$ 31. $\mathbb{Q}xh6$

With mate coming.

23. $\mathbb{W}h3$ $\mathbb{W}f4$ 24. $\mathbb{Q}g4!$

White wins.

24... $\mathbb{Q}g6$ 25. $\mathbb{Q}xf6$ $gxf6$ 26. $\mathbb{Q}xg6$ $f\#$



27. $\mathbb{Q}d4!$ $\mathbb{W}f5$ 28. $\mathbb{Q}xh4\#$ $\mathbb{Q}g8$ 29. $\mathbb{Q}h8\#$ $\mathbb{Q}f7$

30. $\mathbb{W}h7\#$ $\mathbb{Q}e8$ 31. $\mathbb{Q}xf8\#$ $\mathbb{Q}xf8$ 32. $\mathbb{Q}b4\#$
1-0

Outplaying your opponent

There are few greater pleasures in chess than winning a really well-played game. I have won a lot of games through a good understanding of dynamics, as is common for activists. The games where I have outplayed equal opponents strategically are far fewer. The following hopefully shows how this can be done.

In the game, I equalize with Black in the opening, then comes up with a decent middlegame plan of exchanging White's powerful dark-squared bishop. This prompts him to make a double-edged decision. After this I change the plan slightly, but essentially still playing against White's light squared bishop, hoping to end up in an endgame with a strong knight against a weak bishop. This is not what eventually happened, as an opposite-coloured-bishop endgame where my bishop was far superior to his came along. I consider the game one of my finest efforts.

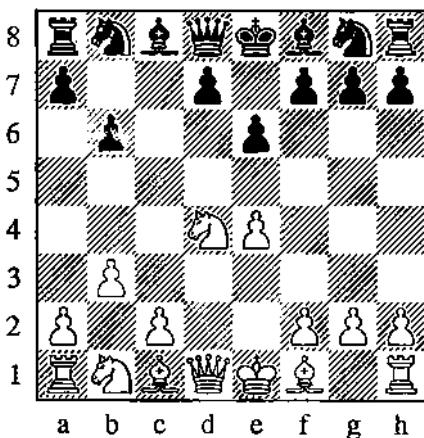
Simon Williams – Jacob Aagaard

Great Yarmouth 2007

This game was played in Round 7 of the British Championship. I had won the first five games and drawn in Round 6. The games from Rounds 5 and 6 against Pert and Rowson can be found on pages 99 and 29.

This game was played after the only free day in this 11-round tournament. I had spent it relaxing and preparing for the pawn-sac line Simon Williams was playing at the time, which soon after became a big main line: 1. d4 $\mathbb{Q}f6$ 2. c4 e6 3. $\mathbb{Q}f3$ b6 4. g3 $\mathbb{Q}a6$ 5. $\mathbb{W}c2$ $\mathbb{Q}b7$ 6. $\mathbb{Q}g2$ c5 7. d5! exd5 8. cxd5.

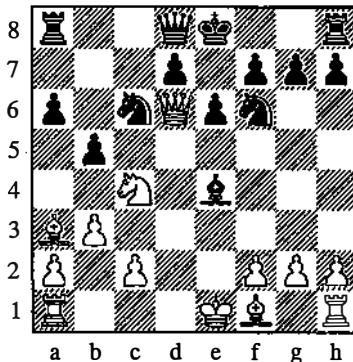
1. e4 c5 2. $\mathbb{Q}f3$ e6 3. b3 b6 4. d4 cxd4 5. $\mathbb{Q}xd4$



5...a6!

This is both an objective and a practical choice.

5... $\mathbb{Q}b7$ looks natural, but White has a dangerous pawn sacrifice, which I later managed to win a miniature with. But that was later; at the time of the game, I had only seen one game with this pawn sacrifice, and it did not encourage me to take it. 6. $\mathbb{Q}b5?$ a6 7. $\mathbb{Q}d6\#$ $\mathbb{Q}xd6$ 8. $\mathbb{W}xd6$ $\mathbb{Q}xe4$ 9. $\mathbb{Q}a3$ $\mathbb{Q}f6$? (9... $\mathbb{Q}e7$ and Black would have been fine) 10. $\mathbb{Q}d2$ $\mathbb{Q}c6$ 11. $\mathbb{Q}c4$ b5?



What is quite funny is that you can see on ChessBase's online engine-sharing site that someone analysed this position to a depth of 124. I am not sure what the point was, as it's mate in four. 12. $\mathbb{W}f8\#$!! 1-0 Kotrotsos – Stiri, Heraklio 2005.

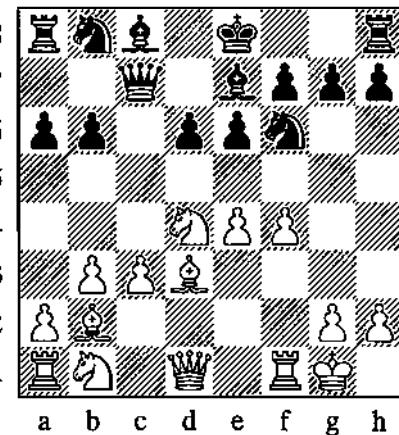
6. $\mathbb{Q}b2$ $\mathbb{W}c7$ 7. $\mathbb{Q}d3$ $\mathbb{Q}b4\#$

This check is not strictly necessary, but it does limit White's choice.

8.c3 $\mathbb{Q}e7$

Somewhat this was a novelty. It was clear to me that 8... $\mathbb{Q}d6$?! 9. $\mathbb{W}g4$! would be uncomfortable.

9.0-0 $\mathbb{Q}f6$ 10.f4 d6

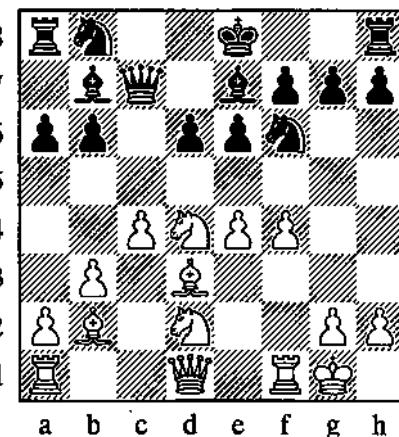


11. $\mathbb{Q}d2$

This is a somewhat odd decision.

11.c4 0-0 12. $\mathbb{Q}c3$ $\mathbb{Q}b7$ 13. $\mathbb{W}e2$ would have taken us into a more standard territory, where White is playing for an advantage.

11... $\mathbb{Q}b7$ 12.c4



At this point I thought for a while, deciding where to put the different pieces. I decided to aim for an exchange of one set of knights, with the intention of exchanging the dark-squared bishops, and later on perhaps play ...e6-e5, in order to restrict White's light-squared bishop and manoeuvre the knight to d4.

12...Qc6!

Even now I think this gives Black the best chance of equalizing.

13.Qe2 Qxd4 14.Qxd4

Now it was Simon's turn to think for a while and come up with a plan. True to his style, he decided to aim for the black king.

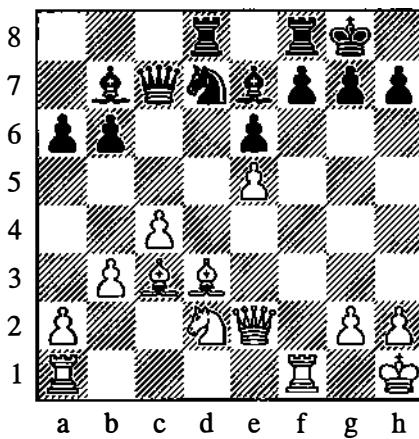
14...0-0 15.Qh1 Qd7

Preparing ...Qf6.

16.e5!

My impression was that Simon overestimated his position. I did not believe that the pawn on e5 was valuable as a limitation of the black defence, as it was weak.

16...dxe5 17.fxe5 Qad8 18.Qc3



This move surprised me somewhat, as it gives me the option to improve my pawn structure and cement a knight on c5.

18...b5!

Not a difficult decision. The pawn will be better on b4 than on b6. Yes, White gets a passed pawn, but many things would have to go wrong for this to be an important factor in the position.

19.Qac1

Simon had entirely missed what my intention was.

19...b4

I made this move quickly. It clearly came as a surprise for my opponent.

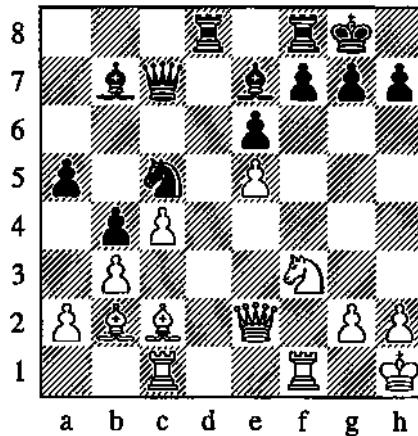
20.Qb2 Qc5 21.Qc2

This was quite an interesting moment of the game. I decided to play against White's light-squared bishop, but it was based on reacting to what I was certain would be his next move.

21...a5

So I decided to defend the b-pawn, just in case it would be hanging later on. It is quite possible that 21...Qd7 was a tad stronger, but to me this was a logical decision.

22.Qf3



22...Qxf3!

I took the knight quickly, which again

surprised Simon. Yes, the bishop on b7 looks quite impressive; but with the outlook of $\mathbb{Q}d4-b5-d6$ coming, the exchange made a lot of sense to me.

23... $\mathbb{W}xf3$

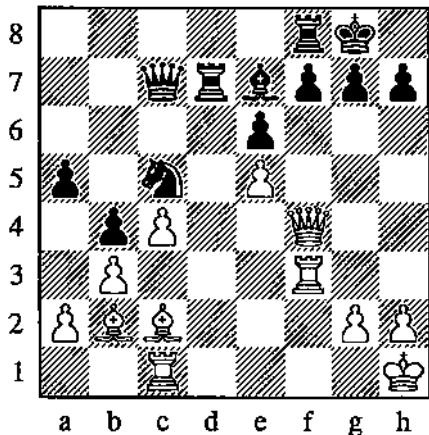
Taking with the pawn would create long-term weaknesses in the white position without any obvious benefit.

23... $\mathbb{B}d2$ 24. $\mathbb{W}f4$ $\mathbb{B}d7$

Again the position was improved slightly.

25. $\mathbb{B}f3$

Simon dreams about a mating attack still.



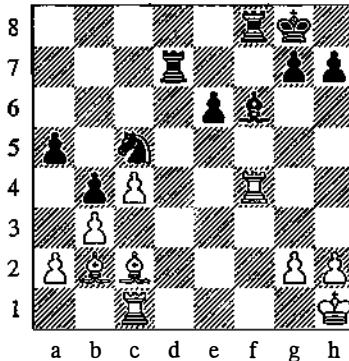
25... $\mathbb{B}5!$

My intention was to play ...g6 at some point to limit the scope of the bishop on b1, but with the text move being possible, I was pleased to exploit the possibility.

26. $\mathbb{B}cf1?$

This is essentially the losing mistake. Yes, it is unpleasant to give up the bishop pair and to exchange queens, when you are an attacking player. But if the pawn stays on f5, White's position is so cramped and his e5-pawn in grave danger in the long run. The lesser evil turns out to bring salvation, but only after very accurate and dynamic defence.

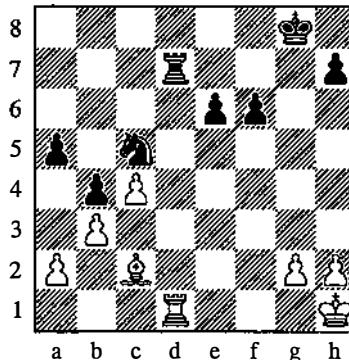
26.exf6 $\mathbb{W}xf4$ 27. $\mathbb{B}xf4$ $\mathbb{Q}xf6$



28. $\mathbb{B}cf1!!$

This is the move White had to find. The concept is typical for how you have to defend a structurally inferior position. White has some active play, which gives him counterplay still.

28. $\mathbb{Q}xf6$? $\mathbb{B}xf6$ 29. $\mathbb{B}xf6$ $gxf6$ 30. $\mathbb{B}d1$ is equal according to the engine.



To me it is obvious that Black has a completely overwhelming position. And if you feed the beast 30... $\mathbb{B}xd1\#$ 31. $\mathbb{B}xd1$ $\mathbb{Q}e4$ it will eventually work out that Black's extra pawn will come in quite handy.

28... $\mathbb{B}d2$

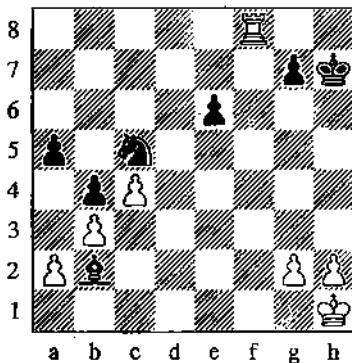
I do not see any other way for Black to progress.

28... $\mathbb{B}df7$ 29. $\mathbb{B}c1$ would allow White to keep his two bishops and very soon challenge the knight on c5. Black needs to be careful he does not end up worse.

29. $\mathbb{B}1f2 \mathbb{B}xf2$ 30. $\mathbb{B}xf2 \mathbb{Q}xb2$

What else?

31. $\mathbb{Q}xh7\# \mathbb{Q}xh7$ 32. $\mathbb{B}xf8$

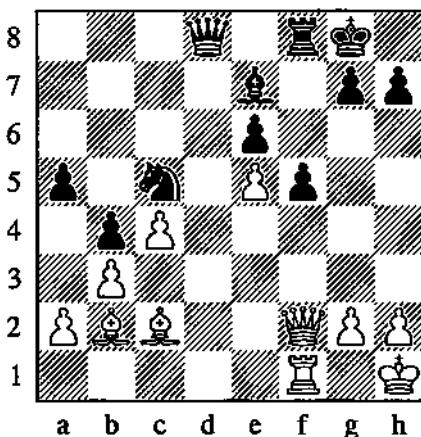


This endgame is a likely draw. The pressure on the a5-pawn and the passed c-pawn gives White all the counterplay he can ask for.

26... $\mathbb{W}d8$

Yes, this supports both the bishop and the rook getting into the game, but there was nothing wrong with 26... $\mathbb{B}fd8!$, when Black is close to being completely winning.

27. $\mathbb{W}e3 \mathbb{B}d2$ 28. $\mathbb{B}3f2 \mathbb{B}xf2$ 29. $\mathbb{W}xf2$



29... $\mathbb{Q}e4!$

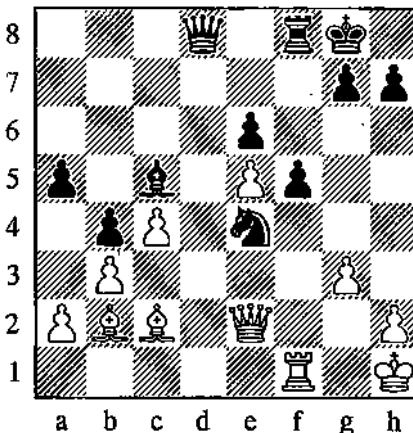
The knight is beautiful on c5, but even stronger on e4.

30. $\mathbb{W}e2$

30. $\mathbb{Q}xe4?!$ $fxe4$ 31. $\mathbb{W}e2 \mathbb{B}xf1\#$ 32. $\mathbb{W}xf1 \mathbb{W}d2$ and Black wins.

30... $\mathbb{Q}c5$ 31. $\mathbb{g}3$

31. $\mathbb{Q}xe4?!$ is poor again. 31... $fxe4$ 32. $\mathbb{B}d1 \mathbb{W}h4$ with a winning attack. For example: 33. $\mathbb{Q}d4 \mathbb{B}xd4$ 34. $\mathbb{B}xd4 \mathbb{B}f2$ 35. $\mathbb{W}d1$ $h6$ and Black is in complete control of events.



31... $\mathbb{Q}c3!$

I am quite happy to enter a position with opposite-coloured bishops, if I get a passed pawn on c3 as a part of the bargain.



32.♗xc3

32.♗f3 ♖d2 is also very strong.

32...bx_c3

Whether or not the advantage is enough to win with perfect play is not something I pay a lot of attention to. Black's position is easier to play and much better. All the burden in this position seems to be on White.

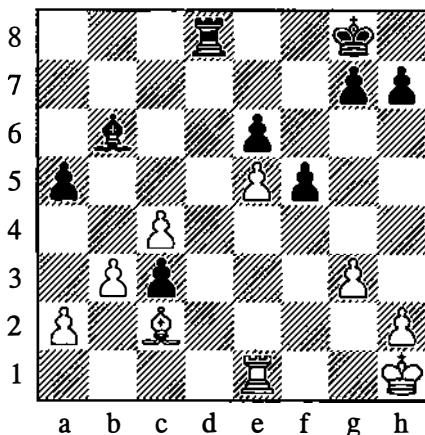
33.♗d1 ♖a8† 34.♗g2 ♖b8

Starting putting pressure on the e5-pawn.

35.♗e1 ♗d8 36.♗c6

I had actually missed this move, but a convenient transition into a winning endgame was luckily at hand.

36...♖b6! 37.♗xb6 ♗xb6



38.♗e2

38.♗d1 ♗xd1† 39.♗xd1 g5! is also pointless for White. 40.♗g2 g4 41.h3 h5 would give Black full control over the position. The weaknesses on g3 and e5 are fixed and the c3-pawn will lock the white pieces down. Black will bring in the king first and then attack the weaknesses.

38...h5 39.♗g2

39.h4 g5! 40.hxg5 ♗g7 also wins.

39...g5 40.♗f3 ♗f7

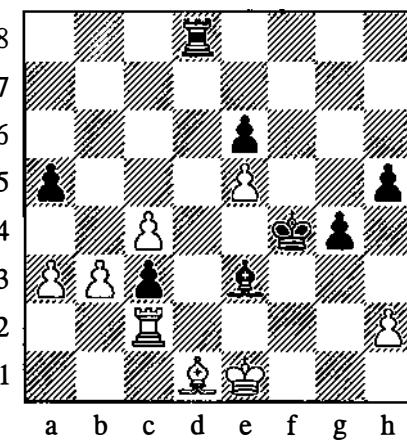
We have passed the time control and the win is a matter of technique. Luckily, I had studied endgames with opposite-coloured bishops and found the ensuing conversion quite effortless.

41.♗g2 g4† 42.♗e2 ♗g6 43.♗e1 ♗c5

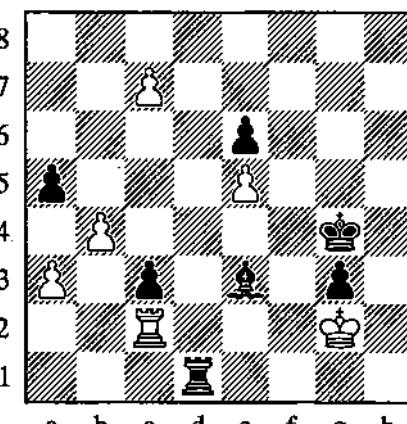
44.♗d1 ♗g5 45.♗c2

The d1-bishop is stone cold. Black's pieces move in...

45...♗e3 46.a3 f4 47.gxf4† ♗xf4



48.♗e2 ♗d2 49.b4 h4 50.c5 g3 51.hxg3† hxg3 52.♗f1 ♗h8 53.c6 ♗h1† 54.♗g2 ♗h2† 55.♗g1 ♗e3† 56.♗f1 ♗h1† 57.♗g2 ♗xd1 58.c7 ♗g4



0-1

Chapter 10

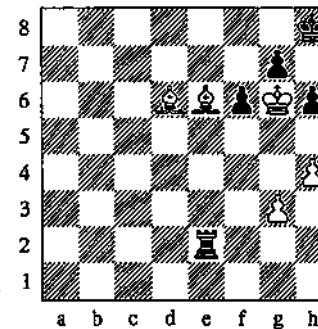
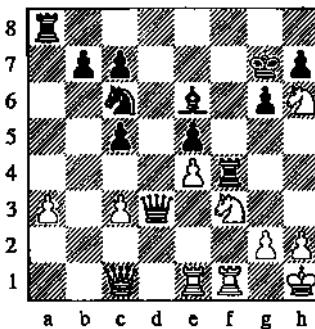
Strategic Concepts



As it says on the T-shirt...

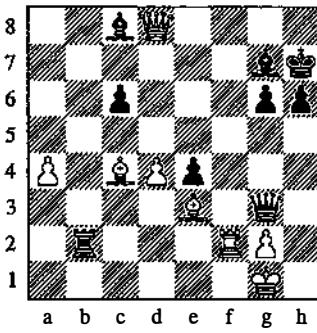
Test yourself against the book

This book is not an exercise book, but an experienced trainer can always find interesting moments in games that can be more effective for the student if he thinks about them first. On this page, I have included a few positions from this chapter that you can look at, should you feel so inclined. As long as it does not make you put off reading the chapter!

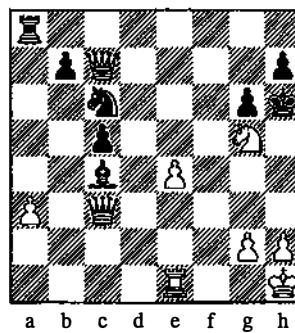


Can White create counterplay?
(see page 246)

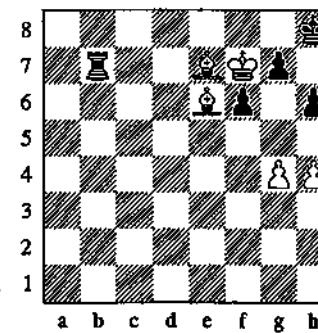
White to play and win
(see page 253)



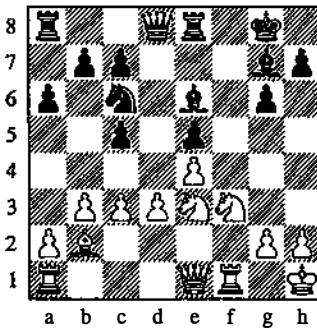
Black to play and win
(see pages 242/4)



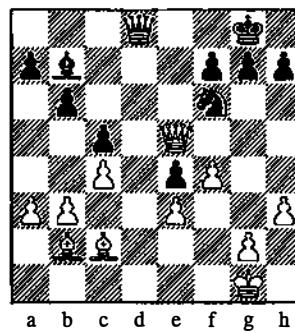
White can still save himself.
How?
(see page 247)



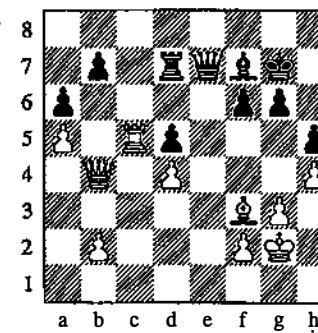
How did Black save the game?
(see page 255)



A good move for Black?
(see page 244)



How can Black fight for a draw?
(see page 251)



How can White play
for an advantage?
(see page 259)

When I wrote *Excelling at Chess* more than fifteen years ago, I challenged a modern point of view, which is that chess is best played with a mix of *intuition, calculation and opening preparation*. It was popular to renounce the idea of “rules” in chess and to find examples that contradicted the greatest players from a century ago and exposed their caveman attitude to chess, which had no place in the sophisticated and avant-garde 21st century. I was rather naive at the time and believed that I had engaged in a good-faith discussion on chess ideas. I was soon having my character attacked, and friends were telling me that it had been unnecessary to start this fight. It was a bleak experience from which a lot can be learned about fragile egos and some people’s lack of civility. In chess terms, I only learned one thing from this whole debacle, which is that the word “rules” is very confusing to a lot of people.

A beginner might make the mistake of thinking that a “rule” in chess is something that is always relevant. As we shall discuss below, this is not the case.

At the time, I tried to solve the issue by arguing that we intuitively operate with a hierarchy of rules, where (an unwritten rule like) “mate wins the game” is a more important rule than “the rook belongs behind the passed pawn”, to summarize an old Tarrasch story.

To have a lot of floating concepts is not a problem for me (I feel my way), but again, some people reject it, because you cannot keep them all clearly visible in your head.

And the purists argue that because it was not specifically written down in a manual out of print for at least 75 years and only spoken about in Chinese whispers, it cannot be classified as a rule.

At some point, I realized that the problem is the language. Some people are not able to change the mindset from the idea that a “rule” is something you implement instead of thinking, rather than something that can help you in your thought process. To explain this fully, let us make a quick diversion and divide chess up into five ages:

Early developments: Before serious tournaments. Think Ruy Lopez, Philidor and correspondence matches.

Romantic period: Starting with Paul Morphy, although he was not strictly speaking a romantic, but he came along at the same time as the first big tournaments. Games were decided by the brilliance of the players.

Classical period: Chess is a draw! Steinitz comes along with a lot of theoretical ideas about chess and plays like a madman. He is followed by Tarrasch, Lasker and Capablanca, all players who would use the word “rule” frequently. The period is marked by the death of Nimzowitsch in 1935.

Modern period: Starts with Botvinnik sharing first place with Capablanca in Nottingham 1936. It was the first top tournament a Soviet player won outside the Soviet Union, ushering in an age of Soviet dominance in chess. The trademark is opening analysis and an exploitation of the dynamic possibilities (no doubt inspired by the zeitgeist that included the defining of quantum physics and artistic exploration of form). Knowledge becomes more and more important. The end of this age is a blurred phase. It could be with the 10th match game in New York 1995, where Kasparov found an idea and then let the computer work out the details while he played blitz with Kramnik.

Or it could be when Kasparov lost to Deep Blue in 1997. Or when FIDE held its first Knock-Out World Championship with rapid and blitz finishes in Groningen 1997 (Anand won and then lost a joke match to Karpov a few days later).

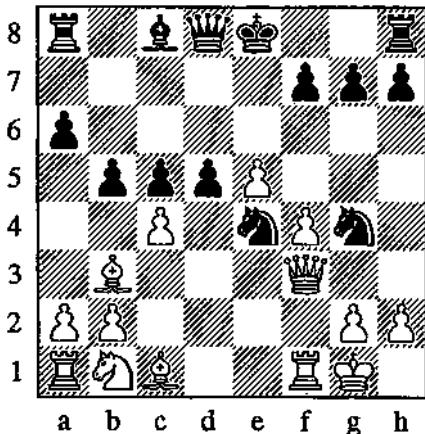
The digital period: Computers are stronger than man and are used extensively in opening preparation, in endgames via tablebases, and to analyse games. Cheating becomes a concern, but the main feature in the early part of this age is the expansion of what is possible especially in, but not limited to, defence. In the later part of this period we have seen a sterilization of opening play, with avoiding opening theory to simply get an interesting position becoming a topic for all top players to think about.

The last period definitely started for me in 1997, when I played a computer novelty for the first time.

Jacob Aagaard – John Emms

London 1997

1.e4 e5 2.Qf3 Qc6 3.Qb5 a6 4.Qa4 Qf6
 5.0–0 Qc5 6.Qxe5 Qxe5 7.d4 b5 8.Qb3
 Qxd4 9.Qxd4 d6 10.f4 c5 11.Qc3 Qeg4
 12.e5 Qe4 13.Qf3 d5 14.c4



I had studied this together with GM Peter Heine Nielsen for use in his games, as Black. My job had been to see if Adams' recommendation in *Chess Informant* was working.

14...Qxh2!?

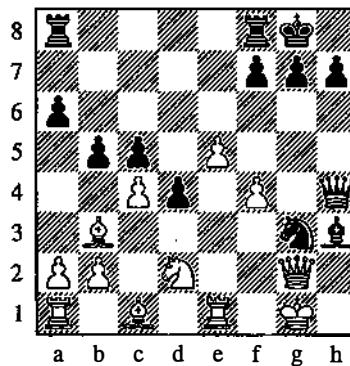
When Adams had this position on the board, he had played: 14...bx_c4?!. After 15.Qa4† Qf8 16.Qc6 Qb8 17.Qc3 Qxc3 18.bxc3 his position was highly dubious. He won the game when his opponent blundered horribly six moves later in Sion Castro – Adams, Leon 1995.

15.Qxh2 Wh4† 16.Qg1 Qg4 17.Qe3 Qg3
 18.Qe1 d4 19.Qd3 0–0 20.Qd2 Qf5

The engines are mad about some continuation such as 20...Qh5 21.Qf1 Qg3, either via h1 or h5. It does not really work. Here one correspondence game went: 22.Qf3 Wh1† 23.Qf2 Qxf1 24.Qxf1 Whxf1† 25.Qxf1± Pecotic – Lund, email 2011.

21.Qf3 Qg4

Another acrobatic attempt was: 21...Qh1!? 22.g3! Qxg3 23.Qg2 Qh3

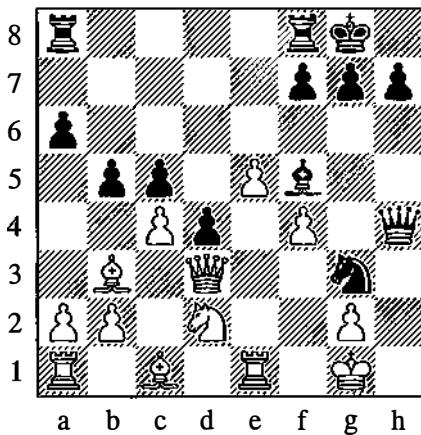


24.Wh2 f5 25.Qf2 Qh8 26.Qd1 Qg4 27.Qh2 Qh3 28.Qf3 g5 and Black had a lot of counterplay and eventually made a draw in Learte Pastor – Moreno Carretero, email 2008.

I suspect that 24.Qf2?N might be a refutation.

One line is 24...d3 25.Qe4 Qe2† 26.Qxe2 Kg4† 27.Qg3 and White will consolidate the position and win through the magic of the minor pieces.

22.Qd3 ♕f5



When analysing this position for Peter, the engine told me that I could avoid the draw. Looking at it for ten minutes was enough to realize that Black was not making an easy draw, but running quite a lot of risk. So we decided to abandon the line.

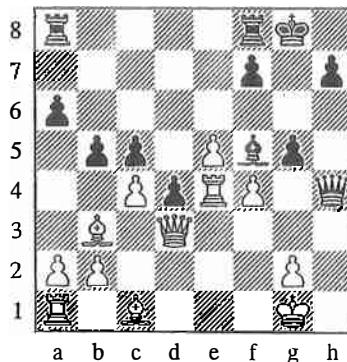
I was never well-prepared in the opening, so when I played this game, I drifted into this line, as I had at least a minimum of knowledge here... After the tournament, John praised the level of my preparation, which I found quite amusing!

23.Qe4!

I am not sure a grandmaster would miss this move in non-engine analysis today, but this is what happened when Adams and Emms analysed it together. White's advantage is material and Black's compensation is immaterial.

23...Qxe4

Analysing the game after the tournament, I came up with 23...Qxe4 24.Qxe4 g5 as an interesting try for Black.



It took me quite a while to work out that 25.Qd2 g4 26.g3! refutes it. It turns out that I am not the only one who worked this out, although I did not have electronic help! 26...Qxe4 27.Qxe4 Qxg3† 28.Qg2± Wilczek – Schuster, email 2008.

24.Qxe4 Wh1† 25.Qf2 Qxe4† 26.Qxe4 Qad8 27.Qe1

27.Qd3? was probably clearer, but from a practical point of view, there is little to complain about in the game. White has a winning position. Of course, a lot of difficulties remain and I was very nervous at some points. But the extra piece turned out to be very useful.

27...Wh4† 28.Qf1 Wh1† 29.Qf2 Wh4† 30.g3 Wh2† 31.Qf3 d3 32.Qd2 Qf8 33.Qf2 Wh6 34.Qg2 Qb6 35.Qc1 b4 36.Qa4 Qe6 37.Qe3 f6 38.Qxc5 Wa5 39.Qb3 Qh8 40.Qe3 fxe5 41.c5 Qf6 42.f5 Qdf8 43.g4 Qc7 44.Qd5 g6 45.Qg5 gxh5 46.Qxf6† Qxf6 47.gxf5 Qd8 48.Qe4 Qh6 49.Qg3 Qd4 50.Qxd3 Qxb2† 51.Qc2
1–0

Summing up on this historical perspective, I would say that chess has gone through five ages, where the main features were: *discovery, imagination, philosophy, research and assistance management*.

What I want you to take away from this is that the five ages are sequential and map rather well how a lot of the top players of our age learned to play chess. And they always did. Chess developed and top competitors learned a lot from each other. Fischer shocked the Soviets when he held a bishop ending without pausing for thought in 1960. Nowadays there are thousands of aspiring young players memorizing endings from *Dvoretsky's Endgame Manual*, although not always with the same recall as the American World Champion.

In the same way, it is a misunderstanding of what Tarrasch, Capablanca, Lasker and so on were talking about, to think that they were replacing intelligence with rules. But rather than taking on that fight, let's talk about something meaningful.

What is a strategic concept?

A strategic concept is a recurring strategy that often works in various situations and for this reason is worth knowing about. Quite a lot of them were developed and formulated in the Classical Period, although plenty have come forward since then (especially the books by Mark Dvoretsky are full of these sorts of observations). They are simply put:

Standard reactions to commonly recurring situations

Getting away from the rule mentality, there is no determination linked to this kind of thinking. There is no certainty. Chess is far too complicated for that. It is after all a mathematical game of combinatorics. All strategy is a human interpretation of what we see on the board. As computers are increasing in hardware power, the programmers are removing more and more parameters from their evaluation models. Humans can increase their abilities of course, but we cannot do it to the same degree as machines. Famously, Charles Hertan wrote in *Forcing Chess Moves* that after Michael Adams lost the match 5½–½ to Hydra, the debate on whether tactics or strategy was more important had been decided once and for all, and that because of the machine's crushing victory and its reliance on brute force calculation, tactics was king. What he omitted was a clear path to get to calculating (and remembering) two million moves per second in a structured and reliable way. Without such a path being described to us, I think we will do well to rely on the sort of strategizing humans do well, but computers cannot yet do.

The Purpose

Spare me from unannotated games! – Bent Larsen

A big part of playing chess is getting ideas. In some types of positions, we need to find tactical ideas. In others, there is not much to calculate; very few forcing moves may exist and they are clearly not working. Then what do we do? This is where positional play and strategy come into play.

What is often recommended is to play through lots of games by the great players of the past and learn from this (I strongly recommend doing this). But how are we learning from it? It is not by seeing various moves and somehow hoping that the magic will rub off, although I do sometimes feel that this is the underlying philosophy, if there is any, when this is recommended. However,

this is not why it works. It works because we are able to learn from the strategic considerations and decisions made in the games. Therefore, great annotations are more important than great players. An example of this is the three books written by Boris Gelfand so far. His first book, *My Most Memorable Games*, was great, as any grandmaster will tell you; really amazing games and great analysis of the relevant lines. But if you talk about the Gelfand books, everyone will refer to the two volumes published so far in the ...*Decision Making in Chess* series. What Boris and I were able to do in those books was to get into the essence of the positions and to explain how he made the decisions he did. Boris is one of the great players of our age, but not a natural teacher. It took the combination of an ignoramus like me who asked a lot of questions, and the patient answers and explanations from the Champ, to work out what was worth communicating to the readers. Some great players knew this instinctively, some did not. But all of them have written about chess in a way that reveals the way they think. And I do believe that will rub off.

A lot of people find the modern tradition of proving or disproving the correctness of decisions made in the game to be insufficient; and it is easy to understand why. What the readers are looking for is how the decisions were reached and how to replicate this process. The old masters understood this and for this reason they summarized the recurring patterns they observed. They called it rules, but some people mistook it for divine commandments, while something like – you guessed it – strategic concepts, is much more appropriate.

It is my belief that a development in chess ability includes what could be called chess culture. To acquaint yourself with the games of the past, the ideas and experiences the best players enjoyed. Although I do not believe that Lasker would be a top grandmaster today if the only update he had was a modern opening repertoire, I am certain that if he had been born at the same time as me, he would have been a top grandmaster for the last few decades. His brilliance and character would transcend time, whereas his limited knowledge of chess history would be a major obstacle.

In the same way, I believe that if a player enjoys dedication and imagination, a good knowledge of chess history and the various strategic ideas, if has learned to work methodically on his openings and games and has learned to get the most out of our electronic friend, he has the potential to become a strong grandmaster.

The purpose of learning strategic concepts is to become a complete player. You can be a very imaginative and well-prepared player, with a great sense for the dynamics of modern chess, but at the same time be close to helpless in positions where little is happening. Once upon a time that was me! In order to understand the game better, to become a grandmaster and to be a good trainer, I had to put clear words to everything I learned.

Static and dynamic features

The first thing to get a good grip on is to have a simple way of defining the various strategic aspects of the position. I am of the opinion that you cannot truly understand an abstract concept if you do not have a precise language for it. I do not think it is important which conceptual system you are using, what is important is that it feels natural to you and you know exactly what it means. I have seen other ways of talking about these things than the language I will present here, but they were never really working for me and for this reason I will not comment on them. Play to your strengths!

The two most basic aspects of a position are the following:

Static features/advantages: These features are the ones that have a long-lasting impact on the position. It can be a weak pawn or other weaknesses in the pawn structure, a permanently insecure king, the power of a strong knight on a secure outpost and so on. And, just as importantly, it can be extra material.

Dynamic features/advantages: These are all based on time and have a tendency to disappear very quickly. The most basic form is the capture. If you don't take a piece, you might not get another chance! This is why the first thing I teach beginners is to *always take back*, which is good advice even if desperately oversimplified.

More advanced aspects are things such as tactical opportunities, the possibilities of attacking an under-protected king and a lead in development.

Two of the most famous strategic concepts come from these two aspects. Steinitz said: *When you have an advantage, you are obliged to attack; otherwise you are endangered to lose the advantage.*

This made perfect sense in the 1880s. Chess was not long out of the romantic age, when Steinitz was the World Champion and formulated his rules. Most of his opponents were romantics! An advantage at that point was almost always dynamic in shape.

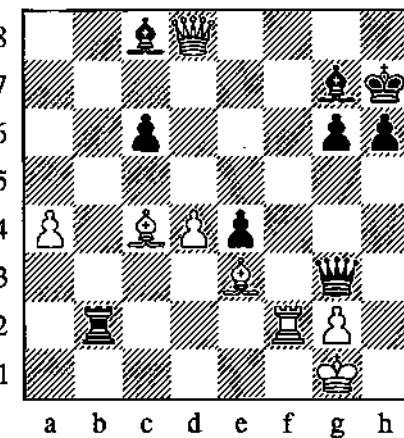
Along came Rubinstein and his technical mastery, which is studied to this day. (Boris Gelfand talked a lot about his love of Rubinstein's games in *Positional Decision Making in Chess*.) He is often attributed with the strategic concept of *Do not hurry!* as a method of exploiting an advantage.

This is an obvious contradiction to the previous concept, but only if you think in "rules". If you think of them as strategic concepts, you will have no problem seeing that one general strategy works well in one type of position, while it does not apply to others.

Let's discuss the dynamic and static aspects of a few examples:

Zhou Weiqi – Liu Guanchu

China 2015



Black to play and win

This game is from the incredibly strong Chinese league, where lower-rated players are not necessarily much weaker players. Many times have I heard the warning "do not play in China" from grandmasters who lost both the will to live and lots of rating points there! In this game, Black has achieved a winning position on the verge of the time control, despite being outgunned by more than 250 elo-points.

Black clearly has an advantage. His rook on the second rank is very active and his queen is situated in a dangerous place, threatening the white king and the bishop on e3 equally. But

White has counterplay; currently mate in one is threatened. Talk about a dynamic feature!

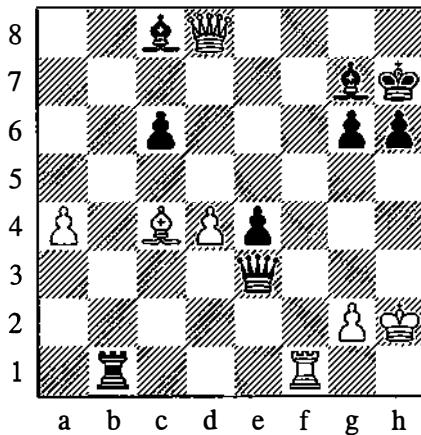
37... $\mathbb{B}b1\#?$

This is a very natural move and I suspect the result of time pressure. We shall see below how Black could have played better.

38. $\mathbb{B}f1!$

If Black was very short of time, he might have had a delusion at this point, thinking that White could not let the bishop on e3 go with check, without checking it further. If so, he might have expected 38. $\mathbb{B}f1$, when Black is totally winning after 38... $\mathbb{W}xe3$.

38... $\mathbb{W}xe3\#$ 39. $\mathbb{Q}h2$



Something I will not talk too much about, because it is not a very complicated thing if you stop to think about it, is the transformation of advantages. Here we have a very simple version. White is threatening mate in one move, which is most certainly a dynamic advantage.

39...h5

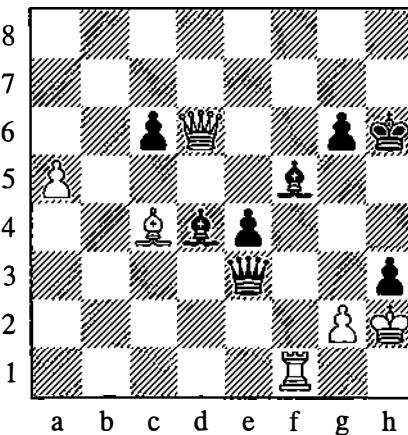
Black has to avoid mate and now White is able to cash in on his dynamic advantage in the most direct way:

40. $\mathbb{B}xb1$

White has won the exchange, but there are a lot of other features in the position. Black has a very strong presence on the dark squares, especially around the white king. There is no easy way to fix this, making it a static feature. Sure, if the queens were exchanged, the importance of this feature would dramatically change, but static only means long-term, it does not mean eternal. Nothing is infinite, except for time, space and man's stupidity – and the infinity of space and time are still contested in science occasionally.

There are other features in the position; the passed a-pawn for example. It would take too long to list them all and it would negate the idea of using summarizing language, which is to replace the territory with the map.

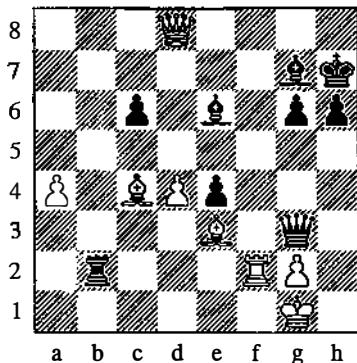
40... $\mathbb{Q}f5$ 41. $\mathbb{B}f1$ $\mathbb{Q}xd4$ 42. $\mathbb{W}e7\#$ $\mathbb{Q}h6$
43. $\mathbb{W}d6$ h4 44.a5 h3!



Having passed move 40, Black has enough time to calculate the tactics accurately. The move played was not a strictly necessary shot, but it is hard to imagine that Black would win this game, so securing a draw makes perfect sense.

45. $\mathbb{B}xf5$ hxg2 46. $\mathbb{Q}xg2$ $\mathbb{W}g1\#$ 47. $\mathbb{Q}h3$ $\mathbb{W}h1\#$
48. $\mathbb{Q}g3$ $\mathbb{W}g1\#$ 49. $\mathbb{Q}h3$ $\mathbb{W}h1\#$ 50. $\mathbb{Q}g3$
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Black missed the chance to eliminate his opponent's threats by highly dynamic play:
37... $\mathbb{Q}e6!!$

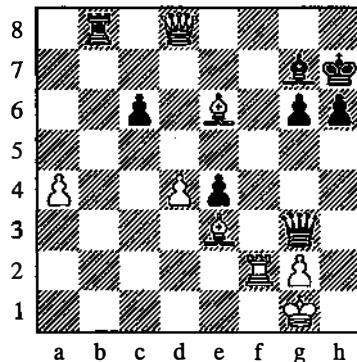


The bishop has no function on c8 and is thus thrown away to divert the white bishop from its double role on c4.

38. $\mathbb{Q}xe6$

White has to accept the sacrifice. It takes only moments to realize that 38. $\mathbb{B}xb2$ $\mathbb{W}xe3\#$ is all over.

38... $\mathbb{B}b8!$



The key point. Black defends against the threat of mate without losing time. White now has a lot of ways to lose the game.

If he moves the queen away from the 8th rank, Black will play 39... $\mathbb{B}b1\#$ and win the game immediately. And against 39. $\mathbb{Q}f4$, the simple 39... $\mathbb{W}xf2\#$ wins.

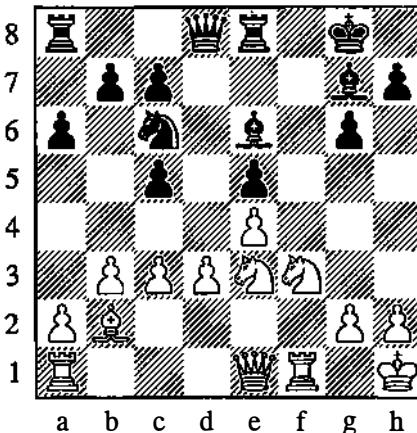
The following example shows a much more lively interplay between dynamic and static

features. At the outset, Black has a good position. The doubled pawn is not a liability, as it helps limit White's potential pawn levers and leaves the d-file open for the application of pressure against the weak pawn on d3. On top of this he has the bishop pair.

So Black has the more pleasant position, but we should not ignore that the bishop on g7 is somewhat ineffective at the moment and that White's position is not entirely without potential. After all, the dark squares around the black king could become weak later on, opening for the invasion of a Trojan horse.

Luke McShane – Magnus Carlsen

Moscow 2012



Luke McShane was invited to the 4th edition of the Tal Memorial tournament after winning an online poll. Despite being an amateur, he fared well in the company of the strongest players in the world, winning three games and losing four. I think the public's choice of inviting McShane was a sensible one, with his seven decisive games.

Magnus Carlsen had not participated in the recently finished cycle for the World Championship due to his dislike for the format of the Candidates tournament, but was already considered the strongest player in the world by

just about everyone. He won this edition of the Tal Memorial by winning this game and a game against Radjabov.

In this position White is suffering a little from the lack of a light-coloured bishop, but we should notice that it would not be good to play 21... $\mathbb{W}xd3?$, on account of 22. $\mathbb{E}d1 \mathbb{W}b5$ 23. $\mathbb{Q}g5!$ when White has a strong initiative and the queen would be very poorly placed on b5.

Instead Black activates his worst placed piece, the rook on a8; and puts more pressure on the light squares.

21...a5!

White cannot prevent ...a5-a4, when he will need to make some kind of involuntary concession on the queenside. The big question is which one.

22. $\mathbb{E}d1?$

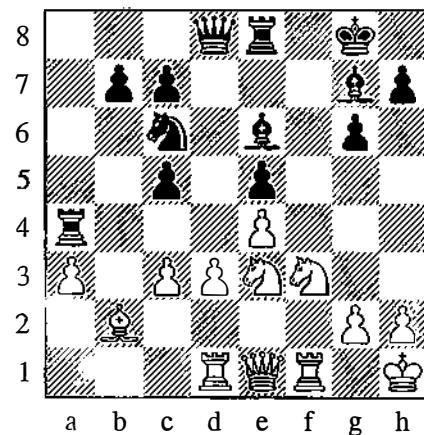
This is too big a concession. McShane should have fought for the light squares with 22.c4! a4 23. $\mathbb{Q}d5$, where he would remain worse, but nothing that cannot be managed.

22...a4 23.bxa4

It was still worth considering 23.c4!? axb3 24.axb3, although with 24... $\mathbb{E}a2$ Black has achieved more than he would have in the variation with 22.c4.

23... $\mathbb{E}xa4$ 24.a3?

White has not lost material on the queenside (yet), but all of his three pawns there are weak now and the bishop on b2 is incredibly ugly. McShane obviously planned to bring it into the game via c1, but this only leaves the pawns more vulnerable. All these are long-term issues that only will matter if Black is not mated; but this happens to be very unlikely.



So, the remainder of the game is about containment. Black has managed to get a static advantage. All he has to do is prevent White from making anything of his position's dynamic potential and he will win the game. This is far from as trivial as it sounds and McShane does not intend to lie down and die without offering resistance.

24... $\mathbb{E}f8$ 25. $\mathbb{Q}c1$ $\mathbb{E}a8$ 26. $\mathbb{W}g3$

McShane continues to dream of an attack on the kingside, but the absence of weaknesses that can easily be attacked makes this an objectively doomed endeavour. But what is the alternative? Sit passively and wait? In some positions this is certainly possible, but here White's position is full of weaknesses and Black has the two bishops. There is no such thing as a safe path.

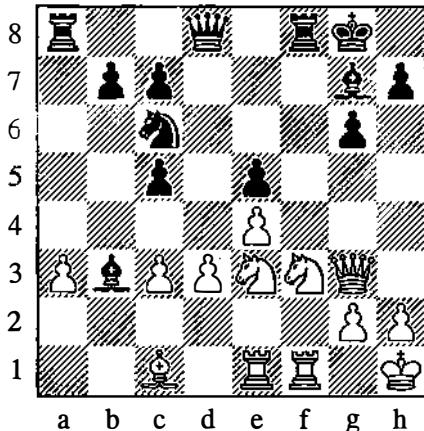
26... $\mathbb{Q}b3!$

Exploiting the weakness of the light squares once again.

27. $\mathbb{E}de1!!$

This pawn sacrifice is doomed to fail, objectively, but is a worthwhile chance at this point. And you can easily see McShane's thinking. With the bishop on b3, he will be able to play $\mathbb{Q}g4$, starting the invasion on the dark squares.

The engine says that 27.♗d2 ♖h6 28.♕e1 was necessary, but I seriously doubt such a passive strategy in a position with lots of weaknesses would have been successful against Magnus Carlsen. Besides, this was hardly the intention behind 26.♗g3.

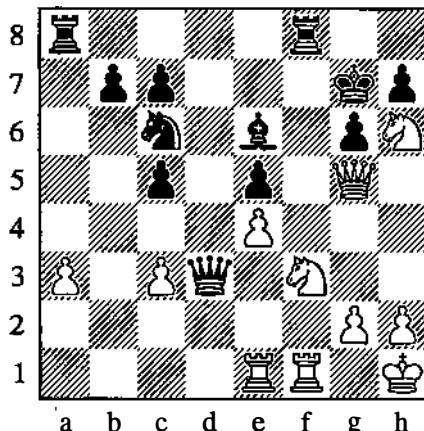


27...♗xd3!

Seeing no drawbacks to it, Carlsen decides that being a pawn up is a very attractive proposition. White will be able to generate some counterplay, but nothing too scary.

28.♗g4 ♖e6 29.♗h6† ♖h8 30.♕h4 ♖f6
31.♗g5 ♖xg5 32.♕xg5 ♖g7

32...♗xc3 is a playable move, but there is no way Carlsen would waste a tempo that could be spent defending his king's position. If it is not mate, Black wins, so the main focus is entirely on eliminating counterplay.



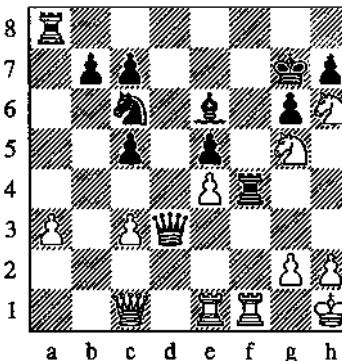
33.♗c1 ♖f4?

But this is a tactical mistake, allowing White to generate some counterplay.

Something like 33...♗d7 was stronger. The queen goes to e7 and the bishop to c4. White's counterplay will eventually fizzle out.

34.♗d1?

McShane misses his one chance to create mayhem: 34.♗g5!



This is not just a direct threat against the bishop, it also releases the stored-up energy in the white pieces.

First of all, we should notice that 34...♗xf1†?! 35.♗xf1 ♖c4?? 36.♗d1! would lead to a winning attack.

A much more important variation is the following:

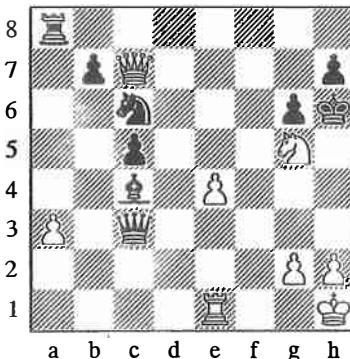
34.♗c4 35.♗xf4 exf4 36.♗xf4!

After the plausible 36.♗g4 h5 37.♗xf4 hxg4 38.♗xc7† ♖h6 39.♗f4 ♖d7 40.♗e6† ♖h7 41.♗f8† ♖xf8 42.♗xf8 ♖e5 Black still has the advantage, though White can resist and there is quite a big chance for Black to go wrong as well...

36...♗xc3 37.♗xc7†! ♖xh6

One piece has been sacrificed and already it seems the white attack has run into a dead end. But a really beautiful tactic, making use

of the currently inactive and endangered rook in the style of Japanese fighter planes towards the end of World War II, saves the day.



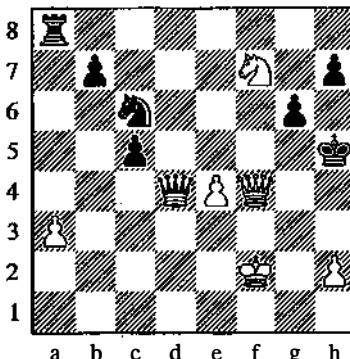
38.♕f1!! ♜xf1

This is not forced, but White has enough counterplay in any case with, for example, ♜f4 coming. Also h2-h4 and in some cases ♜f7† followed by ♜f4† are valuable resources.

39.♗f7† ♜h5 40.♗f4

Black can try to get some use out of his extra material:

40...♜xg2† 41.♗xg2 ♜c2† 42.♗g1 ♜d1†
43.♗f2 ♜d4†

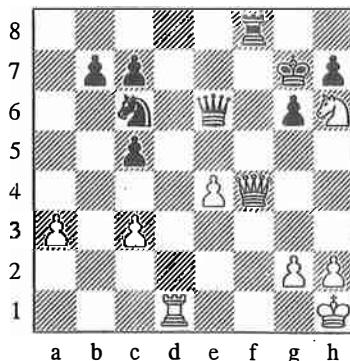


44.♗f1

But astonishingly, Black has nothing more than a perpetual check...

Because of this, it is possible that Carlsen would have preferred 34...♜d6! with the continuation: 35.♗xf4 exf4 36.♗d1 ♜e5

37.♗xe6† ♜xe6 38.♗xf4 ♜f8†

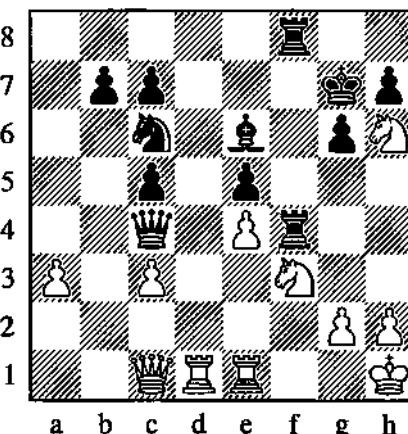


The position is still better for Black because of his superior pawn structure. Carlsen plays this type of technical position better than anyone in history, and for this reason relies a lot on them when making decisions over the board.

34...♜c4

Black is back in control and this time he is not letting go.

35.♗fe1 ♜af8



The intention behind the 33rd move. Black has consolidated his advantage and soon won.

36.♗g5 ♜c8 37.g3 ♜f2 38.♗f5† gxg5
39.♗h3 ♜e2 40.♗g5† ♜h8
0-1

I am certain that I will one day write a book about strategic concepts, giving examples of lots of them and their usefulness. But what I want to achieve here is two-fold. I want to present the context in which I see strategic concepts, as done above, and give a few practical examples of how thinking in this direction can help improve your play.

Take the McShane – Carlsen game above. I am hoping that readers of this book will find no trouble in seeing that White was struggling on the light squares to start with, and that the split pawns on the queenside soon left him with the strategic difficulty of their defence. But I will not be surprised if some find this of little practical application. Back in 1997 I was already an IM, and in the closed GM-event in London where I played John Emms I had missed a chance to score a grandmaster norm by failing to make 50% in the final four games. I was presented by something similar to this and was totally blank.

So what happened in the game above was that White faced a choice of defending a position passively, where he was always going to be worse because his weaknesses were structural and therefore static in nature. McShane did not believe that this was going to work out, so he sacrificed a pawn to create counterplay. At a point where he was probably running out of time, he did have a chance to make a mess of it all, but missed it and went down. In his defence, we should state that the drawing combination is truly outlandish. While perhaps easy to explain, it would have been impossible to find in time trouble, with the surprising fact that Black is unable to do any damage with all his extra material.

Neither Carlsen nor McShane would have felt that they were following basic strategic concepts consciously, but if you were to ask them to explain the path of the game, they would no doubt have used words such as *weaknesses*, *two bishops* and not least *counterplay*, which is the description of using dynamics from a position of potential or actual inferiority.

You will find that this is the way strong players think. They do not think in computer evaluations, even if they may occasionally press the spacebar and write something inspired by the engine. But they (hopefully) don't have it available during the game, so they use their intuition, their logic and their trained ability to calculate deeply and accurately.

I always implore my students to pay attention to recurring patterns, typical reactions to typical scenarios, the strategic concepts. The reason for this is that understanding them truly, why they matter and how they matter, is what is useful for the top players. A grandmaster would never follow a rule blindly, but he would recognize a lot of patterns automatically and include them in his decision making; most of the time subconsciously, but at times consciously as well. Some more than others, of course; but they all do it. Their language gives it away.

Static or Dynamic?

One of the reasons why some writers have found the idea of strategic concepts unpalatable is not only the word “rules”, but also the fact that chess has changed a lot since the classical period, where most of the writing traditionally associated with “rules” is from. There are a few differences between the classical and the modern age.

One is that the annotation of games moved with the thinking of the times, from the abstract to the concrete. Where once a player would prepare based on his feeling for the position, he would

now analyse his openings deeply and memorize lines. It was inevitable that this line of thinking would spill over into the annotation of the games afterwards for books and magazines. Rather than explaining how a decision was made, the player would prove that his decision was correct by giving variations. This tradition lives on to this day and to some extent even more strongly, as the computers will provide lines that go on and on as long as you press the space bar. Obviously, these annotations don't teach you anything if you do not have a framework with which to understand them, be it intuitively or consciously; or both.

Another reason is that first Botvinnik and Keres, then Spassky and Tal, and later again Kasparov introduced and reintroduced dynamics into the game, each time making it more complicated. Many factors were suddenly in play at the same time and it becomes too difficult to blame everything on one or two of them. Besides, we all know about these things already, right?

Well, I shall talk about dynamics in the next chapter. For now, let's have a look at a basic strategic concept in some depth.

Pawns cannot move backwards

This sounds like something you would say to a beginner, but it is just a humorous way to say that *every pawn move will weaken the control over the squares it was previously guarding, as well as bringing it closer to the opponent's forces, potentially making it a hook for him to hang his attack on*. I know... the poetry of it is wasted on the unappreciative masses.

Being able to quickly assess and understand the long-term ramifications of moving a pawn forwards is not an easy thing to acquire at all; especially for dynamically-inclined players. This is one of the reasons why it is an important subject to study.

Take the following game:

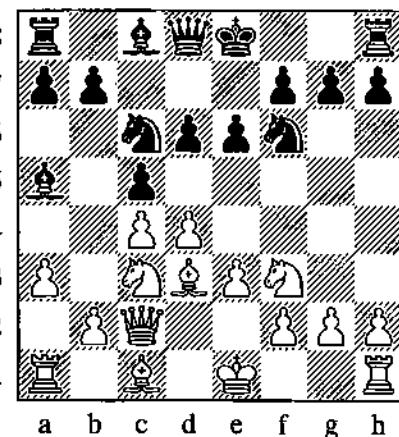
Bent Larsen – Florian Gheorghiu

Winnipeg 1967

1.c4 $\mathbb{Q}f6$ 2. $\mathbb{Q}c3$ e6 3. $\mathbb{Q}f3$ $\mathbb{B}b4$ 4. $\mathbb{W}c2$ c5
5.a3 $\mathbb{Q}a5$ 6.e3 $\mathbb{Q}c6$

Black's set-up in the game does not feel right. I personally prefer 6...0–0 7.d4 b6, as for example Tal played.

7.d4 d6 8. $\mathbb{Q}d3$



This is the key point of interest for us. Black should play 8...0–0 and keep things flexible. There is no real reason not to.

8...e5?!

This is the sort of insensitivity I am talking about. On first inspection, it might seem that Black is simply opening a path for the bishop on c8. This is the short-term effect indeed. But the long-term effect is a weakening of the f5-square and in that connection also the e4-square – and most importantly, the d5-square.

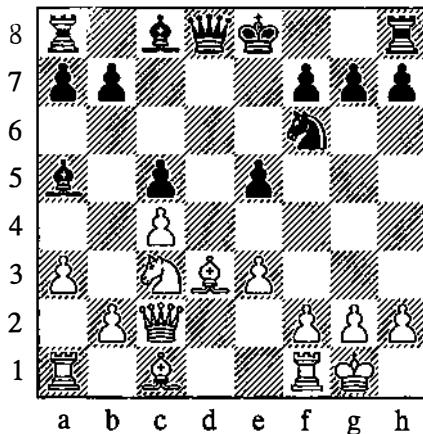
9.dxe5 $\mathbb{Q}xe5$?!

I do not like this decision, but have to admit that 9...dxe5 10. $\mathbb{Q}d2$! is unpleasant for Black as well. For example: 10... $\mathbb{Q}g4$

11. $\mathbb{Q}g5$ $\mathbb{W}d7$ 12. $\mathbb{Q}ge4$ $\mathbb{Q}xe4$ 13. $\mathbb{Q}xe4$ and we can see how White has managed to make Black's life unpleasant on the light squares. Soon comes f2-f3 and $\mathbb{Q}d1$ or maybe even queenside castling?

10. $\mathbb{Q}xe5$ $dxe5$ 11.0–0

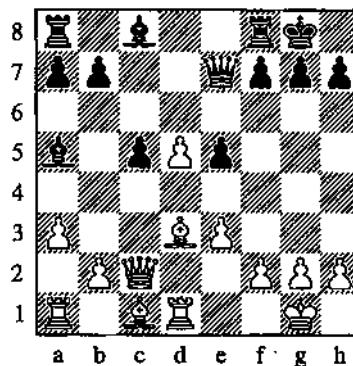
Possibly 11.b4! is even stronger. There is a small tactical point: 11... $cx b4$ 12. $axb4$ $\mathbb{Q}xb4$? 13. $\mathbb{W}a4\#$ $\mathbb{W}d7$ 14. $\mathbb{W}xb4$ $\mathbb{W}xd3$ 15. $\mathbb{Q}a3$ and White has a decisive attack. But the position in the game is also unpleasant for Black.



11... $\mathbb{Q}xc3$

Black must have felt this was necessary.

The position after 11...0–0 12. $\mathbb{Q}d1$ $\mathbb{W}e7$ 13. $\mathbb{Q}d5$ $\mathbb{Q}xd5$ 14. $cxd5$ looks very unattractive too.



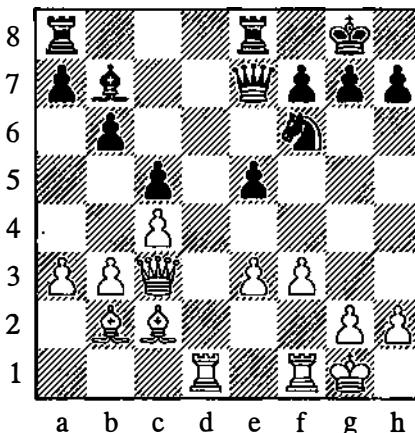
White has a strong passed pawn that will tie down the black pieces, while Black has no activity and no weaknesses to create counterplay against.

12. $\mathbb{W}xc3$

We can see that the earlier exchange of knights was convenient for White, as ... $e4$ would otherwise have been a double attack.

12...0–0 13. $b3$ $\mathbb{E}e8$ 14. $\mathbb{Q}b2$ $b6$ 15. $\mathbb{Q}ad1$ 15. $f4!$ looks like a strong alternative.

15... $\mathbb{W}e7$ 16. $\mathbb{Q}c2$ $\mathbb{Q}b7$ 17. $f3$



White is preparing to double rooks on the d-line. Black will find it hard to contest that file, as the e8-rook is currently consigned to defending the e-pawn. Black chooses instead to push the e-pawn, but this creates an entirely different type of problem, with White's dark-squared bishop becoming very powerful.

17... $e4$ 18. $f4!$

The bishop on b2 is very strong. Black's pieces are limited and the g7-square is weak. White has a free hand to expand all over the board, while Black has no targets and no activity to speak of.

18... $\mathbb{Q}ad8$ 19. $h3$

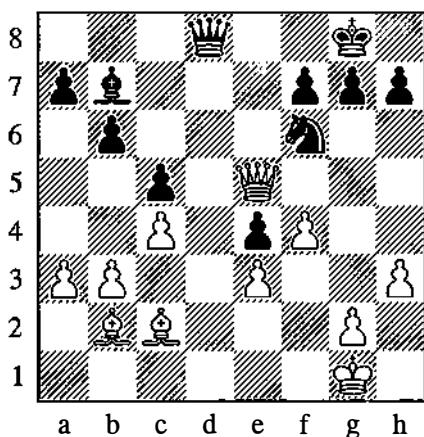
We are experiencing Rubinstein's dictum. Black has no counterplay, so White builds up his position slowly.

19...♝xd1

What else should Black do? He tries to relieve the pressure by getting rid of the rooks, but it does not make a lot of difference.

20.♝xd1 ♕d8 21.♝xd8† ♜xd8 22.♛e5

22.b4! looks a good deal stronger.



22...♞f8??

Black misses what is probably his last chance to offer real resistance.

The engine suggests the rearrangement of the knight with 22...♞e8!. Black wants to play ...f6 and ...♞d6. However, it involves a pawn sacrifice, with the idea that 23.♝xe4 ♜xe4 24.♛xe4 ♜d1† 25.♝h2 ♜f8± allows Black to unbalance the position in a way that gives him chances to save the game. White is better, but the narrative of the game has changed.

23.♝c3

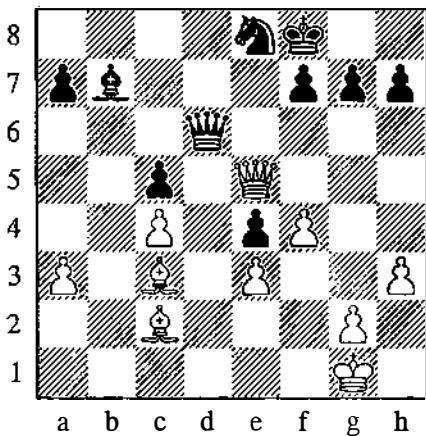
Taking control of the back rank.

23...♞e8 24.b4

White's advantage is consolidated. Larsen was very good with the two bishops (although he was even stronger when handling rooks and knights).

24...♛d6 25.bxc5 bxc5





26.♘a4! ♜xe5 27.♘xe5

The endgame is hopeless.

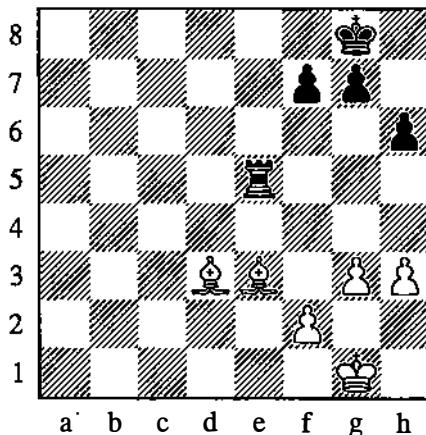
27...♝e7 28.♜b8 ♜f6 29.♝xa7 ♜d7 30.♝b5
♝d6 31.a4 ♜c6 32.a5 ♜c7 33.a6 h5 34.g4
h4 35.♝f2 f6 36.f5 ♜b6 37.♜xb6† ♜xb6
38.♝e2 ♜a8 39.♝d2 ♜a5 40.♝c3 ♜b6
41.♝b3 ♜a5 42.♝a3 ♜b6 43.♝a4

1–0

The nature of positional mistakes is that they become obvious – after the fact. The 20/20 glare of hindsight is a benefit to any chess annotator, so for this reason I want to point to a moment where I had an immediate bad feeling the moment I saw the player make the move.

Magnus Carlsen – Sergey Karjakin

New York, rapid play-off (2) 2016



Earlier, Karjakin's position was not worse in my opinion, but he made one pessimistic and passive decision after another, making concessions in order to exchange pieces, always keeping the position within the margins of what is defensible, eventually ending up in this ending (and being slightly lucky along the way).

Boris Gelfand was joking that this game would send our book *Positional Decision Making in Chess* on a rocket up the bestseller charts. The reason is that we briefly debated this ending in the book. I believed, logically, that White would not be able to attack any square more than twice and Black would always be able to defend it twice and for that reason, the endgame should be a draw. Boris has a more intuitive approach, based on being a practical player looking for progress, rather than a chess commentator looking to provide readers with clear-cut answers.

In the book, we gave a less clear-cut answer to reflect this disagreement and to vocalize our mutual insecurity about the evaluation. As we knew that both players had read the book, Boris believed that they had fallen on the two different sides of the fence, Karjakin on mine and Carlsen on his. Having analysed this game further, I believe the right position is on the fence. The endgame seems to be defensible, according to the logic above, but White can certainly make progress.

40...f6?

Anish Giri writes in *New in Chess*: “Watching the game together with Grandmaster L’Ami, we thought that this was a very decent set-up for Black. That said, now White has a clear path of getting his king to g6 and Carlsen manages to execute it.”

I am not sure anything explains better the value of *pawns cannot move backwards* than such an honest comment from one of the strongest grandmasters in the world.

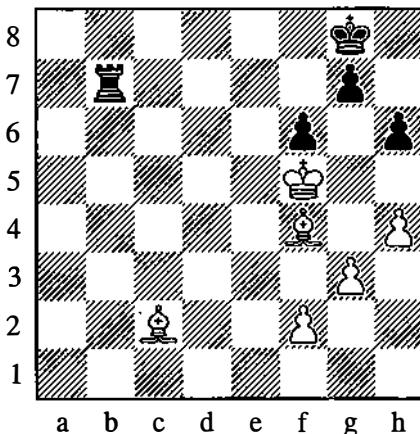
What I disliked about the move when Karjakin played it was that it seemed entirely unnecessary. White has not signalled how he is going to advance his pawns yet, so why make a decision this soon? Especially one that was so committal.

41.♔g2 ♔h8 42.♔f3 ♕d5 43.♔g6 ♕a5
 44.♔e4 ♕b5 45.h4 ♕e5† 46.♔d4 ♕a5
 47.♔c4 ♕e5 48.♔d4 ♕a5 49.♔c5 ♔g8
 50.♔d5 ♕b5 51.♔d6 ♕a5 52.♔e3 ♕e5
 53.♔f4 ♕a5 54.♔d3 ♕a7 55.♔e6 ♕b7
 56.♔f5 ♕d7?

It is possible that Black would still have been able to hang on to a draw with 56...♔h7, preventing the king coming to g6. Play could continue with 57.♔g4† ♔g8, when the idea is to play 58.♔h5 g5! 59.♔e3 ♔g7 and all hope is not lost – yet. White does not have to move the king to h5, but short term he has no way to force his way to g6. It looks very thin, but fortresses often do.

57.♔c2 ♕b7

57...♔h7 does not work at this point. White has 58.♔e6†, winning the rook.

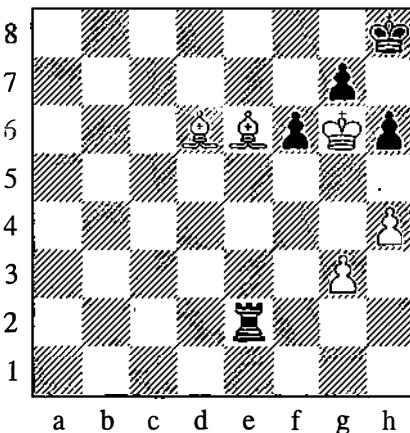


58.♔g6!

Carlsen correctly gives up the f2-pawn in order to get the king to g6. If g7 falls, all of Black's position falls. Obviously, it would

have been better to keep the f2-pawn as well, but the chance to bring the king to g6 came around very easily and might not do so again.

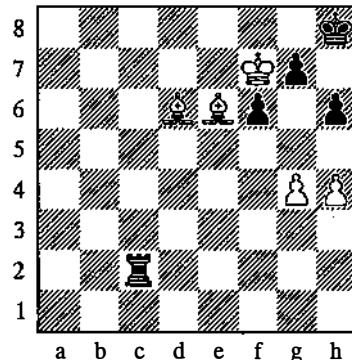
58...♕b2 59.♔f5 ♕xf2 60.♔e6† ♔h8 61.♔d6 ♕e2



62.♔g4?

Carlsen has achieved a prime position, but here he misses his first chance to win the game. I am sure that he felt that he had a chance here, but with the limited time available, he just did not come up with the winning idea: 62.♔f7! The key idea is to play ♔f8, and after being checked to return to g6 and only then play ♔f7, cutting off the rook from the defence of g7.

A plausible variation goes like this: 62...♕c2 63.g4

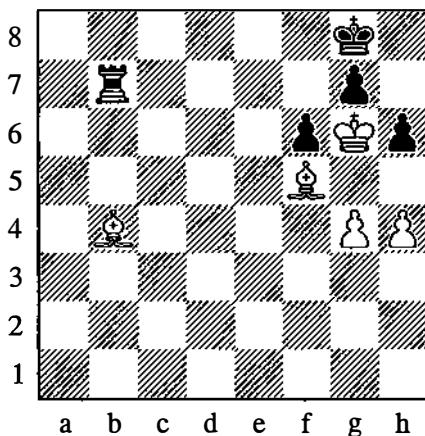


63... $\mathbb{E}c1$ 64. $\mathbb{Q}f8$ $\mathbb{E}c7\#$ 65. $\mathbb{Q}g6$ Black's position has become pretty desperate. He can try a desperado sacrifice with 65...f5? 66.gxf5 h5, with the intention of giving a check on the 6th rank. But after 67.f6! gxf6 68. $\mathbb{Q}f7$ the game is up. Black will have to resign.

Black can try throwing in 63...h5 64.gxh5 and then continue the waiting strategy, but it comes to the same result after 64... $\mathbb{E}c1$ 65.h6! gxh6 66. $\mathbb{Q}f8$ $\mathbb{E}c7\#$ 67. $\mathbb{Q}g6$ $\mathbb{E}h7$ 68.h5 and White wins.

62... $\mathbb{E}e8$ 63. $\mathbb{Q}f5$ $\mathbb{Q}g8$ 64. $\mathbb{Q}c2$ $\mathbb{E}e3$ 65. $\mathbb{Q}b1$ $\mathbb{Q}h8$ 66. $\mathbb{Q}f7$ $\mathbb{E}b3$ 67. $\mathbb{Q}e4$ $\mathbb{E}e3$ 68. $\mathbb{Q}f5$ $\mathbb{E}c3$ 69.g4 $\mathbb{E}c6$ 70. $\mathbb{Q}f8$ $\mathbb{E}c7\#$ 71. $\mathbb{Q}g6$ $\mathbb{Q}g8$ 72. $\mathbb{Q}b4$ $\mathbb{E}b7\#$

72... $\mathbb{E}c6$ looks like it is holding, but defending positions like this where every move is a possible misstep is gruelling.



73. $\mathbb{Q}d6?$

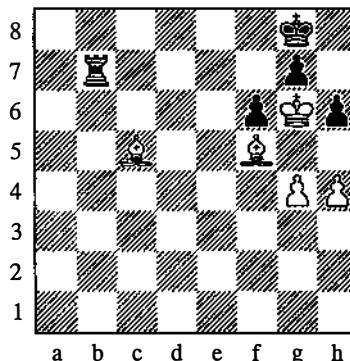
This will be the moment Carlsen was angry about after the game. It is not hard to see that 73. $\mathbb{Q}e6\#$ $\mathbb{Q}h8$ 74. $\mathbb{Q}f8!$ with $\mathbb{Q}f7$ coming is utterly decisive. And as before, White will meet 74...f5? 75.gxf5 h5 with 76.f6! gxf6 77. $\mathbb{Q}f7$, and the game is over.

73... $\mathbb{Q}h8$ 74. $\mathbb{Q}f8$ $\mathbb{Q}g8$

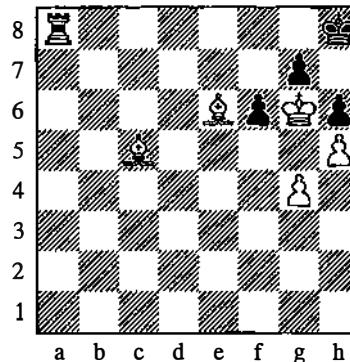
74... $\mathbb{E}a7$ 75. $\mathbb{Q}e6!$

75. $\mathbb{Q}a3?$

It proved impossible to find 75. $\mathbb{Q}c5!$ with very little time left on the clock.

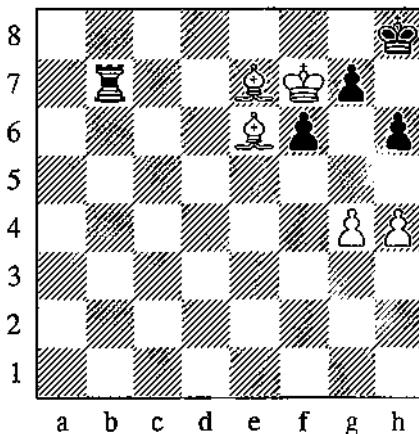


The point of the move is that Black cannot use b6 for the rook. A plausible continuation would be 75... $\mathbb{Q}h8$ 76. $\mathbb{Q}e6$ with the threat of $\mathbb{Q}f8$. Black would have to try and just wait: 76... $\mathbb{E}b8$ 77.h5 $\mathbb{E}a8$



78.g5! A nice breakthrough that wins in the long run if White is allowed to win the h-pawn. The game will be cut short if Black decides to test the idea with 78...hxg5?!, when the undermining continues: 79.h6! gxh6 80. $\mathbb{Q}e7!$ $\mathbb{Q}g8\#$ 81. $\mathbb{Q}xh6$ and Black is mated shortly.

75... $\mathbb{Q}h8$ 76. $\mathbb{Q}e6$ $\mathbb{E}b6$ 77. $\mathbb{Q}f7$ $\mathbb{E}b7\#$ 78. $\mathbb{Q}e7$



78...h5!

Karjakin forces the draw.

79.gxh5 f5 80.Qxf5 Qxe7† 81.Qxe7 Qg8
82.Qd3 Qh8 83.Qf8 g5 84.hxg6

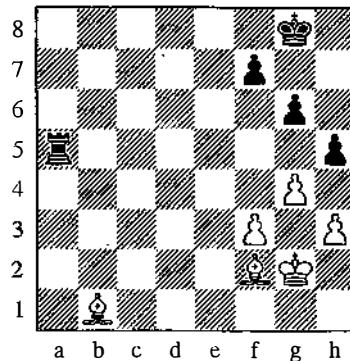
½–½

After the game Carlsen's chief trainer, grandmaster Peter Heine Nielsen, told him not to worry. He was outplaying his opponent and more chances would surely come. He won the final two games in the rapid play-off, winning the World Championship title for the third time.

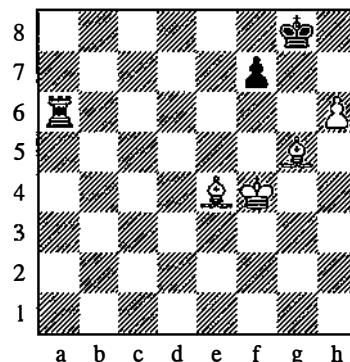
As you can see in my annotations, I am not certain that 40...f6? is a losing move. But this does not make the decision any better. A weakness is created in the black position without even an exchange of pawns.

What I was pondering was if the best defence would be to do nothing or to play ...g6 and ...h5, as is common practice in rook endings. My conclusion was that both defences should hold, but that waiting is probably the most convenient. But they tend to end up in the same place.

Let us have a look at this plausible diagram, where it is easy to imagine Black taking on g4 and White recapturing with the f-pawn.

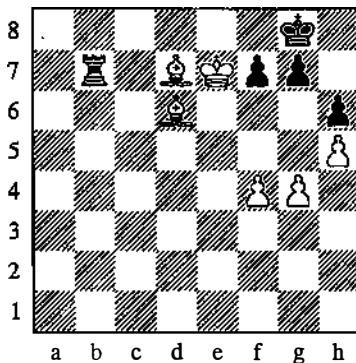


Let's imagine that Black is still waiting. White will try to advance the h-pawn and create a passed pawn. I am not saying that this will be easy to achieve, or is something Black should allow without resisting firmly, but let us imagine that it happens and White becomes reasonably coordinated.



This position is a fortress. White can win the pawn and the rook for the dark-squared bishop, after which we have a standard fortress. This is confirmed by a seven-man tablebase (thank you to Guy Haworth and Karsten Müller for checking this for me).

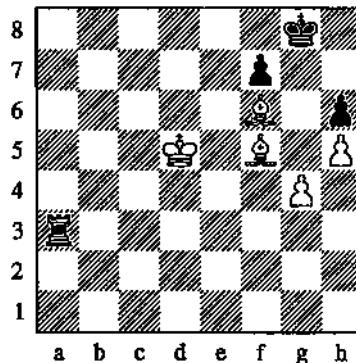
The other option is to remain entirely passive.



It is plausible to construct a set-up where White has a king on e8, bishop on e7 and the bishop is covering the a8-square, preventing the black rook from giving a lifesaving check there. But I cannot find a way for White to get there. If nothing else, the rook will harass the bishop on d5 long before, asking it to choose between covering a8 and attacking the f7-square.

Let us imagine that White makes sensible progress from this position by advancing the f-pawn to f6.

1. $\mathbb{Q}e5$ $\mathbb{R}a7$ 2. $\mathbb{Q}d4$ $\mathbb{R}b7$ 3. $\mathbb{Q}d6$ $\mathbb{R}b4$ 4. $\mathbb{Q}d5$ $\mathbb{R}b7$ 5. $\mathbb{Q}f5$ $\mathbb{R}b3$ 6. $\mathbb{Q}e4$ $\mathbb{R}b7$ 7. $f5$ $\mathbb{R}b3$ 8. $f6$ $gxf6$ 9. $\mathbb{Q}xf6$ $\mathbb{R}g3$ 10. $\mathbb{Q}f5$ $\mathbb{R}a3$



Black could have offered a lot more resistance, but allowing this best-case scenario is interesting, as it shows how difficult it is for White to make progress.

11. $\mathbb{Q}d4$

11. $\mathbb{Q}g5$ $\mathbb{R}a5\#$ 12. $\mathbb{Q}e4$ $\mathbb{R}a4\#$ 13. $\mathbb{Q}d3$ $\mathbb{R}h4$ and Black holds.
11... $\mathbb{R}a5\#$ 12. $\mathbb{Q}c5$ $\mathbb{R}a2$ 13. $\mathbb{Q}e3$ $\mathbb{Q}g7$ 14. $\mathbb{Q}d4\#$ $\mathbb{Q}g8$

White is not making progress. And even if he did, it would be to exchange the g-pawn for the h-pawn, and then we are back to our previous fortress.

It is plausible that someone smarter than I can find a plan for White in this endgame. In that case, there can always be a second edition...

Studying with Strategic Concepts

I want to finish this section by looking at a game from the second match for the World Championship played between arguably the two greatest World Champions in history. I chose this game because I did not know it and because I saw that Kasparov was debating some decisions regarding pawn moves in his book. By applying the thinking of *pawns cannot move backwards* and all that entails, I was able to understand the game much better than my normal dynamic sensitivity would have allowed.

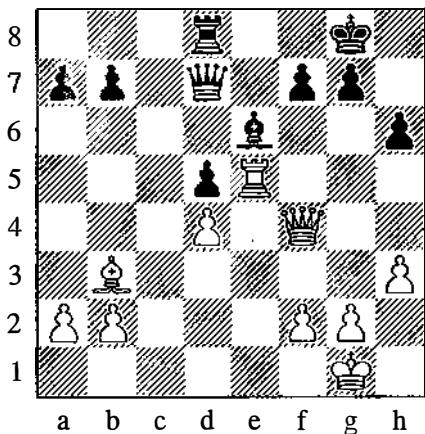
Garry Kasparov – Anatoly Karpov

Moscow (23) 1985

1. d4 d5 2. c4 e6 3. $\mathbb{Q}c3$ $\mathbb{Q}e7$ 4. $\mathbb{Q}f3$ $\mathbb{Q}f6$ 5. $\mathbb{Q}g5$ h6 6. $\mathbb{Q}xf6$ $\mathbb{Q}xf6$ 7. e3 0–0 8. $\mathbb{Q}c1$ c6 9. $\mathbb{Q}d3$ $\mathbb{Q}d7$ 10. 0–0 dx c 4 11. $\mathbb{Q}xc4$ e5 12. h3 exd4 13. exd4 $\mathbb{Q}b6$ 14. $\mathbb{Q}b3$ $\mathbb{Q}e8$ 15. $\mathbb{Q}e1$ $\mathbb{Q}f5$ 16. $\mathbb{Q}xe8\#$ $\mathbb{Q}xe8$ 17. $\mathbb{Q}d2$ $\mathbb{Q}d7$ 18. $\mathbb{Q}e1$ $\mathbb{Q}d8$ 19. $\mathbb{Q}f4$ $\mathbb{Q}d5$ 20. $\mathbb{Q}xd5$ cx d 5 21. $\mathbb{Q}e5$ $\mathbb{Q}xe5?$

21... $\mathbb{Q}e6$ was more flexible.

22. $\mathbb{Q}xe5$ $\mathbb{Q}e6$

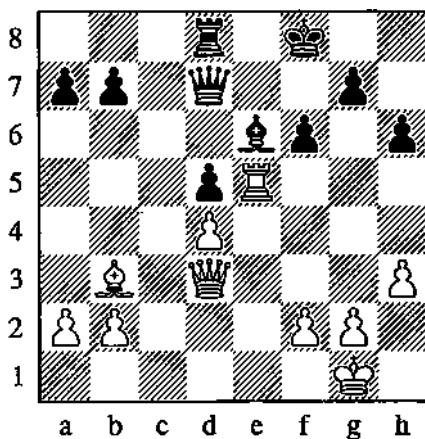


Black has played the opening pessimistically. He has taken on a passive position with a weak bishop and no activity. The middlegame will be all about whether White can create further weaknesses in the black position, or if Black will be able to either exchange pieces or use a moment of inaccuracy to create counterplay.

23.♕e3

The queen is going to d3. Black must deal with the possible invasion on h7. Karpov decides to make a concession that at least does not make his bishop worse.

23...♝f8 24.♕d3 f6!?



It is easy to understand why Karpov did not fancy putting all his pawns on the light squares. Long term, he would be in grave danger of landing in zugzwang in a bishop ending. And at the moment, an escape to a bishop ending is one of the strategies for Black to keep his position together.

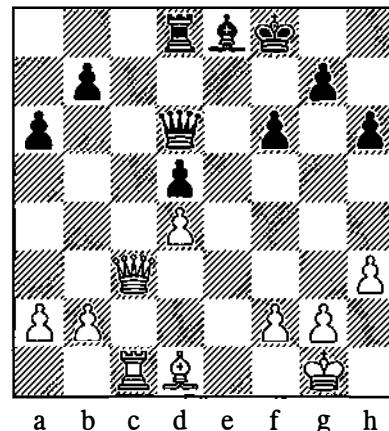
25.♗e1 ♛f7

Having provoked a concession on the kingside, Kasparov turns his attention to the queenside.

26.♘c3 ♘d6

Preventing the check on b4.

27.♗c1 ♛e8 28.♗d1 a6!?



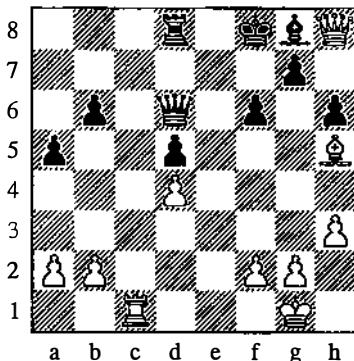
Kasparov does not like this move, with good reason. In many lines, Black wants to put the pawns on b6 and a5, but now this can be very hard to achieve, as after a later ...b6, the pawn on a6 will be hanging in many lines. We shall see some of those below.

29.♗f3 g6!?

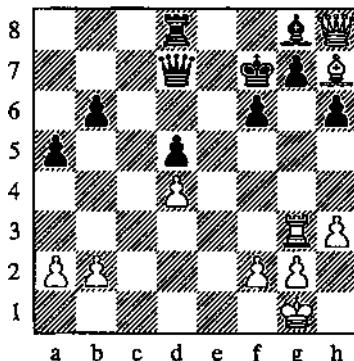
Kasparov gives an intuitively-based criticism of this move, but I am not convinced that it is a mistake. Karpov is creating a bit of air in front of the king in order to take control of the light squares on the kingside, while at the same time

keeping his pawns flexible. It is always difficult to make a move in an inferior position, but easy to argue against the path chosen.

One of the reasons why I think Karpov's choice has merit is the following variation: 29...b6 30. $\mathbb{W}d3$ a5 31. $\mathbb{W}h7$ $\mathbb{Q}f7$ 32. $\mathbb{W}h8\#$ $\mathbb{Q}g8$ 33. $\mathbb{Q}h5!$ ±



Followed by $\mathbb{Q}g6$ and later on g2-g3 and $\mathbb{Q}g2$. At some point $\mathbb{Q}h7$ can be quite unpleasant for Black. One thing is clear, passive defence would no longer suffice: 33... $\mathbb{W}d7$ 34. $\mathbb{Q}g6$ $\mathbb{W}d6$ 35. $\mathbb{B}c3$ $\mathbb{W}d7$ 36. $\mathbb{Q}h7$ $\mathbb{Q}f7$ 37. $\mathbb{B}g3$



White wins.

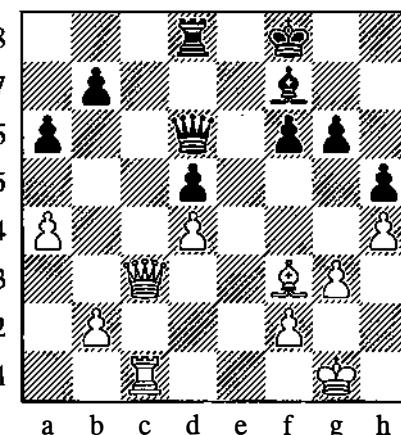
Certainly, Black does not have to play 29...b6, but the variation does show the dangers he is facing on the kingside. The pawns are not providing adequate defence at the moment, so the drawbacks of advancing the g-pawn and moving the defensive line to the 6th rank are not obvious to me.

30.h4!?

On the other hand, Kasparov does not discuss this decision. It is not apparent to me that Black is threatening to play ...g5 or similar, but I do suspect that the pawn structure now appearing on the kingside is more to Black's advantage than to White's. Long term, Black has a hook for his counterplay, something it did not seem necessary to provide him with.

Personally I would probably have played 30.b4!? to expand on the queenside, and kept the options on the kingside open for now.

30...h5 31.g3 $\mathbb{Q}f7$ 32.a4



Karpov was of course anticipating this, but it still had to be played. The b7- and a6-pawns are fixed on the light squares, making them permanent weaknesses.

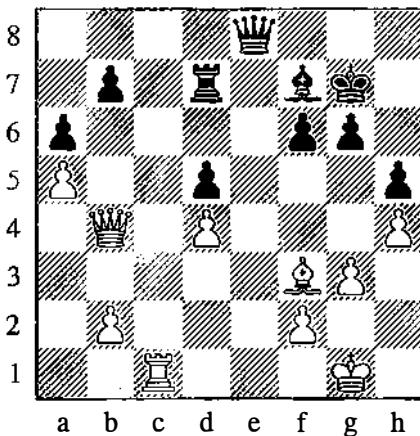
32... $\mathbb{W}d7$

Black's position is so full of weaknesses that every move seems to have a downside. For example, 32...b6 can be met with 33.. $\mathbb{Q}e2!$ a5 34. $\mathbb{W}e3$ $\mathbb{Q}g7$ 35. $\mathbb{Q}b5!$ and White has taken control over the e-line, giving Black a greater headache.

33.a5

The pawns on the queenside are unpleasantly fixed on the light squares.

33... $\mathbb{Q}g7$ 34. $\mathbb{W}b3$ $\mathbb{W}e6$ 35. $\mathbb{W}b4$ $\mathbb{W}e8$



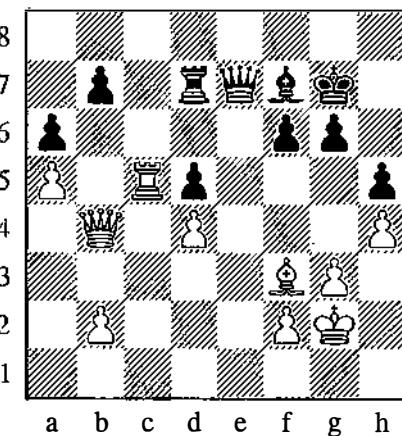
36. $\mathbb{Q}g2?!$

Kasparov does not like this move, as it has a tactical flaw.

Because of what happens in the game, Kasparov prefers 36. $\mathbb{Q}h2?!$, but I am not really certain that the king is better on h2 than on g1. It has good and bad sides in both places...

36. $\mathbb{W}d2?!$ $\mathbb{W}d8$ 37. $\mathbb{E}c5$ looks more natural to me. White can improve his position with b2-b4 and $\mathbb{W}c3$, and Black will have to work out what to do in order not to be invaded slowly. There is a small point to be made here. It is not realistic to expect to win a game against a strong defender like Anatoly Karpov without taking some tough decisions at some point. White will eventually have to take some sort of risk and calculate accurately. The manoeuvring will eventually have to end.

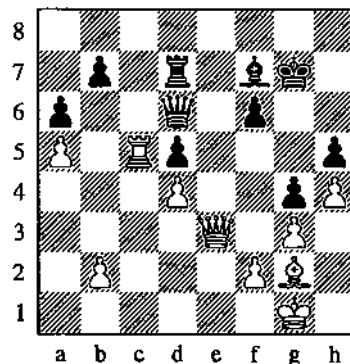
36... $\mathbb{W}d8$ 37. $\mathbb{E}c5$ $\mathbb{W}e7$



38. $\mathbb{W}c3?$

The last mistake of the game.

Kasparov was of the opinion that he should have played 38. $\mathbb{W}d2!$ to be ready to fight for the dark squares on the kingside after 38...g5. A possible continuation could be: 39. $\mathbb{Q}g1$ g4 40. $\mathbb{Q}g2$ $\mathbb{W}e6$ 41. $\mathbb{W}e3$ $\mathbb{W}d6$

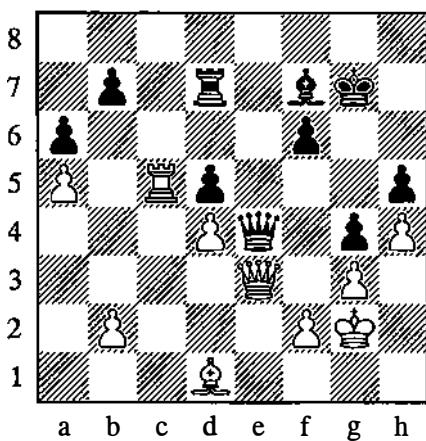


42. $\mathbb{W}c1!$. This is prophylaxis against ...b6. Black is probably doing slightly better than he was around move 30, but it is not at all certain that he will be able to resist the pressure in the long run. But as Kasparov made a few too many mistakes (his main strength was after all dynamics), Karpov got a chance to close down the winning attempts early.

38...g5! 39. $\mathbb{W}e3$ g4!

Kasparov probably underestimated or missed this idea.

40. $\mathbb{Q}d1$ $\mathbb{W}e4\#$



41. $\mathbb{Q}g1$

This was back in the days of adjournments. After the players had a chance to check the position back home, they realized that there was no point in continuing.

$\frac{1}{2}-\frac{1}{2}$

I will go out on a limb and say that if Karpov had had the white position after 29 moves, I think it is likely that Kasparov would not have made the draw. Later on, Kasparov learned

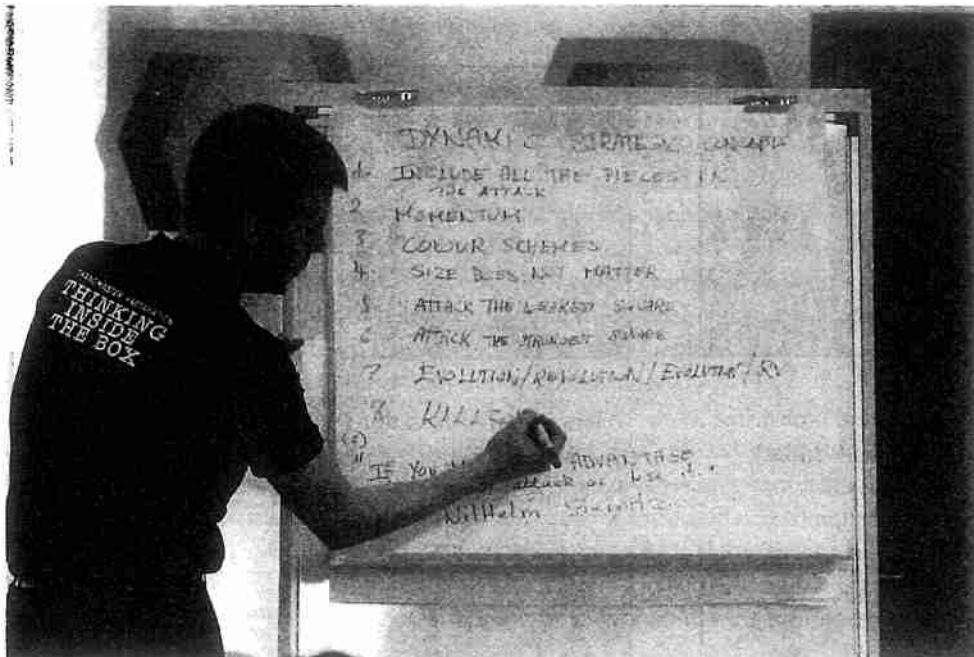
how to play against Karpov and obtained very sharp positions and won some memorable games.

I am certain that some readers will think that Kasparov must be right and that my disagreements with his annotations are by definition to be rejected. I sympathize; he is my hero too. However, in order to gain a deep understanding of chess, in this case a strategic concept, you have to look at the evidence with an honest and inquisitive mind. You analyse games such as this in order to understand things. If your understanding takes you in a counterintuitive direction ("I believe Kasparov misassessed this decision.") it should certainly make you look more carefully at it. Be critical of everything, especially yourself. But reject nothing, not even yourself. Allow yourself to be in doubt. Have an inquisitive mind.

There are many concepts that we can study and it is certainly a meaningful way to study positional play and to study the games of the greats. We really do not learn a lot from knowing that Alekhine saw this or that line or missed this or that move. The techniques of calculation are not historical in nature. But positional play is, and the idea that we will be able to build a strong intuition without the use of ideas and concepts is hard to comprehend. You will constantly hear a grandmaster say, "In this type of position you usually do x, y and z," which is the very definition of thinking in strategic concepts. It is not a divine part of chess, but it is how we organize things in our brain. Why we should leave this to the subconscious without any logical guidance and structuring is not clear to me.

Chapter 11

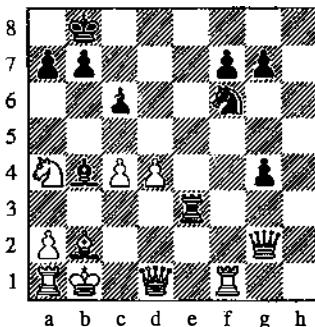
Dynamic Strategic Concepts



In this chapter you will find my best ever game. If you do not like it, I apologize.
No refunds though...

Test yourself against the book

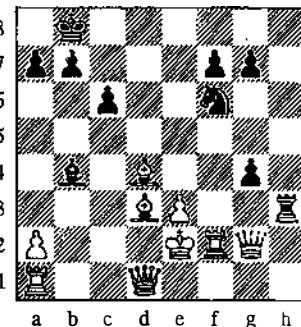
This book is not an exercise book, but an experienced trainer can always find interesting moments in games that can be more effective for the student if he thinks about them first. On this page, I have included a few positions from this chapter that you can look at, should you feel so inclined. As long as it does not make you put off reading the chapter!



Black has a nice winning move.

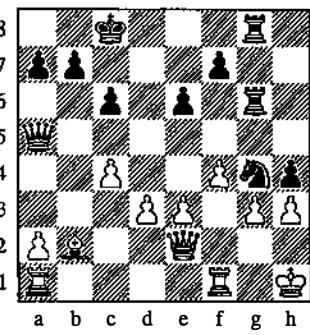
Can you find it?

(see page 272)



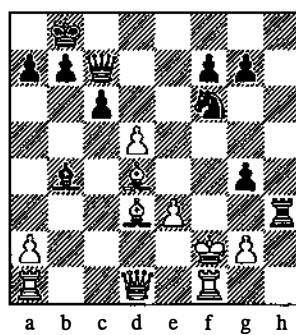
Has the black attack come to a sad halt?

(see page 275)



Can you find both wins?

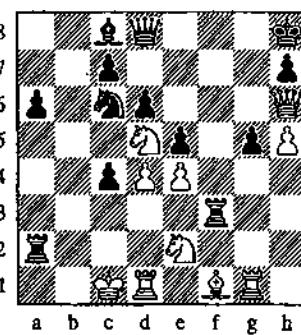
(see pages 267/8)



Here a bit of calculation

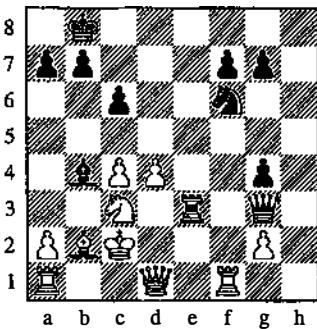
is needed!

(see page 274)



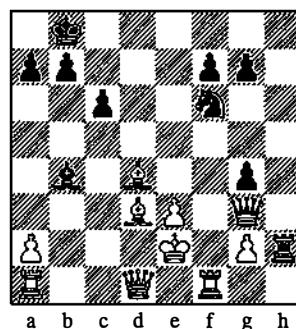
Be wary of counterplay!
What can White do here?

(see page 280)



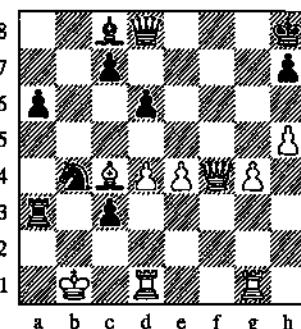
Find the white defence

(see pages 272/3)



White's defence is rather
cunning. Can you find it?

(see page 275)



It is time to calculate
till the end...
(see page 283)

After the debate fifteen years ago, mentioned in the previous chapter, I realized that I was lacking coherency in my argumentation for a simple reason: the strategic concepts described in the late 19th century and early 20th century were mainly focused around the type of chess which was played at the time. It is not only that you cannot criticize opening moves such as 1.e4 g6 2.d4 ♜g7 3.♘c3 c6 4.f4 d5 5.e5 h5 6.♘f3 ♜g4 based on a *develop your knights before your bishops* advice, which was uttered at a point where most games started with 1.d4 d5 or 1.e4 e5. You also cannot expect the strategic concepts described before 1936 to adequately describe what was learned about chess subsequently. I find it highly questionable when people do this in a way that makes the giants of the past look naive. We are all standing on the shoulder of giants – we are not taller than they were.

The main thing lacking was a coherent description of the role of dynamics. In the era of Capablanca, positional play was conducted logically or intuitively, but dynamics was overly reliant on calculation. The intuitive sacrifice was rare, although not entirely non-existent. Personally, I like Spielmann's games, though he is mainly remembered for uttering the words: *I can see all of Alekhine's combinations; I just can't get his positions...*

The theory of dynamics I developed was eventually published in *Attacking Manual 1*.

In the first edition, I described the reasons for its development, referring to another chess author by name. I had in advance asked him if I would be allowed to do so and if he wanted to see the text in advance to see if there was anything he found objectionable. He had recommended that I should write whatever I wanted and not be so concerned. I wrote and rewrote the passage, trying to water it down as much as possible. Then got advice from others on how to soften the language as much as possible. Just to be respectful. Once published I got into another torrent of criticism for “personal attacks” by this author and his friends. I removed all references to him for the second edition and decided never to mention his name again.

In *Attacking Manual 1* I referred to seven principles and later realized there was an important omission, adding a chapter in *Grandmaster Preparation – Attack and Defence*. These concepts are all what I call “global concepts”, in that they cannot be said to be minor techniques. One thing I did not like especially about Vukovic's *Art of Attack in Chess* is the emphasis on the ♜xh7† sacrifice. To me this is not a basic concept of attack; it is a typical pattern related to quite a number of openings that everyone needs to know, but it does not have a universal quality to it, unlike the concepts presented below.

Include all the pieces in the attack

The fate of a mating attack is usually decided by controlling a few key squares more than the opponent. For this reason, it is not necessary to have a material advantage or even in some cases a general lead in development (it can be enough to have a lead in development in a small part of the board, though this is only rarely what happens). Local superiority is what it is all about.

It is not hard logically to understand that an attack will work better when more pieces are included in it, just as it is not hard to understand that the support of teammates in most situations will lead to an increased chance of scoring a goal. What makes it complicated is when we have to weigh

this consideration against those of material, momentum and other strategic factors. As well as just remembering to include the last piece when all the other pieces are active and so many options exist. These options may be almost working, and only one special ingredient is needed: the last piece!

The general advice is to include as many pieces in the attack as you can without losing your momentum. At all times consider if there is a way to include the last piece in the attack, but do not let the attack stall in order to manoeuvre it into position. Attacking chess is about dynamics and exploiting a lead in development; thus it is almost the antithesis of manoeuvring.

Often, we will lose a pawn or more in our ambition to include all the pieces in the attack, not stopping to recapture or move the threatened unit. In the game below we shall see numerous cases of this happening; and although other things are going on in it as well, we shall pay extra attention to how Black at all times relies on getting full mileage out of his pieces.

Momentum

The most famous strategic concept in chess is probably the seventh and final general rule of chess by Wilhelm Steinitz – “*When a sufficient advantage has been obtained, a player must attack or the advantage will be dissipated.*”

Since the days of Steinitz, we have of course learned to distinguish between a dynamic advantage and a static advantage, but this does not change the profound insight of the first World Champion.

What this means is that *once you have improved your position to the maximum, you must execute your attack with the greatest possible pace.*

A little sub-idea concerning this relates to a lead in development. It is never static. You only have to think about it for a brief moment to realize that this is the case. A lead in development can reach a maximum, where all the pieces are active. The opponent will surely develop his pieces if given the opportunity, and your lead in development will shrink. Or, you happen to be bringing your pieces in more effectively than your opponent for whatever reason (because he has to deal with threats is just one of many reasons that spring to mind) and your lead in development is expanding as a result.

The basic idea is thus that a lead in development should be exploited at its zenith. When your piece development is at its peak compared with that of your opponent; your aggressive action is most likely to be effective.

Colour

Most chess pieces are colour blind! Bishops, knights and pawns can only control squares of one colour at a time, the queen is biased towards the colour of the square it is standing on, the rook will aim at the same colour square first in all four directions, and the king at the edge of the board (where it often is) is also biased. Though the chess board was probably divided into light and dark squares by an artistic soul, thinking in black and white should not be underestimated as an important tool, both in technical and in dynamic positions.

As bishops, pawns, queens and in particular knights are vital attacking pieces, it is no surprise

that controlling one colour of squares is one of the main indicators of a promising attack. Often, attacks are successful on the dark squares while the opponent has his pieces placed so they primarily defend the light squares, or vice versa.

Quantity beats Quality

A piece can only attack a square once, no matter its alleged exchange value in pawns. Often, we give up the exchange, or maybe the queen for two minor pieces and similar, in order to win important momentum for our attack. The exchange of static value for dynamic value is obviously a two-edged sword. You are likely to miss that exchange in the endgame! But if the short-term rewards are big enough, taking such long-term risks is justified.

Attack the Weakest Square

Possibly the simplest principle in chess and in any kind of combat is that *you should strike at the weakest spot in the opponent's position*. It is not such a complicated concept; the opponent is likely to bleed most if you stab him where he is ill defended. If we do not mistake simplicity for irrelevance, we will notice that a lot of attacks fail because the attacker does not pay enough attention to all the weak squares, or that the weakest square has shifted.

Attack the Strongest Square

There are times when we cannot get at the opponent's weaknesses. At these times, there is an additional technique that can be useful. By striking at a square that the opponent has overprotected to an almost extreme extent, we can sometimes ruin his coordination and in that way, get through to his real weaknesses.

I incorporated this concept into the theory after an inspiring lecture by Mark Dvoretsky, where he was referring to the work of Igor Zaitsev, who had used this idea in a lot of his opening preparation work and written a book about it. Still, the concept is only applicable to a minority of cases, and, as such, is perhaps the least important of the seven.

Evolution/Revolution

One of the most important ideas of attacking chess is to get a good feeling for the natural flow.

First, we prepare our forces as much as we can; then we do with them what we can, and things change. The positions will change, usually in a big way.

Psychologically it can be difficult for us to adjust to this fact and we might want to continue to "do stuff", when it is actually time for us to change the placement of our pieces or include pieces we did not have a chance to include the first time around. Especially if you have sacrificed material, there can be an emotional blockade against regrouping before proving the compensation.

This concept is my own addition to the theory of dynamics, and quite an important one. Thinking in this way has helped me in a lot of games.

The Killzone

Years ago, I was watching a TV programme called "Road Cops" or something like that. My only excuse is that the distance to the remote exceeded the length of my arm – it was truly a terrible show. But have mercy on me; I was married.

At one point, it showed how gun nuts had shot policemen after being pulled over for broken tail lights and similar. It always happened within two metres or so of the car. Based on this, the theory of the killzone was developed, meaning a small circumference of the car, where you would more than likely get shot if a gun was raised. They trained the officers to get out of this zone the moment they saw a gun. The programme finished by showing how officers who exited this zone were not killed. The gun nuts simply drove away. I immediately realized the implications for chess. Sadly, I had already published the two Attacking Manuals and it did not look like we were going to be publishing a third edition anytime soon. (Actually, there are still plenty of copies in the warehouse to this day...) Therefore I put it in *Grandmaster Preparation – Attack & Defence*.

The basic idea is this: *A mating attack is likely to happen in a limited area of the board. If the opponent's king manages to escape this area, the attack is likely to fail.* Despite its simplicity, this little idea can have a great effect on our thinking when we calculate.

From Theory to Practice

I started working on this organization of the main principles in 2002 and first presented the majority of them in two DVDs for ChessBase in 2003. At that time, I already had a number of games I felt showed a mastery of these concepts. I deliberately held them back for the book I was writing, which it took me six years to finish and another two to be happy with. *Attacking Manual 1 – 2nd edition* was published in 2010 alongside *Attacking Manual 2*, which deals with the more common features of attack, described many times over, such as for example the $\mathbb{Q}xh7\#$ tactic, commonly known as the Greek Gift.

I had originally wanted to put my masterpiece in the book but, as the project developed, I took the decision to include very few of my own games – and not many of the good ones. I wanted the book to be about attacking technique and not to give the impression in any way that it was also a best games collection. The main game I knew I could not put in was the game where I used all the ideas to play my best ever game. I think most grandmasters have a game like this, where everything went right on the day and they felt inspired in a way they immediately realized had never happened before and would never happen again. Gufeld called his game against Bagirov from 1973 his “Mona Lisa” – we shall have a look at this below – but first we will take a look at mine.

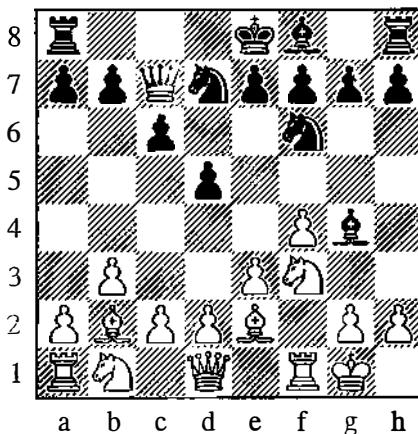
Jacob Pallesen – Jacob Aagaard

Taastrup 2002

I was at a low point in my chess career at the time this game was played. Poor performances, a general lack of direction and a plummeting rating had robbed me of my confidence and, by proxy, my motivation.

In this tournament, I made many quick draws and bad moves. Then this game came along. Afterwards, when people asked what had happened, I said, “Suddenly it became interesting.”

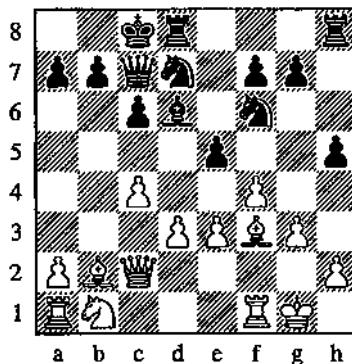
1.b3 d5 2. $\mathbb{Q}b2$ c6 3.e3 $\mathbb{Q}f6$ 4.f4 $\mathbb{Q}g4$ 5. $\mathbb{Q}f3$ $\mathbb{Q}bd7$ 6. $\mathbb{Q}e2$ $\mathbb{W}c7$ 7.0–0



7...e6?!

Not bad, but certainly not the best move. I had no doubt that 7... $\mathbb{Q}xf3$ 8. $\mathbb{Q}xf3$ e5 was not only stronger, but also more suited to my style. But I was hoping that Jacob would play 8. $\mathbb{Q}e5$, transposing to one of my early successes.

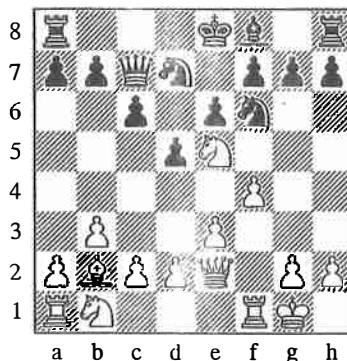
After the game I could see that Kasparov had played 7... $\mathbb{Q}xf3$ 8. $\mathbb{Q}xf3$ e5 at a young age. That game continued: 9.d3 $\mathbb{Q}d6$ 10.g3 0–0–0 11.c4 $dxc4$ 12.bxc4 h5 13. $\mathbb{W}c2$



13...h4 14. $\mathbb{Q}c3$ $hxg3$ 15. $hxg3$ $exf4$ 16. $exf4$ g5 It should come as no surprise that White was brutally mated in Romanishin – Kasparov, Leningrad 1975.

8.c4

A decade earlier, after:
8. $\mathbb{Q}e5$ $\mathbb{Q}xe2$ 9. $\mathbb{W}xe2$

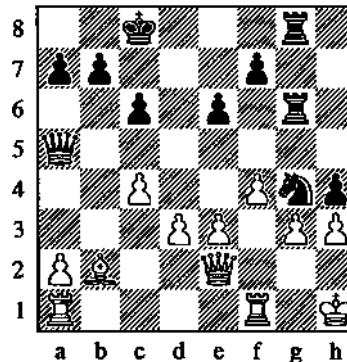


I had the position on the board. It was the first round and I was not sure who I was playing (we were young and the pairings were published in the Cyrillic alphabet, which I had not yet learned). Jackie Andersen, the other Danish player in the closed IM group, had just speculated that I was playing the other unrated player (Jackie had no rating, but still made an IM norm). I returned to the board thirsty for blood.

9... $\mathbb{Q}d6$ 10. $\mathbb{Q}xd7$ $\mathbb{Q}xd7$!?

Who cares about objectivity, when your opponent does not even have a rating? Keep in mind that I saw myself as inhabiting a different world from the one where people were playing for title norms.

11. $\mathbb{Q}xg7$ $\mathbb{Q}g8$ 12. $\mathbb{Q}b2$ 0–0–0 13.c4 $dxc4$!
14. $\mathbb{Q}a3$ $\mathbb{Q}xa3$ 15. $\mathbb{Q}xa3$ $\mathbb{Q}f6$ 16.bxc4?! $\mathbb{W}a5$
17. $\mathbb{Q}c1$ $\mathbb{Q}g6$ 18.d3 $\mathbb{Q}dg8$ 19.g3 h5 20. $\mathbb{Q}b2$
 $\mathbb{Q}g4$ 21. $\mathbb{Q}h1$ h4 22.h3



The best move has not been played on every turn, but things have definitely gone Black's way. At this point I executed a simple combination.

22... $\mathbb{Q}xe3!$

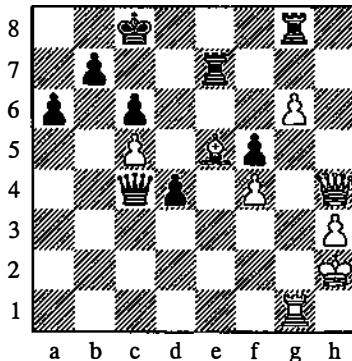
A very human solution: Black regains his pawn and wins the exchange. All that remains is technical difficulties.

It turns out I had an even stronger option in 22... $h \times g3!$ 23. $h \times g4$ $g2\#!!$ 24. $\mathbb{W}xg2$ $\mathbb{E}xg4$ 25. $\mathbb{W}h2$ $\mathbb{W}d8!$ and ... $\mathbb{E}h4$, cutting the conversion phase short.

23. $\mathbb{g}4$ $\mathbb{Q}xf1$ 24. $\mathbb{E}xf1$ $\mathbb{E}d8$

At this point Peter Heine Nielsen (who made his final GM norm in this event) came up to me and said: "You are beating the number one seed!"

25. $\mathbb{W}c2$ $\mathbb{W}c5$ 26. $d4$ $\mathbb{W}d6$ 27. $c5$ $\mathbb{W}d5\#$ 28. $\mathbb{W}h2$ $\mathbb{E}gg8$ 29. $a4$ $\mathbb{E}d7$ 30. $a5$ $a6$ 31. $\mathbb{Q}a1$ $f6$ 32. $\mathbb{E}f2$ 33. $\mathbb{E}f1$ $\mathbb{W}d8$ 34. $\mathbb{W}f2$ $f5$ 35. $g5$ $\mathbb{W}xa5$ 36. $d5$ $exd5$ 37. $\mathbb{Q}e5$ $\mathbb{W}b4$ 38. $\mathbb{E}g1$ $\mathbb{W}c4$ 39. $g6$ $d4$ 40. $\mathbb{W}xh4$



40... $\mathbb{E}xe5$ 41. $f \times e5$ 42. $\mathbb{W}e2\#$ 43. $\mathbb{W}h1$ $\mathbb{W}xe5$ 43. $\mathbb{E}e1$ $\mathbb{W}d5\#$ 44. $\mathbb{W}h2$ $d3$ 45. $\mathbb{E}e7$ $\mathbb{W}a2\#$ 46. $\mathbb{W}g3$ $\mathbb{E}xg6\#$ 47. $\mathbb{W}f3$ $\mathbb{W}d5\#$ 48. $\mathbb{W}e3$ $\mathbb{W}xc5\#$ 49. $\mathbb{W}f3$ $\mathbb{W}d5\#$ 50. $\mathbb{W}e3$ $\mathbb{E}e6\#$ 51. $\mathbb{E}xe6$ $\mathbb{W}xe6\#$ 52. $\mathbb{W}xd3$ $\mathbb{W}e4\#$ 53. $\mathbb{W}xe4$ $f \times e4$ 54. $\mathbb{W}xe4$ $\mathbb{W}d7$ 55. $\mathbb{W}f5$ $a5$
0–1 Belikov – Aagaard, Pinsk 1993.

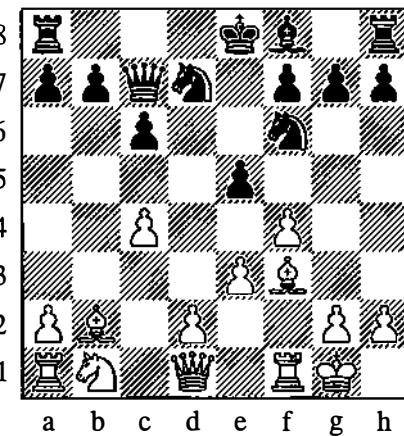
There is an obvious lesson to be learned about the power of self-limitation from this game. It is one I have had to learn again and again in my life. I talked more about confidence and belief in the possible on page 47.

After the move played by my opponent in the game, I immediately regretted my previous move and decided to gamble, playing something I knew was dubious, in order to get an open game. It was not just a matter of style, but also about doing something to keep myself remotely interested. If Jacob had 100-150 rating points more, I would no doubt have offered a draw already by this point; but the difference was exactly 300 points, not something I would want to have to justify when my friends would later ask me what had happened.

8... $\mathbb{Q}xf3?!$

8... $\mathbb{Q}d6$ 9. $\mathbb{Q}c3$ 0–0 was natural and solid.

9. $\mathbb{Q}xf3$ $d \times c4$ 10. $b \times c4$ $e5$



One of the first things I try to teach children about chess strategy is not to rely on the opponent's mistakes. But here I am, hoping that my opponent will take on e5. Please, Jacob, pleeeease...

11. $f \times e5?$

And he did! Free from the consequences of my laziness and irresponsibility, I transformed into myself, taking off the Clark Kent disguise. I continued to play quite fast, sensing the correct path and using my principles of attack to find good moves with ease.

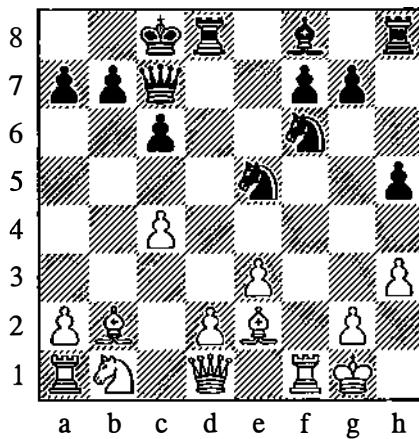
During the game I worried about 11.d4!, when the flexible 11...0–0–0 is playable, although it looks dangerous. I was planning 11...e4 12.Qe2 h5, but after 13.Qc3 Bb4 14.Wc2 Bxc3 15.Qxc3 I distrust Black's position intensely.

11...Qxe5 12.Qe2 h5

The weakest square is h2, so the knight needs to go to g4.

13.h3 0–0–0

Up to this point I had played on gut feeling and according to what was the laziest, most optimistic move. But here I started to realize that this game was different. I had an attack – and one that I could navigate by using the principles I had developed.



14.Qc3

During the game I was expecting:
14.d4 Bb8 15.Qd2

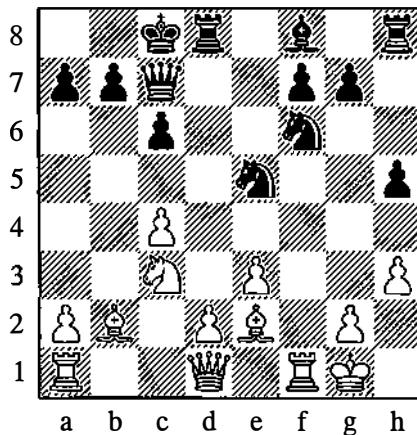
With the idea of putting the knight on f3.
15...Qeg4! 16.hxg4 hxg4
I had no idea about the consequences. The lack of viable alternatives and the fact that it was a few moves away (and never happened) made going deeper irrelevant. My feeling was that Black had good chances, and analysis confirms that White is indeed walking a tightrope.
17.Bf4!

17.Qf2? Bb4 18.Qd3 Bde8 is simply lost for White. All the black pieces are attacking and White has no coordination at all.
17...Qd6 18.Bxf6 We7!



19.Qf1 Bh2† 20.Qf2! Wxf6† 21.Qe1Bg1

White probably has enough defensive resources, but he will still have to show that he can find them in practice.



14...Bb8!

The first move made according to the principles. The thinking about this move is easy. I would like to involve my bishop on f8 in the game, as it currently has no function. But I also felt that the position was likely to undergo a revolution and it was unclear where the bishop would be best placed afterwards. So, I moved the king so that Bxg4 would not come with check.

15.d4!?

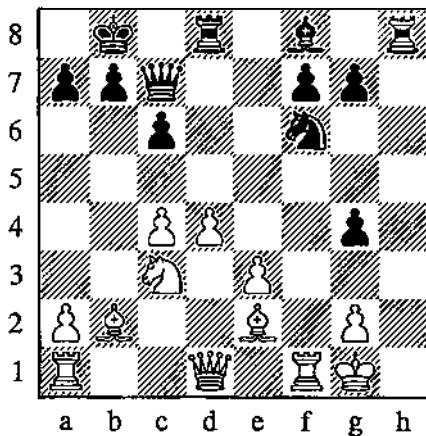
A brave decision; White is hoping to fend off the attack and keep the extra material.

15.♗c2 is the 2017 suggestion from Stockfish 8.

The position is probably in balance.

15...♝eg4

This move was planned long ago and for this reason I made it in seconds.

16.hxg4 hxg4**17.♗f2!**

I had not seen this move at all, but quickly realized that it was the best one available.

I had planned to meet 17.♗f4 with 17...♝d6 (the bishop now has a square where it can find a function), and now:

a) I mainly thought about 18.♗xf6 ♛e7!!, which leads to a winning attack. I really did not calculate much; I was more interested in the strategic view of the position at this point.

b) I did not consider 18.♗xg4 at all. Black wins with 18...♝h2†! 19.♔f1 ♛g3 20.♔g1 ♜h6 when the other rook will quickly be included in the attack, with decisive effect.

c) Finally, there is 18.♗d2 ♜xf4 19.exf4 ♛a5!, transferring the queen to h5 with a strong attack.

17...♝b4!

Although I had no prior thoughts about this position, this move was very easy to come by. The bishop is seeking a function and goes to b4, from where it will fight for the e4-square. The e4-square is important as a knight there will control all the dark squares. And this battle is all about the dark squares, as we shall see again and again.

18.♗d3!

The most natural move and also the best.

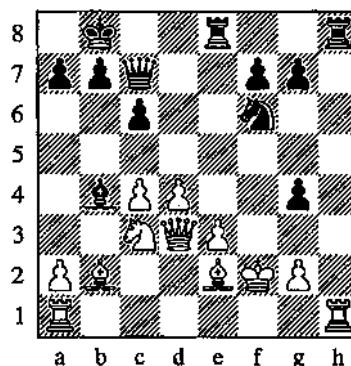
During the game I was expecting Jacob to play:

18.♗d3

I believed this was the stronger move, but I liked my position after:

18...♜de8 19.♜h1

According to the computer 19.♜ab1 ♛a5 is best play. I do not find that this has a lot to do with what could possibly have happened in the game, but I note that Black also seems to have an advantage here.



19...♜h2! 20.♜xh2 ♛xh2 21.♔f1

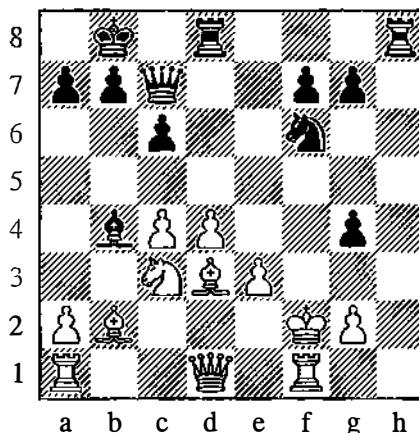
21.♔f1 g3† 22.♔e1 ♛xg2 is also bad for White.

21...♝h5 22.♔e1 ♛f4

Black has a winning attack. For example:

- 23.♕f5 ♕g3† 24.♔d1 ♔xg2 25.♗xg2 ♕xg2
26.♔e2 ♘h8!

White is lost.



According to my understanding of momentum, it was now time for a revolution. I could not feasibly improve my pieces, so something had to happen, or I would lose the momentum. Again I was focusing on destroying the defence on the dark squares, on involving the rook on h8 in the game somehow, and on being as violent as possible.

18...♝xd4!!

A few months after the game I was lecturing in a small club in Copenhagen about the attacking principles. Local player Tom Skovgaard suggested 18...♝h3?! as another possible idea. I found it amusing that I had seen this idea in advance to play a few moves later in the game, but had not considered it in the present position. Analysing it deeply suggests that White has the choice between a complicated line where Black has to settle for a perpetual and playing 19.♕d2?!, which leads to complications where Black has a lot of pawns for the piece, but no advantage.

19.♗d5

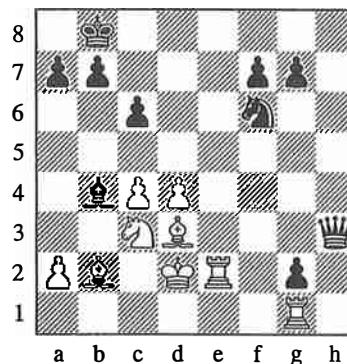
I was certain that Jacob would play this. Not only because of the variations I had calculated, but also just because it is psychologically easier to decline a sacrifice than to accept it. So, this had been the main thing I had been calculating.

- 19.exd4 ♕f4†

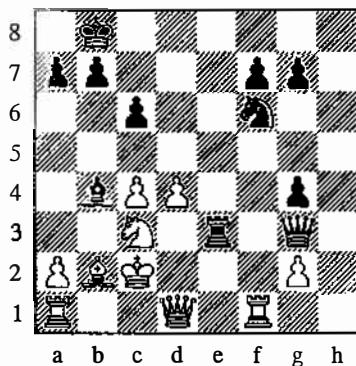


20.♔e2!

- 20.♔e1? ♘e8† 21.♕e2 ♕g3† 22.♔d2 ♘xe2†
23.♔xe2 ♕xg2† 24.♗f2 ♘h3 25.♔d2 g3
26.♗e2 g2 27.♗g1



- 27...♝h5 28.♗e4 ♘g3 29.♗xg2 ♘h6†
30.♗e3 ♘f5 Black wins in the long run.
20...♝e8† 21.♗e4 ♘xe4† 22.♔d3
22.♘xe4 ♘xe4† 23.♗f2 g3†! and Black will win the queen with a decisive advantage. The white pieces are simply not playing together.
22...♝e3† 23.♔c2 ♘g3



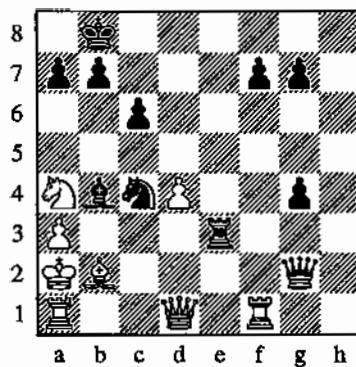
24.♘a4 ♜xg2†

24...♞e4! is even stronger, but this is a different story. Black is also winning in the main line.

25.♗b1 ♜e4

25...♝e1! is another one-shot I missed.

26.a3 ♜d2† 27.♗a2 ♜xc4!



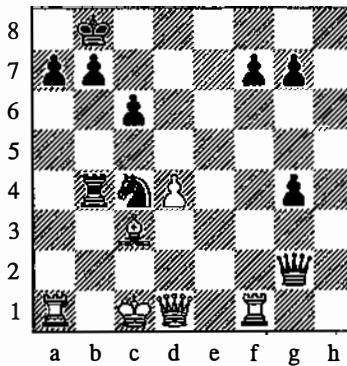
28.axb4 ♜a3† 29.♗b1 ♜xa4!

I believed that Black would have great chances here and it turned out to be correct.

30.♗c3 ♜xb4†

I had seen to around here, which is spectacular for me. I did not feel in control; I simply felt that there were possibilities everywhere, and for that reason I was confident in my position. As we have seen, there were more options along the way for Black. Stronger options. But I also want to show some nuances in the present variation:

31.♗c1



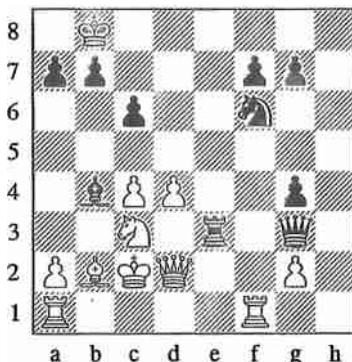
31...♝b2! 32.♗a2 ♜xd1 33.♗xg2 ♜xc3
34.♗xf7 ♜xd4

Black will win this endgame if he shows good technique, although there is still a lot of play left.

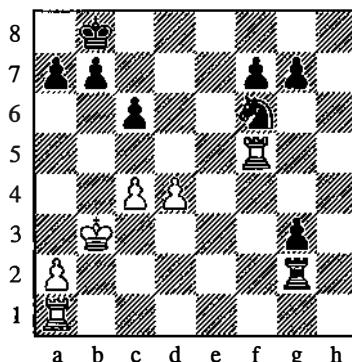


With the greatest chess trainer alive, GM Ramesh from the ChessGuruKul Academy in Chennai

But let us rewind the tape a little bit and inspect it with modern equipment. It turns out that White could have escaped in this complicated line, had he found: 24. $\mathbb{W}d2!!$



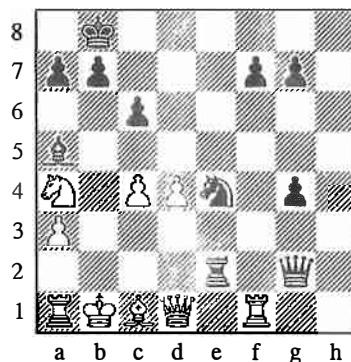
24... $\mathbb{Q}xc3$ 25. $\mathbb{W}f2!$ Leading to a complicated endgame. For example: 25... $\mathbb{W}xf2\#$ 26. $\mathbb{R}xf2$ $\mathbb{g}3$ 27. $\mathbb{R}f5!$ $\mathbb{Q}xb2$ 28. $\mathbb{Q}xb2$ $\mathbb{E}e2\#$ 29. $\mathbb{Q}b3$ $\mathbb{E}xg2$



30. $\mathbb{E}f3!$ The engines assure us that White will save the game. I think there are still some practical issues, but we'll let it pass, just to keep the peace. On the other hand, can we agree that no one would actually find this in a tournament game?

On top of this looney tune variation, neither Jacob nor I considered what would happen if White included 19.a3! $\mathbb{Q}a5$ in the mix before taking on d4. (Incidentally, 20. $\mathbb{Q}d5?$ $\mathbb{Q}e4\#$ does not work for White this time around,

as the bishop is safe on a5.) It turns out that White is doing just fine: 20. $\mathbb{exd}4$ $\mathbb{W}f4\#$ 21. $\mathbb{Q}e2$ $\mathbb{E}e8\#$ 22. $\mathbb{Q}e4$ $\mathbb{E}xe4\#$ 23. $\mathbb{Q}d3$ $\mathbb{E}e3\#$ 24. $\mathbb{Q}c2$ $\mathbb{W}g3$ 25. $\mathbb{Q}a4$ $\mathbb{Q}e4$ 26. $\mathbb{Q}c1$ $\mathbb{W}xg2\#$ 27. $\mathbb{Q}b1$ $\mathbb{E}e2$



28. $\mathbb{E}g1$ $\mathbb{W}f2!$ 29. $\mathbb{E}f1$ $\mathbb{W}g2$ with a draw by repetition.

The big difference from the 19. $\mathbb{exd}4$ line is that after 28... $\mathbb{W}f3\#$? White has the extra option of 29. $\mathbb{Q}a2!$, when Black's compensation seems rather speculative.

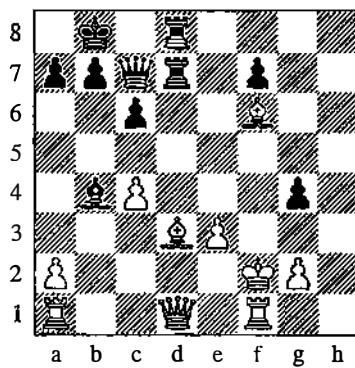
All in all, this seems to be the most practical outcome White can hope for, but to come up with all of these defensive moves would be out-of-this-world remarkable. And this is without including such things as assessing the outcome, calculating the lines, not losing on time, and so on.

19... $\mathbb{Q}xd5$

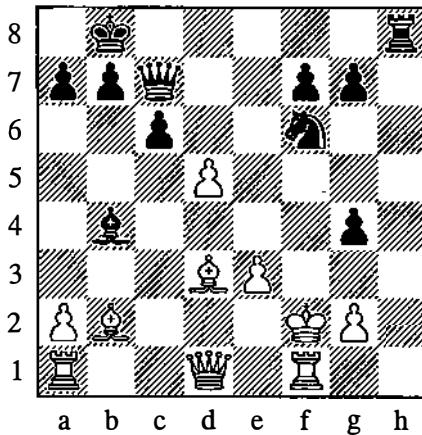
I never even looked at 19... $\mathbb{Q}e4\#$, but it is worth mentioning that after 20. $\mathbb{Q}xe4$ $\mathbb{E}xd1$ 21. $\mathbb{Q}xc7$ $\mathbb{E}d2\#$ 22. $\mathbb{E}g1$ $\mathbb{E}xb2$ 23. $\mathbb{Q}a6\#!$ $\mathbb{bx}a6$ 24. $\mathbb{E}ab1$ $\mathbb{E}xb1$ 25. $\mathbb{E}xb1$ c5 26. a3 I favour White's chances.

20.cxd5

20. $\mathbb{Q}xf6\#$? was not something I considered as likely. After 20... $\mathbb{E}d7$ Black has a strong attack for a totally acceptable investment. This was enough for me. What more do you need to know? For example: 21. $\mathbb{E}xg7$ $\mathbb{E}hd8$ 22. $\mathbb{E}f6$



22... $\mathbb{Q}c5!!$ and the attack on the dark squares is too strong to be withheld. The computer can always find a lot of resources, but White's position is untenable, as analysis confirms.



20... $\mathbb{Q}h3!!$

I was ecstatic to be able to put this move on the board. Yes, taking it leads to mate in one, so it is not really a sacrifice. But for mere mortals, such a move can nonetheless be hard to see. This was confirmed later in the evening, when Alexander Raetsky, who soon after became a grandmaster and who was staying with me during the tournament, said that he found this move amazing. He had no problem imagining himself finding moves such as 15... $\mathbb{Q}eg4$ and 18... $\mathbb{Q}xd4$, but this move was beyond him.

The key idea is of course to attack the dark-square weaknesses in the white position; but

I would like to point out that it is also about including the least active piece in the attack.

21. $\mathbb{Q}g1?$

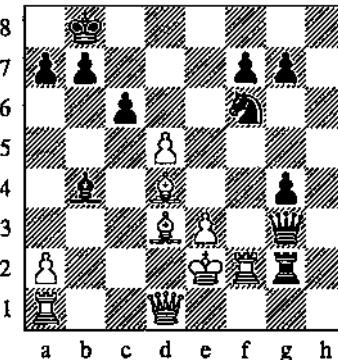
A logical move; White is clearing the f1-square for the king. However, although Jacob had been thinking for quite a while, I have to admit that I had not anticipated this move at all.

Here are some of the details I noticed:

21. $\mathbb{Q}e2?$ $\mathbb{Q}xe3\#!$ 22. $\mathbb{Q}xe3$ $\mathbb{Q}xd5\#$ gives a winning attack. You only have to look at a few variations to see that Black has many ways to end the game favourably.

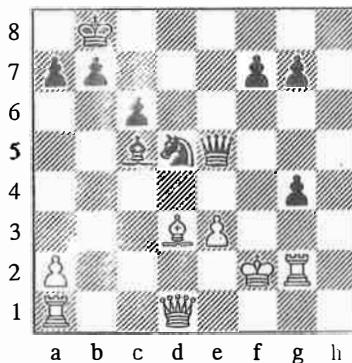
21. $\mathbb{W}e2?$ $\mathbb{W}g3\#$ 22. $\mathbb{Q}g1$ $\mathbb{W}h2\#$ 23. $\mathbb{Q}f2$ $\mathbb{W}f3\#$ is also a complete disaster for White.

I spent quite a while calculating 21. $\mathbb{Q}d4?$ and found a really nice solution: 21... $\mathbb{W}g3\#$ 22. $\mathbb{Q}e2$ $\mathbb{W}h2$ 23. $\mathbb{Q}f2$ $\mathbb{W}xg2$



The key idea is 24. $\mathbb{W}f1$ $\mathbb{W}f3\#!$

So White has to try 24. $\mathbb{Q}e5\#$, but after 24... $\mathbb{W}xe5$ 25. $\mathbb{Q}xg2$ $\mathbb{Q}xd5$ my guiding principle of attacking on the dark squares, while my opponent is only defending the light squares, assured me that I was totally winning. There are many possible variations to give here, but the most satisfying is probably what I saw during the game: 26. $\mathbb{Q}f2$ $\mathbb{Q}c5!$



White's position collapses. His great material advantage is irrelevant, as they are playing on the wrong squares. I always find variations that include bringing the last piece into the attack especially satisfying.

When I first analysed the game deeply a few months after it was played, I found a nice defensive idea for White: 21.d6?! $\mathbb{W}xd6$ 22. $\mathbb{Q}d4$, with the idea that 22... $\mathbb{W}g3\#$ 23. $\mathbb{Q}e2$ $\mathbb{B}h2?$ fails:



The only difference from the variation with 21. $\mathbb{Q}d4$ is the missing d-pawn. This gives White a beautiful possibility: 24. $\mathbb{Q}e4!!$ and White is fully defended, on account of 24... $\mathbb{Q}xe4$ 25. $\mathbb{Q}e5\#$ $\mathbb{W}xe5$ 26. $\mathbb{W}d8\#$, so the attack stalls and White gets time to consolidate.

But luckily Black has: 23... $\mathbb{W}xg2\#$ 24. $\mathbb{B}f2$



24... $\mathbb{W}f3\#$!! This leads by force to a much better endgame. 25. $\mathbb{B}xf3$ $\mathbb{G}xf3\#$ 26. $\mathbb{Q}f1$ $\mathbb{Q}g4$ 27. $\mathbb{Q}e5\#$ (White has to cut his losses, as 27. $\mathbb{Q}g1?$ $\mathbb{B}g3\#$ is mate in two) 27... $\mathbb{Q}xe5$ 28. $\mathbb{Q}e4$ $\mathbb{B}h1\#$ 29. $\mathbb{Q}f2$ $\mathbb{B}xd1$ 30. $\mathbb{B}xd1$ $\mathbb{Q}c7\#$

Black has excellent winning chances in the endgame, but White can still offer some resistance.

My primary belief about the position, i.e. that it was all about the weak dark squares and especially the e3-pawn, led me to believe that the right move was:
21. $\mathbb{W}c1!$



I have analysed this position many times since the game was played, always disappointed to find that I was right. I just wanted to prove that 18... $\mathbb{B}xd4$ was the correct decision from an objective point of view; but it seems that

it is only on practical grounds. (18... $\mathbb{W}h3$ poses White with fewer problems to solve over the board, but the ultimate outcome in both cases is that White holds.)

21... $\mathbb{W}h2!$

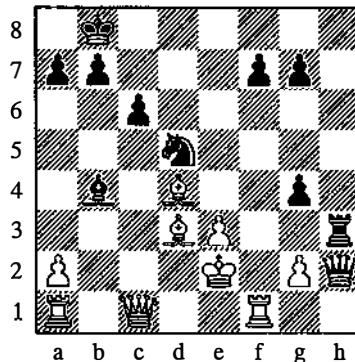
The most venomous.

21... $\mathbb{Q}xd5$ 22. $\mathbb{Q}d4$ $\mathbb{W}h2$ 23. $\mathbb{Q}e4$ c5 24. $\mathbb{Q}e5\#$ $\mathbb{W}xe5$ 25. $\mathbb{Q}xd5$ $\mathbb{W}xd5$ 26.gxh3 $\mathbb{W}f3\#$ 27. $\mathbb{Q}g1$ $\mathbb{W}g3\#$ and Black gives perpetual check.

22. $\mathbb{Q}e2!$

The only move. 22. $\mathbb{Q}d4?$ does not work here due to 22... $\mathbb{B}f3\#$!.

22... $\mathbb{Q}xd5$ 23. $\mathbb{Q}d4!$



The battle for the e3-square continues.

23...c5

For the same reason, Black has to play this.

24. $\mathbb{Q}xg7!$

This would be a difficult decision to make in a game, especially since there are numerous other possibilities.

One example is 24. $\mathbb{B}f2$, which gives Black an overwhelming attack after 24...cxsd4 25.gxh3 $\mathbb{W}g3\#$!. The complications continue, but in Black's favour.

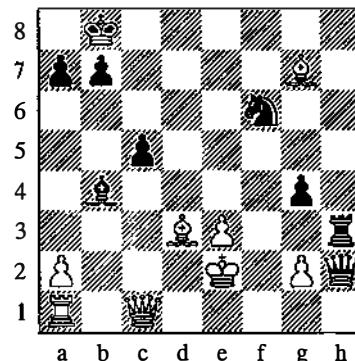
24...f6!

24... $\mathbb{B}xe3\#$ is always possible, but White has enough pieces to hold.

25. $\mathbb{B}xf6!$ $\mathbb{Q}xf6!$

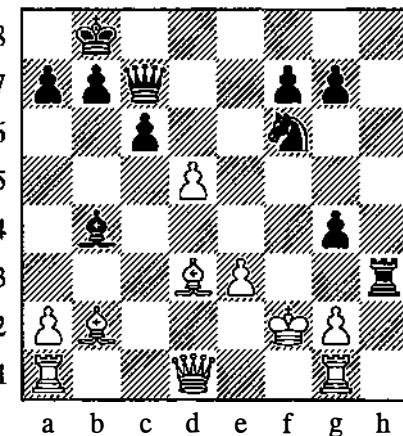
The reason why it was so important for White to include the moves 23. $\mathbb{Q}d4$ c5 lies in the variation 25... $\mathbb{B}xe3\#$ 26. $\mathbb{W}xe3$ $\mathbb{Q}xe3$, where White has the extra move 27. $\mathbb{B}f8\#$!,

making it possible to meet 27... $\mathbb{Q}c7$ with 28. $\mathbb{Q}xe3$, without Black being able to give a devastating check on e5.



26. $\mathbb{W}g1!$ c4 27. $\mathbb{W}xh2\#$ $\mathbb{B}xh2$ 28. $\mathbb{Q}xc4$ $\mathbb{B}xg2\#$ 29. $\mathbb{Q}f1$ $\mathbb{B}c2$ 30. $\mathbb{Q}b3$ $\mathbb{B}c5$ 31. $\mathbb{Q}g2$ $\mathbb{Q}e4$

Stockfish 8 claims that White is equal. I think he is a pawn down. But OK, I accept that it does not require Karpovian defensive abilities to hold.

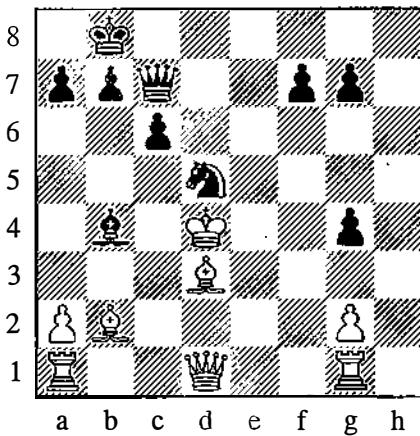


21... $\mathbb{B}xe3!!$

This was a most satisfying move to play, but not at all hard to find, as I had already seen it in other lines. It was especially easy to see this move when you remember that my main goal was still to win the game on the dark squares.

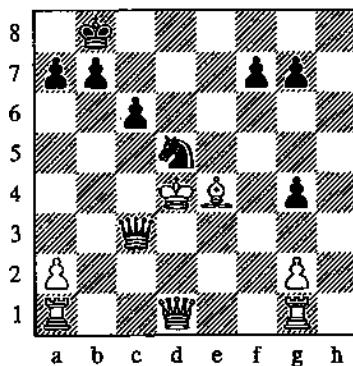
22. $\mathbb{Q}xe3$ $\mathbb{Q}xd5\#$ 23. $\mathbb{Q}d4$

23. $\mathbb{Q}f2$ $\mathbb{W}f4\#$ also leads to mate.



23...Wb6†

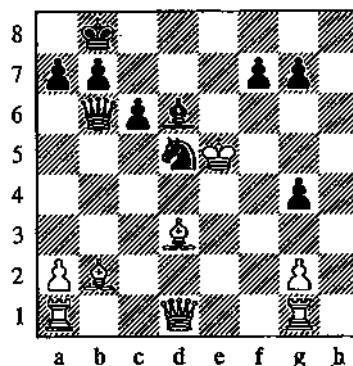
I was happy to deliver checkmate by force, and did so without much consideration. A win is a win, right? Well, afterwards I did regret that I had not played: 23...Qc3†! 24.Qxc3 Wb6† 25.Qe5 We3† 26.Qe4 Wg3† 27.Qd4 Wxc3#



With beautiful imagery on the board.

24.Qc4

On 24.Qe5 I had planned: 24...Qd6†!

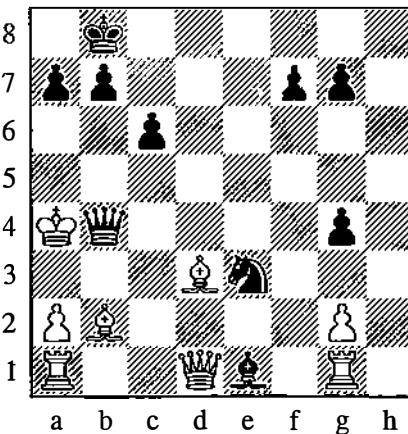


25.Qf5 (25.Qxd6 Wb4† and mate on the next move) 25...Qe3† 26.Qg5 Wd8† 27.Qh5 Wh8† 28.Qg5 Wh6# Not an unattractive finish either.

24...Qe3† 25.Qb3 Qe1† 26.Qa4

Very gallantly, Jacob allowed me to deliver checkmate.

26...Wh4#



Am I the only one that finds it attractive that all the black pieces are on the dark squares here at the end, with the knight occupying the stronghold in the white position, the e3-square, where a pawn once defended the d4-pawn, the f4-square and the diagonal from c5 to g1?

After the game, the organizer joked that the game would surely appear in my next book. “In all of them!” I roared, knowing full well that this was going to be the peak of my creativity on the chess board.

Let's have a quick rundown of the themes of the game:

1. Black managed to make full use of all of his pieces. In the final position, the five white pieces control none of the important squares.

White had more pieces, but they did not have valuable functions.

2. Black played with great intensity. Every time when his pieces were well developed, he made an aggressive move.

3. The battle centred entirely on the dark squares around the white king. The decisive mistake was not to support the e3-pawn and the final strike was 21... $\mathbb{E}xe3!!$, removing the last white pawn standing on a dark square.

4. In the final position White has two rooks more. They are controlling no important squares. All the best pieces on the board are black. The others have no function.

5. Black was attacking first the h2-square, then the g3-square and the e3-square. None of these squares were defended by any other piece than the white king.

6. By sacrificing a rook on d4, Black managed to deflect the white pieces away from the defence of important squares.

7. Black had a few revolutions. He gave up a knight on g4 and then went back to improving his position with 17... $\mathbb{B}b4$. Then he gave up the rook on d4 and improved the placement of his h8-rook. Yes, 20... $\mathbb{R}h3!!$ is spectacular seen with human eyes, but it is not actually hanging and therefore conceptually nothing else than improving the worst placed piece, so that it attacks the weakest squares in the opponent's position.

8. The killzone theme was entirely absent! The white king ran to the opposite side and was still mated, although it would have happened a bit swifter, if Black had mated him in the centre...

Gufeld's Mona Lisa seen through the dynamic concepts

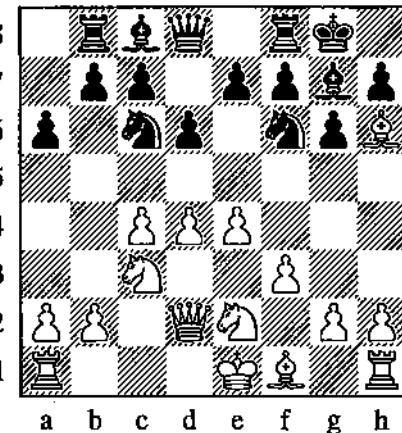
This game was played in the semi-final of the Soviet Championship, a tournament that was stronger than all other national championships in the world at the time.

Vladimir Bagirov – Eduard Gufeld

Kirovabad 1973

I do appreciate that this game will not be a novelty to some readers. It is, after all, one of the great classics of the 20th century – and unlike me, Gufeld did manage to put it in almost all of his books. If you don't know the game already, you are in for a treat; and if you do, I invite you to look at the game through a different lens, to look at it through the basic principles of dynamics laid out above. See how they all explain why the variations work.

1.d4 g6 2.c4 $\mathbb{B}g7$ 3. $\mathbb{Q}c3$ d6 4.e4 $\mathbb{Q}f6$ 5.f3 0–0 6. $\mathbb{E}e3$ $\mathbb{Q}c6$ 7. $\mathbb{Q}ge2$ $\mathbb{B}b8$ 8. $\mathbb{W}d2$ a6 9. $\mathbb{B}h6$



This game does not illustrate the colour theme very well – but then it does not have to. It is a concept, not a rule. Having said this, White is trying to weaken the dark squares

around the black king and start an attack there. The problem is that he never truly succeeded in this.

9...b5

We shall not debate Gufeld's handling of the opening. I believe that it might be a bit dubious, just like mine was.

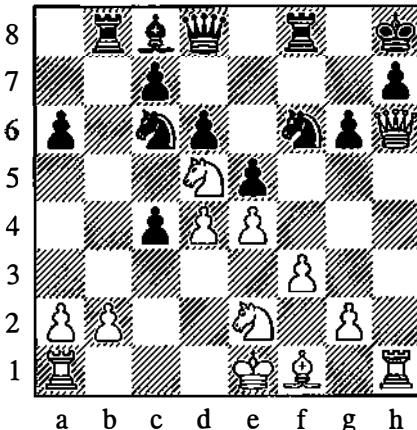
A quick look in the database suggests that 9... $\mathbb{Q}xh6$ 10. $\mathbb{W}xh6$ b5 11.h4 bxc4 12.0–0–0 c5 13.h5 $\mathbb{W}e7$ could be a critical line, but I will leave this for opening experts to debate.

10.h4 e5 11. $\mathbb{Q}xg7$ $\mathbb{Q}xg7$ 12.h5 $\mathbb{Q}h8?$

Geller gives the following line: 12...bxc4 13. $\mathbb{Q}d5$ $\mathbb{Q}xd5$ 14.hxg6? $\mathbb{Q}f4$ 15. $\mathbb{Q}xf4$ exf4 16. $\mathbb{W}xf4$ hxg6 17. $\mathbb{W}h6\#$ f6 18. $\mathbb{W}h4\#$, but here somehow misses that there is no compensation to speak of after 18...g5 19. $\mathbb{W}h6\#$ $\mathbb{Q}e7$ and the king waltzes away.

The best move might be 13.d5! with a slight edge for White.

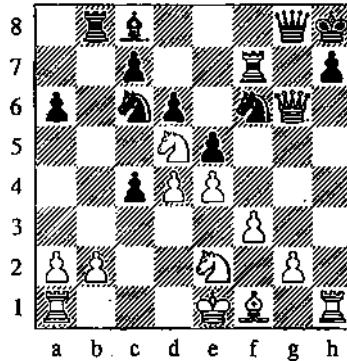
13. $\mathbb{Q}d5!$ bxc4 14.hxg6 fxg6 15. $\mathbb{W}h6$



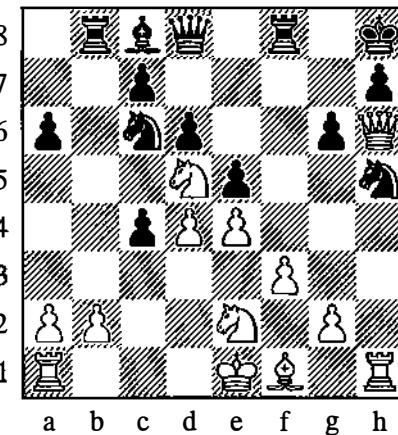
15... $\mathbb{Q}h5!$

Seen in the longer arch of the game, this is a fantastic move. The knight is sacrificed in order to stall the white attack down the h-file and let the other pieces glow in their dynamic potential. To me, this is where the game starts.

I am certain that Gufeld, playing the game one move at a time, not realizing this would be THE DAY, made a decision here based purely on elimination. 15... $\mathbb{Q}f7?$ 16. $\mathbb{W}xg6$ $\mathbb{W}g8$ loses to a nice little combination:



17. $\mathbb{W}xf6\#$! $\mathbb{Q}xf6$ 18. $\mathbb{Q}xf6$ White will regain the queen, keeping an extra pawn and a big positional advantage.



16.g4?

Bagirov plays the most aggressive move, but it is a bit like a bad James Bond movie, jumping out of an aeroplane without a parachute, hoping to catch the villain and take his parachute.

Playing 16.0–0–0! would be equivalent to putting on your own parachute first and loading your Walther PPK before taking the jump, one frame later. Or to speak in the terms

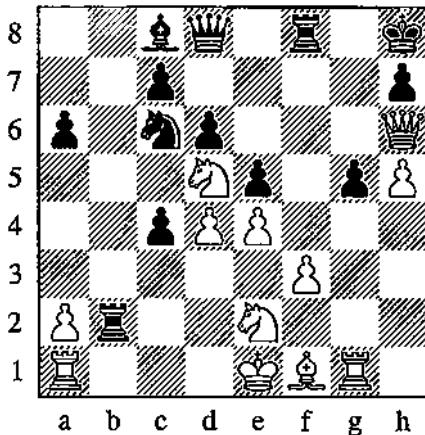
of our strategic concepts, White decides to develop his pieces before he begins the attack.

The text move throws the advantage away, allowing Black to advance his own ideas.

16... $\mathbb{B}xb2$

This sacrifice was already decided on the last move.

17. $g\text{x}h5$ g5 18. $\mathbb{B}g1$



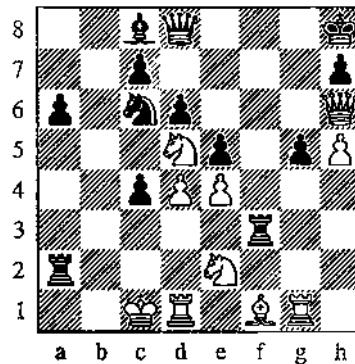
18...g4!

The first star move of the game. The g-file is kept closed for quite a while now.

18... $\mathbb{B}xf3?$

This also looks energetic, but after 19.0–0–0 $\mathbb{B}xa2$

it is White who has the chance to make the most out of his pieces. As we know, when you attack, it is important to find a function for all of the pieces and to act with the greatest intensity possible.



20. $\mathbb{Q}ef4!!$

This not only clears the way for the bishop on f1 to enter the attack with a gain of tempo (there is a knight check on g6 threatened after all), it also blocks the f-file for Black. This is important because 20. $\mathbb{B}xg5$ $\mathbb{W}f8$ leads to equality.

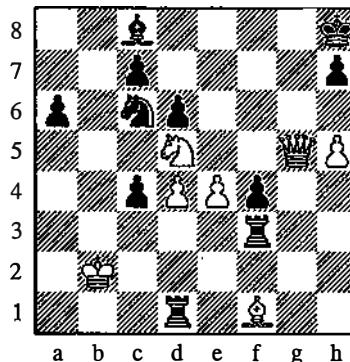
20...exf4

20... $\mathbb{B}ff2$ threatens mate in one, but White has a few useful checks: 21. $\mathbb{Q}g6\uparrow$ $\mathbb{W}g8$ 22. $\mathbb{Q}de7\uparrow$ $\mathbb{Q}xe7$ 23. $\mathbb{Q}xc4\uparrow$ and White takes the rook on a2 with a winning advantage.

21. $\mathbb{B}xg5$ $\mathbb{B}a1\uparrow$ 22. $\mathbb{Q}b2$

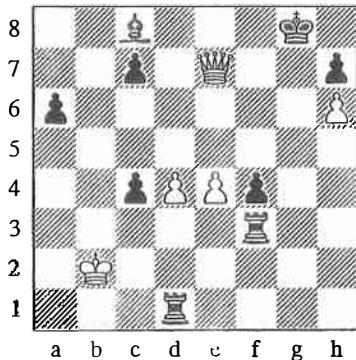
Not the only move, but the most forcing and thus the most human.

22... $\mathbb{W}xg5$ 23. $\mathbb{W}xg5$ $\mathbb{B}xd1$



Black is not completely out of counterplay. For example: 24. $\mathbb{Q}xc4$ $\mathbb{B}f2\uparrow$ 25. $\mathbb{Q}c3$ $\mathbb{B}c1\uparrow$ and Black has a curious perpetual going. Therefore White needs to keep up the momentum.

24. $\mathbb{W}f6\#$ $\mathbb{Q}g8$ 25. $\mathbb{Q}e7\#!$ $\mathbb{Q}xe7$ 26. $\mathbb{Q}xc4\#$ $d5$
 27. $\mathbb{W}xe7$ $dxc4$ 28. $h6!$

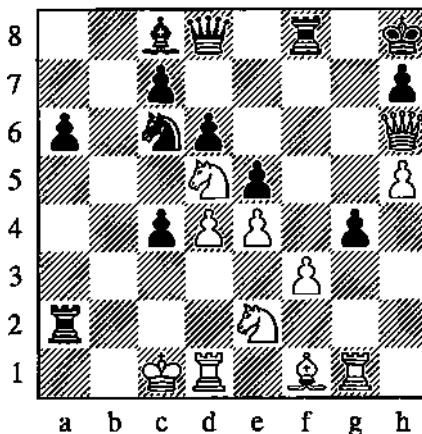


The second revolution is over. It is now Black's turn to give some checks. They will run out eventually, after which he is faced with the deadly threats of $\mathbb{W}e8\#$ and $\mathbb{W}g7\#$.

19.0–0–0!?

The most combative move, but objectively it is neither worse nor better than some others.

19... $\mathbb{E}xa2$



20. $\mathbb{Q}ef4?$

This aggressive move is refuted by one of the great attacks in chess history.

20. $\mathbb{Q}h3?$ was mentioned by Geller, but 20... $\mathbb{E}f7!$ defends the g7-square for at least a

move, making 21. $\mathbb{Q}xg4$ $\mathbb{Q}xg4$ 22. $\mathbb{E}xg4$ useless on account of 22... $\mathbb{W}b8$ with mate on the horizon.

The correct approach was 20. $dxe5!$ $\mathbb{Q}xe5$ (Black cannot play 20... $dxe5?$ 21. $\mathbb{Q}ef4$ $\mathbb{E}xf4$ 22. $\mathbb{Q}xc4$ $\mathbb{Q}a1\#$ 23. $\mathbb{Q}b2$ $\mathbb{E}xd1$ 24. $\mathbb{E}xd1$ $\mathbb{Q}xf3$ 25. $\mathbb{Q}f4$ and White wins) 21. $\mathbb{Q}ef4$ $\mathbb{Q}g8!$ 22. $\mathbb{Q}g6!$ $hxg6$ 23. $hgx6$ $\mathbb{W}d7$ 24. $\mathbb{E}h1$ when Black has to play energetically not to lose. For example: 24... $\mathbb{E}c2\#!$ 25. $\mathbb{Q}b1$ $\mathbb{W}b5\#$ 26. $\mathbb{Q}xc2$ $\mathbb{W}a4\#$ 27. $\mathbb{Q}d2$ $\mathbb{W}a2\#$ with a perpetual.

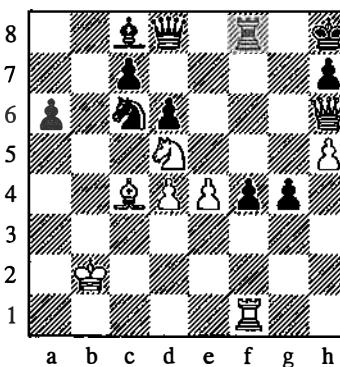
20... $\mathbb{E}xf4$ 21. $\mathbb{Q}xf4$

This was obviously the idea behind White's last move and I am sure Bagirov played it relatively quickly; or if not, he was thinking about decisions to make down the line, not whether or not he wanted to continue with the planned line of attack.

21. $\mathbb{Q}xc4$

This was better according to the engine, but Black still has the upper hand:

21... $\mathbb{E}a3!$ 22. $\mathbb{Q}b2$ $\mathbb{E}f3$ 23. $\mathbb{E}df1$ $\mathbb{E}xf1$ 24. $\mathbb{E}xf1$



And now it is time for a deep move, which wins the fight for the vital f4-square.

24... $\mathbb{Q}e5!$

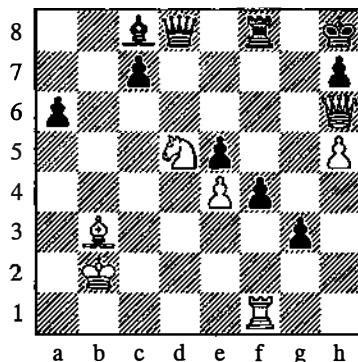
The basic idea is to recapture with the pawn in order to defend the f4-pawn and prevent White's knight from getting there.

25. $\mathbb{Q}b3$

White needs the bishop. After something like 25.♕xf4 ♕xc4† 26.♔c3 ♔g8 there is no attack and, for a start, Black is a pawn up with a much better king. On top of this, White is pinned down the f-file.

25...g3! 26.dxe5 dxe5

But not 26...g2? 27.♕xf4! and Black is mated.



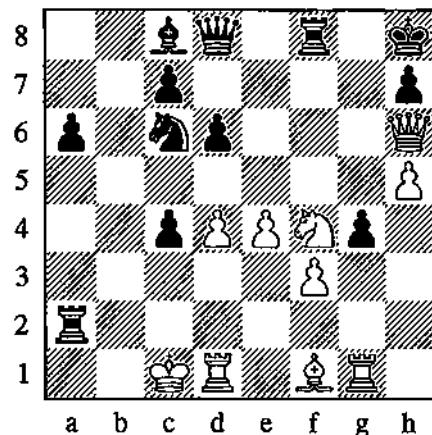
There are still a lot of complications left, but Black appears to be in the driving seat:

27.♗d1

27.♕xc7 ♖f6! and the pawns will claim the rook soon enough.

27...♖d6! 28.♖g5 h6 29.♖h4 ♜e6

Black is winning in the long term.



Gufeld was a highly talented attacking player and I doubt that the following moves were difficult for him to decide on.

21...♝xf4

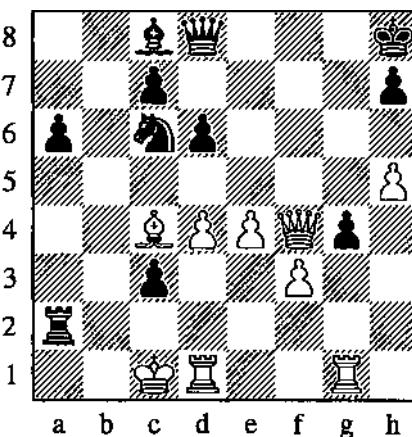
I am not really sure what Bagirov had expected. There is no point in allowing the knight check on g6 for Black, so he has to give up the exchange. Did he somehow delude himself and believe Black would meekly retreat his knight to e7? Your guess is as good as mine. What I do know is that by giving up the exchange, Black wins an important tempo and is able to set up a mating net around the white king, from which he shall never escape.

22.♛xf4 c3!

Creating the threat of ...♝b4 followed by ...♝a1#. The pawn is an attacking piece and, as we shall see, one of the strongest in the entire game.

23.♝c4

White manages to win a tempo; but it is only one, and Black is able to steal it back in the near future.



23...♝a3!!

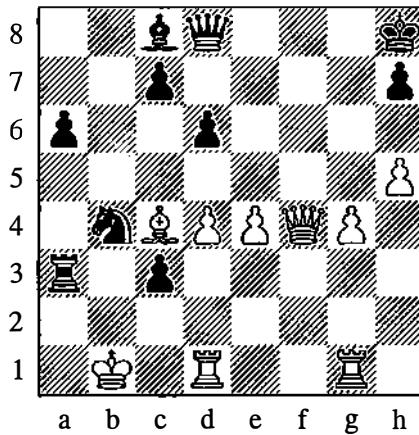
Only on this square. The reason becomes clear in the note to the next move.

24.fxg4

24.♜f7 ♛b4 25.♝b1 c2† 26.♝b2 cxd1=♛
27.♝xd1 ♛xf3 This is the key move made possible by ...♝a3. I do not for a moment

think that Gufeld saw or realized that this was a key move in this line, but I am certain that he realized it was a key move in many lines, as it wins time and protects important squares around the king. That the queen is trapped is purely incidental.

24...Qb4 25.Qb1



White is preparing $\mathbb{A}df1$ with counterplay, but Gufeld had a great feeling for the need to play with momentum and also realized that the bishop had no function at all, but could be exchanged for a tempo.

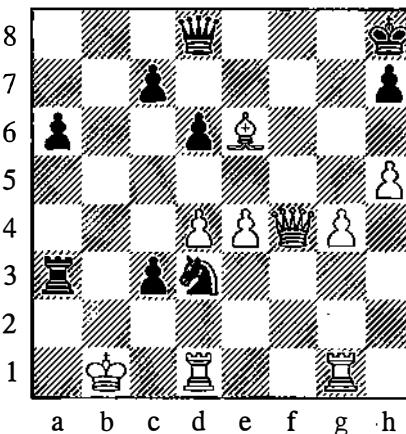
25...Qe6!!

$25...c2\# 26.\mathbb{Q}b2 cxd1=\mathbb{W} 27.\mathbb{Q}xd1\pm$ would leave Black a piece up, but his kingside is extremely exposed and White has managed to rid himself of the various headaches he was struggling with. To put it another way: the black pawn was more powerful than the white rook.

26.Qxe6

White has no alternative.

26...Qd3!!



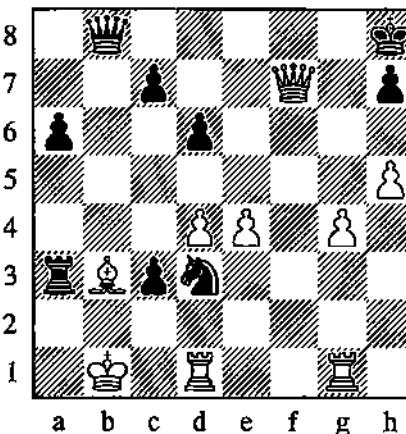
Classic clearance, but also a good example of momentum. The knight is sacrificing itself, in order to bring the queen into the attack.

27.Qf7!

The attack meets a great obstacle in the form of Bagirov's desperado.

27...Qxd3? Qb8# is child's play.

27...Qb8# 28.Qb3!



The trick! Black's attack seems to come to an impasse. Could it be time to bail out with $28...d5$ and allow White to give a perpetual?

28...Qxb3#

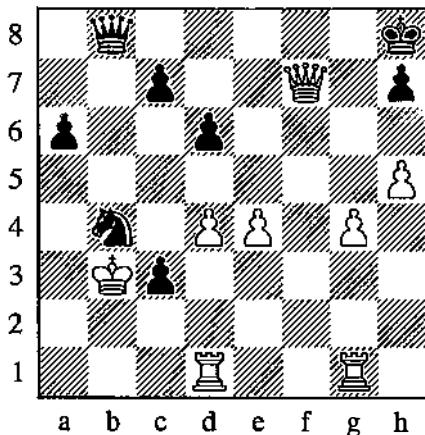
You can, with fairness, accuse me of leading the witness.

29.♕c2 ♜b4†!

The final sacrifice. Getting the queen close to the king with check is all that matters.

30.♔xb3

30.♔c1 ♜b1†! transposes.



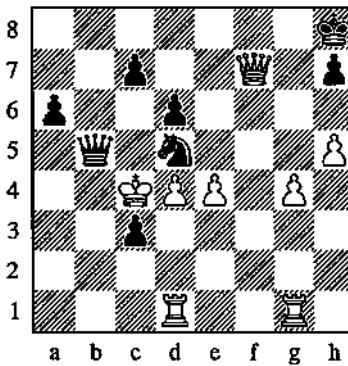
30...♜d5†!

Defending the c3-pawn.

31.♔c2 ♜b2† 32.♔d3 ♜b5†

0–1

White resigned. The game should have ended with: 33.♔c2 ♜e2† 34.♔b3 ♜b2† 35.♔c4 ♜b5#



When you are on the road, you take your downtime when you can. Here in Hong Kong, enjoying a quick rest while the others were at the restroom.

What can we learn about our strategic themes from this game?

1. Gufeld managed to make something out of all of his pieces. If they did not have attacking potential, they were able to delay or deflect the opponent.
2. Gufeld played with great intensity. The moment the attack got going, he played with immense energy. And this energy meant he arrived at the battle scene half a move before the opponent.
3. The absence of the dark-squared bishops made it harder for each side to both attack and defend. In the end, b2 became the most important square and the pawn on c3 dominated it.
4. Gufeld's pawn on c3 was worth more than a rook. The pawn was controlling the pivotal b2-square, whereas the white rook was not defending it.
5. With a knight on c3, no dark-squared bishop and the queen on h6, it is no surprise that Black constantly attacked the b2-square. In the opposite corner of the board, he managed to keep the white knights away from g6 and the white queen away from f6.
6. There were beautiful tactics related to seemingly strong squares in the opponent's camp. White had this knight sacrifice on f4, which did not work in the game, but worked in a lot of the lines. Also, some ♜e7† tactics were quite important. Just because the opponent controls a square does not mean you cannot use it.

On the other side, we had tactics like 26...♜d3!!, whereby a square that was seemingly defended proved to be accessible to the black pieces. But to me, the tactics connected with ♜ef4 provide the best illustration of this theme.

7. Two key moments in the game were when White did not play 16.0–0–0! with an advantage and when Black played 23...♝a3!!. In both cases, a small regrouping was needed before the position was transformed through energetic actions.

8. Black resisted the temptation to check the white king on a1 with the rook, and especially to play ...c2† at times.

Finally, 32...♛b5†!, the last move of the game, draws the white king back to the queenside, where he had to walk through a crowd of hostiles, before being slain in the middle of the board.

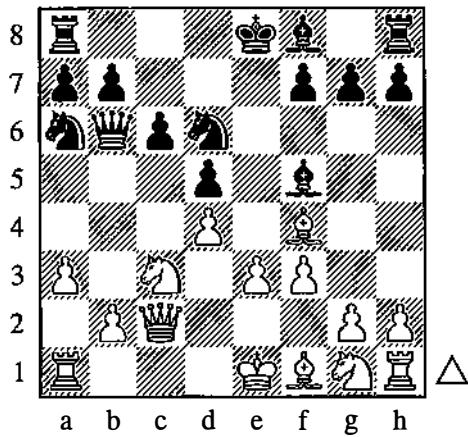


Chapter 12

Openings

Lars Schandorff – Jacob Aagaard

Skorping 2014

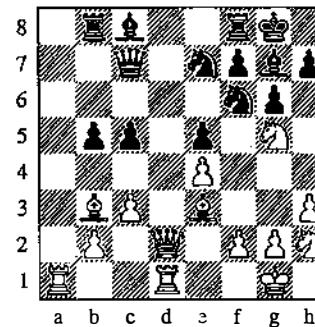
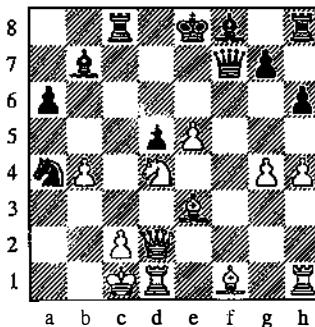


White to play

The psychology of the surprise is an interesting part of opening play that is too often underestimated in preparation and overestimated at the board! At this point White felt on the run, but if he had calmed down a bit, he could have found a really nice way to continue the game.

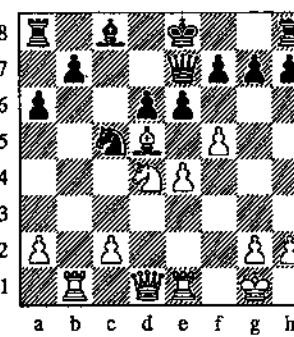
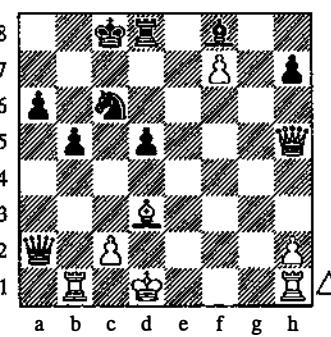
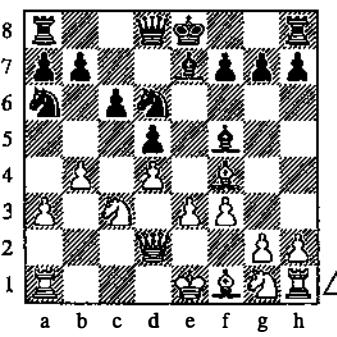
Test yourself against the book

This book is not an exercise book, but an experienced trainer can always find interesting moments in games that can be more effective for the student if he thinks about them first. On this page, I have included a few positions from this chapter that you can look at, should you feel so inclined. As long as it does not make you put off reading the chapter!



Which surprising move did
I not even look at?
(see page 297)

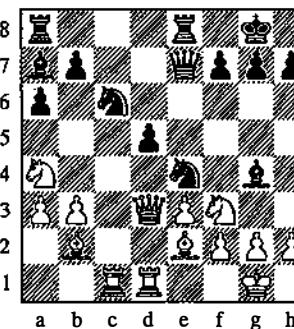
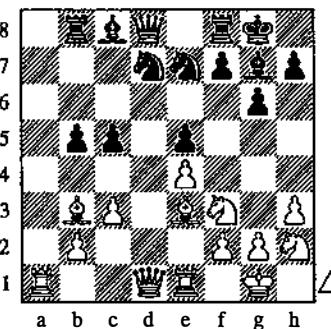
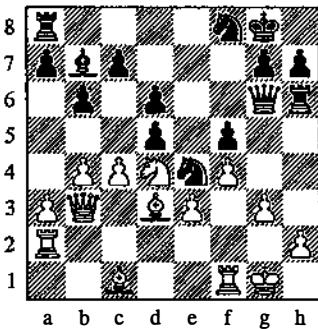
Black is ready for ...c4.
What do you do?
(see page 302)



White was soon worse.
How should he have played?
(see page 292)

White is better, but how should
he consolidate his advantage?
(see page 299)

Wei Yi is good at the quick kill!
(see page 308)



An easy one
(see page 295)

A small positional move that
I was quite proud of
(see page 301)

Everything is ready!
(see pages 310/1)

One of the reasons Mark Dvoretsky's teaching resonated so much with me was his dislike of opening theory. Whenever someone told him that opening theory was very important *now*, he would assure them that it was always very important.

Some people are naturally drawn to opening theory; they like analysing lines and are on the quest for new ideas. Others hate opening theory and try to dodge their opponent's preparation all the time.

I belong to a different group, the most common group among chess players. I would have loved to have a strong and detailed opening knowledge, but I was not willing to put in the effort. Over many years of trying different things, I eventually ended with some ideas that worked for me. I would like to share them, with the great caveat that I am not an openings expert, and I do not want to pass on my thoughts as a system that can be replicated, but rather a few ideas that might be useful while you develop your own approach.

Building a repertoire

The most important part of building a repertoire is to find positions that you enjoy playing. There is a good chance that positions you like will also be the positions you will play well. I remember that when we were in our teens, Sune Berg Hansen told me that young players should play very sharp positions.

It is common for young people to give advice and try to learn from each other; we were no different. But everyone I know who really excelled at an early age, took advice from someone older than themselves. It is easy to have opinions on things you do not have a lot of experience of, as we can see on social media every day, especially extreme opinions. But a valuable opinion does not come easy.

Sune's advice was good advice for me, but not for him. Based on it, I played the Sicilian, King's Indian and 1.e4. In time, I ditched the KID, the requirement for accuracy being too demanding for my intuitive style. I took up the Nimzo-Indian and did very well with it. I based my openings around positions where accurate knowledge was less important, and an understanding of how to play the positions was more important.

Building a repertoire based on who you are is really important. To start thinking about this, Chapter 3, *Who Are You?* will hopefully give you some inspiration.

Memorization

Towards the end of my playing career, this strategy was working less and less. I tried to catch up, but my motivation was fading. This was indeed a big part of the reason why I retired from tournament chess. I felt that I needed to change the way I worked on chess, just to retain an already decreased level.

If I was starting over at this point, I would slowly build up a repertoire and, more than anything, I would spend a lot of time memorizing it. A few players have a great memory and only have to check their analysis; this was never me. I developed the following simple method for checking my analysis, which I used in the last five years of tournament chess: I would have ChessBase files with my analysis; I would put the setting on *Training*, go through the files, speaking the moves out loud before revealing them. This was a form of interactive memorization that worked well. The few times I had a second available in the flesh, I would ask him to help me to go over the lines

repeatedly on the board. This is also what I have offered to the players I have seconded myself. Which brings me smoothly to my next point.

Get a second

Once I realized that people do not succeed on their own very often, despite the strong myths connected to doing so, I hired a trainer, Artur Yusupov, to go over my games with, and asked John Shaw to help me prepare for tournaments over the phone. This worked really well for a few tournaments in 2007, as you will have seen throughout this book.

Later on, Nikos Ntirlis came into my life, which we will talk about below. He helped me during some tournaments with great results; at least in the opening. What happened thereafter is not something I would blame him for!

An important thing I learned from working with seconds is that the player needs to take charge and the second has to analyse exactly what they are asked to analyse. I have discussed this with others and realized that it is a common problem that the second is asked to analyse one line, but decides for some reason to abandon it in place of some idea they were eager to make work. The player then asks for the line an hour before the game and they have not checked it, creating a weak link in the preparation. However, if the player is well organized and the communication with the second is good, it can be a very useful experience.

The element of surprise

I was in Moscow for the 2012 World Championship match, rooting for Boris Gelfand. I was not a part of the team, but had helped Boris with training material in advance of the match as usual. What I learned from following the games was the immense practical value of the element of surprise. Both players spent months preparing a new repertoire as Black. Anand prepared a Semi-Slav variation with an early ...a6 and Boris prepared the Grünfeld and the Sveshnikov Sicilian. With their first outings, these openings all yielded easy draws. As the match grew older, they came under pressure. Anand lost in the 7th game, after Gelfand had managed to find a nice new idea on the free day (see *Positional Decision Making in Chess*, page 192). Having already faced difficulties in the 3rd game in the Grünfeld, Gelfand lost Game 8 in the same opening. Later on, he struggled in the Rossolimo Sicilian (3...b5), which Anand team member Surya Ganguly called *the refutation of the Sveshnikov*, spending too much time solving his problems in the second rapid game, eventually losing a holdable endgame and thereby the match.

I started incorporating the element of surprise more and more in my games, with great results. I would spend time between tournaments learning new openings or revising old favourites, coming to the board with something surprising and fresh, which I had looked at in detail. The reason this worked well is obvious; we cannot prepare well for everything. So, if you have prepared well for an opening the opponent is not up-to-date on, you are already ahead.

I was certain I was not the only one learning this lesson. During the 2013 World Championship Match, I was as surprised as everyone else to see Carlsen playing the Caro-Kann in the first game. I immediately realized that it was a bluff, a one-off. The game was an easy draw and the Caro-Kann did not return in the match, serving its dual purpose: securing a draw and distracting Anand's team.

There are other stories of surprises in the World Championship matches. A legendary one was when Peter Leko prepared 1.d4 against Vladimir Kramnik for Brissago 2004. Kramnik was

entirely unprepared for this and almost lost the title. Part of the reason why he managed to retain the title by drawing the match was that he won Game 1 as Black in the Petroff...

Because my openings were a bit shaky, I preferred to be a moving target with Black. The idea of showing up to the board with decent preparation in a variation my opponent had no chance of preparing for was very attractive. But even more attractive was preparing a system of surprises for my opponents.

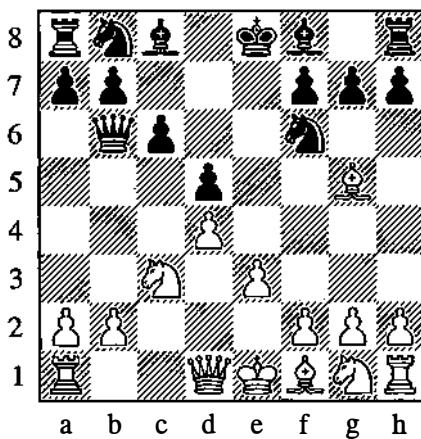
In the 2014 Danish Championship, I got a good piece of prep in against Simon Bekker-Jensen in Round One. The game can be found on page 215. It was all based on 6. $\mathbb{W}c2$ being a slightly odd move order, allowing this new idea.

In Round 5 I was Black against Grandmaster Lars Schandorff, who had prepared for me repeating the Queen's Gambit as well. I am sure he had some idea in the Classical main line, but I beat him to it with a tricky sideline.

Lars Schandorff – Jacob Aagaard

Skorping 2014

1. d4 d5 2. c4 e6 3. $\mathbb{Q}c3$ $\mathbb{Q}f6$ 4. cxd5 exd5
5. $\mathbb{Q}g5$ c6 6. e3 $\mathbb{W}b6!$?



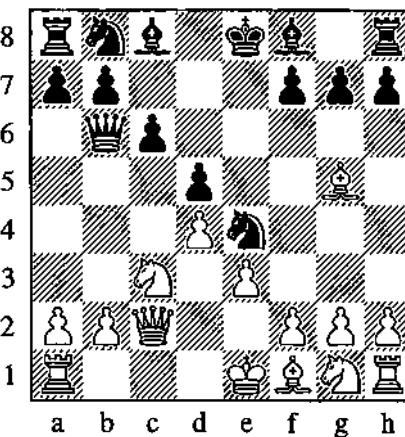
Lars was obviously surprised by this sideline. If he had ever checked the theory of it, it would have been decades earlier. I did not think this was a very good line, but I knew that refuting it at the board would be really difficult and that the complications would be taxing for my opponent.

7. $\mathbb{W}c2$

7. $\mathbb{W}d2$! is the real problem with this variation. The idea is 7... $\mathbb{Q}e4$ (not necessarily the best move) 8. $\mathbb{Q}xe4$ dx $e4$ 9. $\mathbb{Q}e2!$ and compared to the game, White does not have to worry about a check on a5 winning a piece.

7... $\mathbb{Q}e4$!

This pawn sacrifice is the key idea. Yes, there are some complications after 7. $\mathbb{Q}xf6$ $\mathbb{W}xb2$, which Nikos had analysed for me, and which I had gone over again and again. The complications are probably OK for Black, but more importantly, they are placed in a non-obvious and treacherous terrain.



8. $\mathbb{Q}f4$!

Lars wisely decided to avoid my preparation, but it was costing him a lot of time. He probably should have made this decision quicker.

8. $\mathbb{Q}xe4$ dx $e4$ 9. $\mathbb{W}xe4\#$ $\mathbb{Q}e6$ gives Black compensation for the pawn, but is also playable

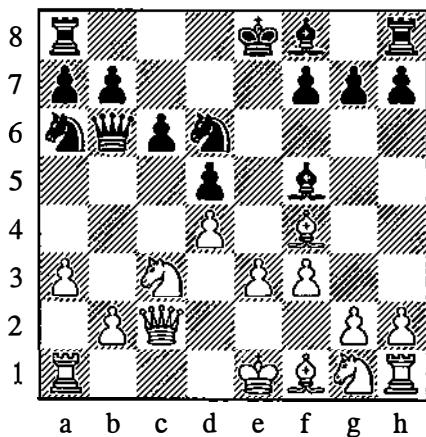
for White. But what sane person would go into such complications, playing against an engine rather than a human being?

8... $\mathbb{Q}a6$ 9. $f3$!?

Lars is shaping the game in his own way, but he was taking too much time.

9. $a3$ $\mathbb{W}a5$ 10. $\mathbb{B}a2$? was also a decent choice, but when your opponent is playing fast, it is hard to make such moves.

9... $\mathbb{Q}d6$ 10. $a3$ $\mathbb{B}f5$!?

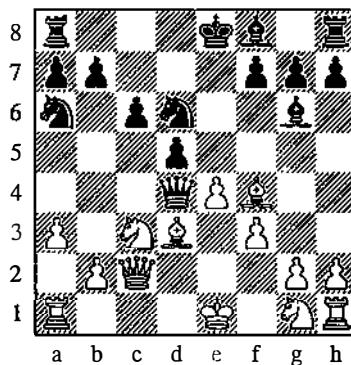


There is some psychology involved with this decision. Lars has been caught out and is burning a lot of time, meaning I am on the offensive. The facts on the board do not support this feeling, but this was our reality at the time.

10... $\mathbb{Q}e7$ 11. $\mathbb{Q}d3$ $\mathbb{Q}c4$? with a complex game was probably better.

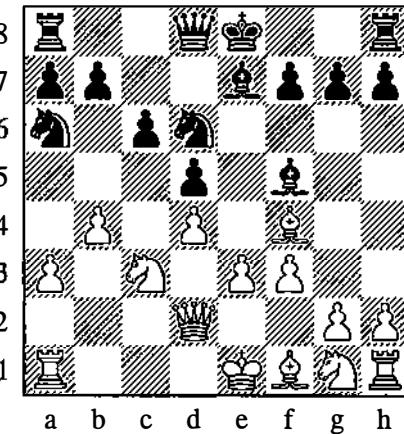
11. $\mathbb{W}d2$!?

11. $e4$! $\mathbb{Q}g6$ 12. $\mathbb{Q}d3$! would have allowed White to play for an advantage still: 12... $\mathbb{W}xd4$?



13. $\mathbb{Q}xa6$ $bxa6$ 14. $\mathbb{Q}b5$!! is the beautiful tactical point underpinning everything. This is difficult to see for ordinary grandmasters like Lars and myself, but not impossible. But in order to see it, the feeling of things going your way needs to be present as well.

11... $\mathbb{Q}e7$ 12. $b4$ $\mathbb{W}d8$



13. $\mathbb{Q}a4$?

During the game I was sure that Lars would play 13. $\mathbb{Q}xd6$ $\mathbb{Q}xd6$ 14. $\mathbb{Q}xa6$ $bxa6$ 15. $\mathbb{Q}ge2$, when I would have long-term issues with my pawns. On the other hand, I would have strong bishops. I believed White would be better, but the machines say that I am OK. Who knows which narrative would have won?

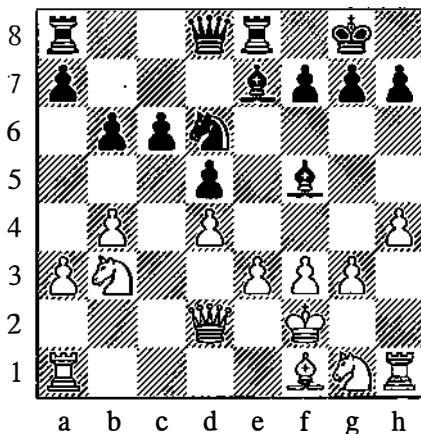
13... $\mathbb{Q}c7$

Lars was thinking for a long time here, realizing that everything had gone wrong.

14.♕f2

14.♕xd6 ♕xd6 15.♕c5 does not work on account of 15...b6 16.♕b7 ♘h4† and the knight is in trouble on b7.

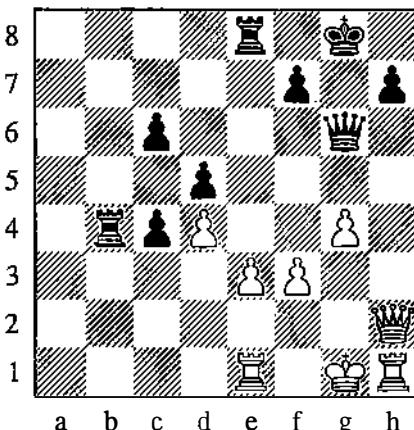
14...0–0 15.g3 ♘cb5 16.♕c5 b6 17.♕xd6 ♕xd6 18.♕b3 ♘e8 19.h4



19...g5?

I was playing too impulsively and regretted this move rather quickly. Why would I weaken my position unnecessarily? So even though this is playable and even considered a top choice by the computer, I wished I had played 19...a5! 20.bxa5 ♘c4 21.♘c3 b5, when things would work out to my advantage easily.

20.hxg5 ♘xg5 21.♗e1 a5 22.♕h3 axb4 23.axb4 ♘a3 24.♕xg5 ♘xb3 25.♕h3 ♘f6 26.♕f4 b5 27.g4 ♘g6 28.♗g1 ♘c4 29.♘xc4 bxc4 30.♘xg6 ♘xg6 31.♗h2 ♘xb4



Lars resigned. He could have resisted with 32.♘f4 ♘e6 33.♗f2 ♘b2† 34.♗g3 and the win is still some way away, although the advantage is great. But Lars was running out of time and had no fight left in him.

0–1

After the game Sune Berg Hansen suggested that I should have the words *Queen's Gambit Forever* tattooed on my arm, having scored 3/3 in the tournament so far with the opening. I was leading with 4/5 at that point, but sadly I did not win any more games, and will never win the Danish Championship.

Guessing the opponent's opening choices

When I was young I was really poor at preparing for my opponents, but once I got to my mid-30s I turned it around and became good at it. I found that there was no big secret to it, it was all about being systematic and think strategically before the game started.

Against players who played the same openings all the time, it is necessary to go deep and find something valuable. This is where a second comes in especially useful, of course. But at the same time, if you get a reputation for being dangerous in the opening, some players will abandon lines they have played for years, but when they do, they will often aim for minor variations. I have exited the opening

with a good position many times, as well as plenty of time on the clock, despite my opponents “surprising” me with a new variation of the Najdorf, for example.

There is another thing I worked out that you should always take into account: people prefer not to do the work twice; they are lazy. If they prepare something, they will be eager to use it later on, rather than spending more time on preparation. I am the same. If you look at your opponent’s games in that context, you will be able to see what they had intended in previous games where their opponents chose to deviate from their normal preparation. If you are able to guess what they were intending, you can surprise them with that opening and they will be likely to use that preparation against you. But they will not remember it so well anymore, and you will know that it is coming and have a chance to use tricks and traps.

I was once seconding a very strong grandmaster for a team tournament where he got to be Black against the same player twice. For the first game, I had worked out that his opponent liked to play things that had been played against him by others, and made a list of possible choices. We checked the top five options carefully and he played the sixth. The game was a quick draw.

When the players faced each other the second time around, I had warned my player that his opponent was unlikely to deviate. He would “surprise” him with the same variation, as a sort of double bluff. Why? Because he liked to use his preparation. My player won the game in great style in 25 moves...

In short, I have found that being systematic and doing the slow, careful work is the path to guessing your opponent’s opening choice. Try to work out their system; because everyone has a system. Once you have done this, you will be able to work out a list of possible options. Rank them and make sure that you prepare for them in order. You will never be able to prepare for all options, but make sure you are ready for the most likely ones.

The following game was very important to me. It was played in the Scottish Championship, and with a win I had a decent chance of winning the tournament. I have an entirely dual national identity, with a Danish foundation and a Scottish commitment. Of the two championships, even if the Danish has often been more interesting and offered better financial conditions, the Scottish has for some reason always been more important to me; probably because my children are Scottish.

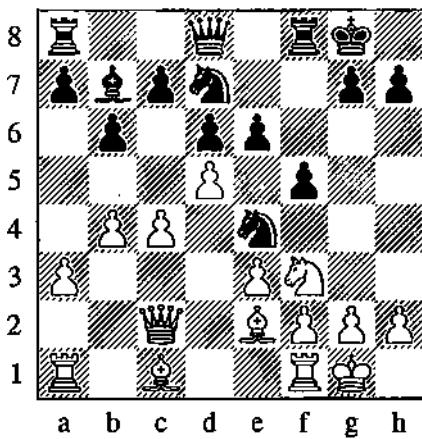
My last-round opponent was an International Master from Belgium who had a tendency to repeat a few lines. I managed to get my preparation in and won the game without having to do anything independently. It was the second time this happened in the tournament, which was the reason I was still in the running at this point.

In the end, my main rival for the Championship won a great game in the last round and took the title on tie-break, but we cannot control how others play...

Jacob Aagaard – Jan Rooze

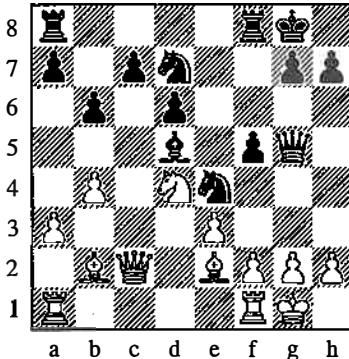
Edinburgh 2015

1.d4 $\mathbb{Q}f6$ 2. $\mathbb{Q}f3$ e6 3.c4 $\mathbb{Q}b4\ddagger$ 4. $\mathbb{Q}bd2$ b6
 5.a3 $\mathbb{Q}xd2\ddagger$ 6. $\mathbb{W}xd2$ $\mathbb{Q}b7$ 7.e3 $\mathbb{Q}e4$ 8. $\mathbb{W}c2$ f5
 9.b4 0–0 10. $\mathbb{Q}e2$ d6 11.0–0 $\mathbb{Q}d7$ 12.d5!

12... $\mathbb{W}f6?$

This is a serious mistake. Black cannot allow the knight to come to d4.

12... $\mathbb{W}xd5\?!$ reveals White's idea. 13. $\mathbb{Q}d4$ $\mathbb{W}f6$
 14.cxd5 $\mathbb{Q}xd5$ 15. $\mathbb{Q}b2$ $\mathbb{W}g5$



16.f3?! White has many ways to get a big advantage, this being the most spectacular.
 16... $\mathbb{W}xe3\ddagger$ 17. $\mathbb{Q}h1$ $\mathbb{Q}ef6$ (17... $\mathbb{Q}f2\ddagger$ 18. $\mathbb{W}xf2$ 19. $\mathbb{Q}c4\!\pm$ was the point) 18. $\mathbb{Q}xf5\pm$ White won in Kempinski – Warakomski, Karpacz 2008.

12...e5 13. $\mathbb{Q}d2$ $\mathbb{Q}xd2$ 14. $\mathbb{Q}xd2\pm$ was the sort of joyless life I wanted for my opponent. For example: 14... $\mathbb{W}h4$ 15.f4 $\mathbb{Q}ae8$ 16. $\mathbb{Q}d3$ e4 17. $\mathbb{Q}e2\pm$ and White later won in Gelfand – Tomashevsky, Sochi 2014.

13. $\mathbb{Q}d4$ $\mathbb{Q}f8$

13... $\mathbb{W}xd5$ 14.cxd5 $\mathbb{Q}xd5$ 15.f3 was already winning in Iturriaga Bonelli – Venkatesh, Rochefort 2015.

13... $\mathbb{Q}h6\?!$

This was successful in one game, but it does not work.

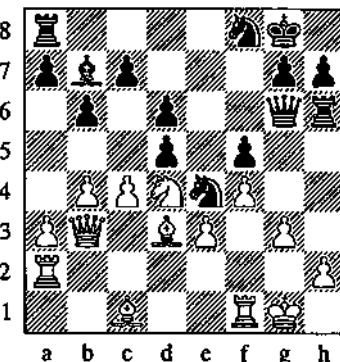
14.g3!

14. $\mathbb{Q}xe6$ $\mathbb{W}h4$ 15.h3 $\mathbb{Q}e8$ also should not work for Black, but who would take this risk needlessly?

14... $\mathbb{Q}f8$ 15. $\mathbb{Q}a2\?$

This is a very strange move.

15.f3! $\mathbb{Q}g5$ 16.dxe6 was winning in Tarasova – Lingur, Moscow 2016.

15... $\mathbb{W}g5\pm$ 16.f4? $\mathbb{W}g6\ddagger$ 17. $\mathbb{Q}d3$ exd5 18. $\mathbb{W}b3\?!$ 

18... $\mathbb{Q}xg3\!!$ 19. $\mathbb{Q}g2$ $\mathbb{Q}e2\ddagger$! 20. $\mathbb{Q}xe2$ $\mathbb{W}xg2\ddagger$
 21. $\mathbb{Q}xg2$ dxec4†

And 0–1 in 29 moves in Beckhuis – Jakubowski, Dresden 2007.

14.f3 $\mathbb{Q}g5$ 15.dxe6!

15. $\mathbb{Q}b2$ is maybe slightly more accurate for the reason mentioned in the next note, but that is hardly relevant.

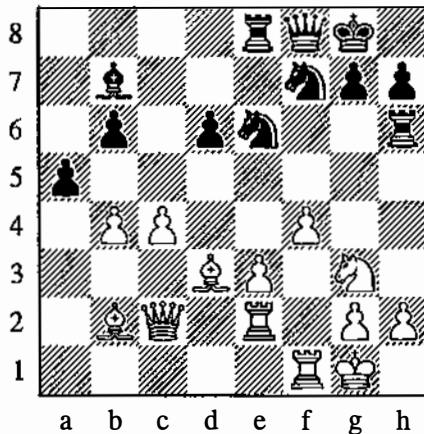
15...Qfxe6

I never considered that 15...f4 was a better way for Black to lose the pawn. I just took the pawn...

16.Qxf5

The fight is over, but the game continued for quite a while.

16...Qf8 17.Qd3 Qf7 18.f4 Qe8 19.Qb2 Qg6 20.Qg3 Qh6 21.Qael c5 22.Qe2 cxb4 23.axb4 a5

**24.Qf5 Qh5**

My plan was the curious 24...Qg6 25.Qh4 Qh6 26.Qxh7†! Qxh7 27.Qg6 and the queen is trapped.

25.g4 Qh3 26.Qe4 Qxe4 27.Qxe4 h5 28.g5 Qfd8 29.Qd5 Qh8 30.Qg2

1-0

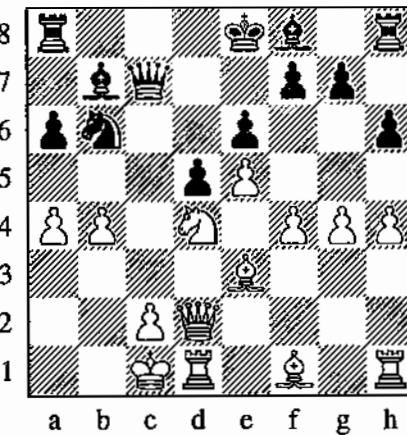
Play with conviction

I was once debating which line to play against the Najdorf with Emil Hermansson. I had in general played quiet systems, like 6.Qe2 for example, covering up my lack of theoretical knowledge. He suggested that I should play 6.Qe3 if I wanted to prepare in depth. His reasoning: the rewards for knowing more than the opponent are greater there. He was right.

Jacob Aagaard – Johan Eriksson

Sweden 2000

1.e4 c5 2.Qf3 d6 3.d4 cxd4 4.Qxd4 Qf6
5.Qc3 a6 6.Qc3 e6 7.f3 b5 8.Qd2 Qb7
9.g4 h6 10.0–0 Qbd7 11.h4 b4 12.Qa4
Qa5 13.b3 Qc5 14.a3 Qxa4 15.axb4 Qc7
16.bxa4 d5 17.e5 Qd7 18.f4 Qb6



So far this was all preparation from both of us.

19.f5?

The most direct.

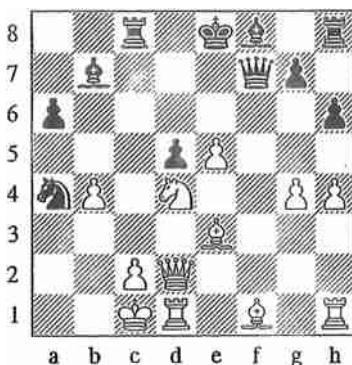
Both of my opponents (see below) had prepared to follow 19.a5 Qc4 20.Qc3 Qe7 as played in a famous game, Topalov – Kasparov, Linares 1999.

These days, 19.Qh3 Qxa4 20.Qf2± is the popular continuation.

19...Qxa4 20.fxe6 Qc3

I got the chance to play the same line in the Bundesliga as well.

20...Qc8? 21.exf7† Qxf7



22.♕d3??

The most natural move. The computer is happy with 22.c4!!, which is not a very human move. It was certainly beyond my abilities.

22...♝c3 23.♝df1 ♜xb4 24.♝h2 ♜d7 25.♝g6† ♜d8 26.♝f7 ♜a3† 27.♝d2 ♜e4† 28.♝xe4?

28.♝e1! ♜b4† 29.♝f1 ♜f8 30.♝xf8† ♜xf8 31.♝f5 would still have retained a lot of advantage.

28...♜xf7 29.♝f5 ♜e8?

29...♜b4†=

30.♝b1 ♜c7?

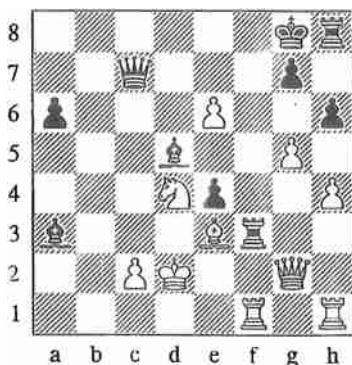
30...♝c4±

31.♝e2 ♜c5 32.♝xc5 ♜xc5 33.♝xb7 ♜c7 34.♝xc7 ♜xc7 35.e6† ♜b7 36.♝e5 ♜e7 37.♝d4 ♜c7 38.♝d3 ♜c3† 39.♝e2 ♜c5 40.♝f5

1–0 Aagaard – Breyther, Germany 2000.

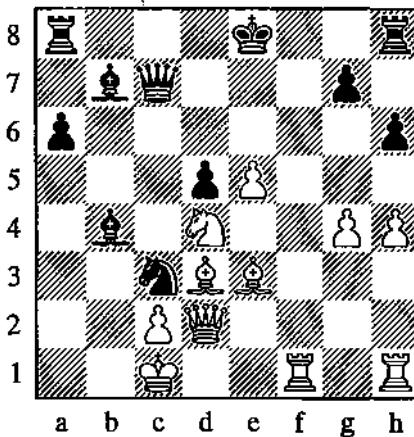
21.exf7† ♜xf7 22.♝d3 ♜xb4 23.♝df1† ♜e8?

Around the time my games were played, it was already worked out that Black should play: 23...♝g8 24.♝f2 ♜a3† 25.♝d2 ♜e4† 26.♝xe4 dxе4 I had planned on trying 27.g5, but did not have great hopes for it. Today this variation is considered entirely played out. 27...♝d5 28.e6 ♜f8 29.♝g2 ♜f3??



Perhaps the simplest; definitely the coolest.

30.♝xf3 exf3 31.♛g4 ♜a5† 32.c3 ♜b5 33.♝xf3 hxg5 34.♝xg5 ♜b2† 35.♝d3 ♜b5† 36.♝d2 ½–½ Repp – Proof, email 2009.



Faced with a position outside my preparation, I thought for almost an hour, working everything out in detail.

24.♞f2! ♜a5 25.♞f7† ♜d8 26.♝xb7

This looks dangerous at first glance, but it simply wins.

26...♜a1† 27.♝d2 ♜b5† 28.♝e2 ♜xd4† 29.♝xd4 ♜xd4 30.♝xa8† ♜e7 31.♝b7† ♜e8 32.♝f5 ♜xe5† 33.♝f3 ♜d6 34.♝c8†

After the game my opponent said that he had never faced preparation on such a level before.

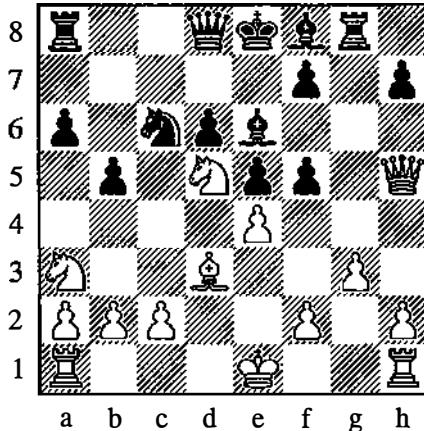
1–0

I have always been proud of my ability to take in good advice. The natural next step was to expand this idea to my preparation for other openings. So, when I decided to prepare for the Sveshnikov Sicilian, I decided to investigate the most aggressive line. Not because I was convinced that it was the strongest line, but because it fitted my style and because having a head start in shark-filled waters gives you a big advantage. My overall preparation was not great in those days, but against what was then a trendy opening, I had prepared the sharpest line played at the time.

Jacob Aagaard – Zeev Dub

Budapest 2003

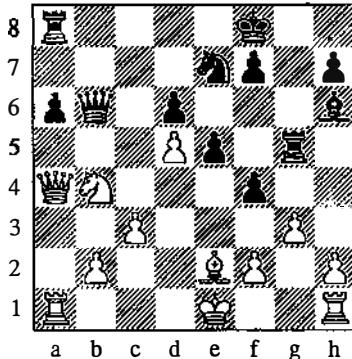
1.e4 c5 2.♘f3 ♘c6 3.d4 cxd4 4.♗xd4 ♘f6
 5.♗c3 e5 6.♗db5 d6 7.♗g5 a6 8.♗a3 b5
 9.♗xf6 gxf6 10.♗d5 f5 11.♗d3 ♗e6 12.♗h5
 ♗g8 13.g3



13... $\text{g}4$

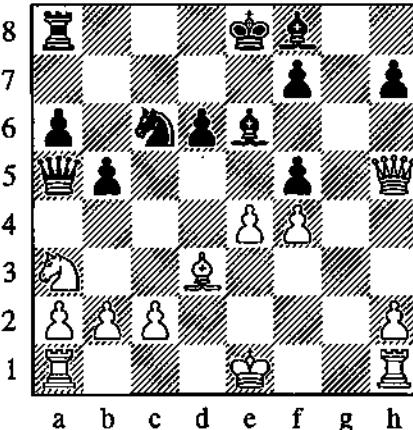
This was once a famous line, but already a few years before this game the critical line had been determined to be 13...Bg5!. I have no memory of what I had planned against this. But only a week later, while I was in the audience, two grandmasters played the same variation in the same city: 14.Wd1 Qxd5 15.exd5 Qe7 16.c3

17. $\mathbb{Q}e2$ $\mathbb{W}b6$ 18. $\mathfrak{Q}c2$ $\mathfrak{Q}f8$ 19. $a4$ $bxa4$
 20. $\mathfrak{Q}b4$ $f4$ 21. $\mathbb{W}xa4$



21...f3? A grave error that loses all of Black's attacking chances on the dark squares in the centre. (White is worse after 21...e4! 22.♗a5 ♖b8 23.gxf4 ♜f5, as in Cardelli – Vohl, email 2011.) 22.♕d3 ♜g4 (22...f5 23.♗d7 is also very good for White.) 23.0–0 f5 24.♗d7! ♜xb4 Desperation; Black has no counterplay. 25.cxb4 e4 26.♗b5 ♜b8 27.♖c6 ♖xb4 28.♗a4 ♖xb2 29.♗xd6 ♜e3 30.h4 ♜a7 31.♗xa6 ♖e2 32.♗a1 e3 33.♗f6† ♜g8 34.♗d7 exf2† 35.♗h2 ♜b6 36.♗e6† ♜xe6 37.dxe6 1–0 Acs – Leko, Budapest 2003.

14.f4! exf4 15.Qxf4 Qxf4! 16.gxf4 Wa5†



I had analysed this a lot and prepared to open the e-file.

17.Qd1!?

Had I not prepared this line, I would probably have looked at 17.c3 b4 18.Qc2 bxc3 19.b3 as the most logical way to play. But I wanted to keep the position as sharp as possible.

17...fxe4 18.Qxe4 d5 19.Qd3?!

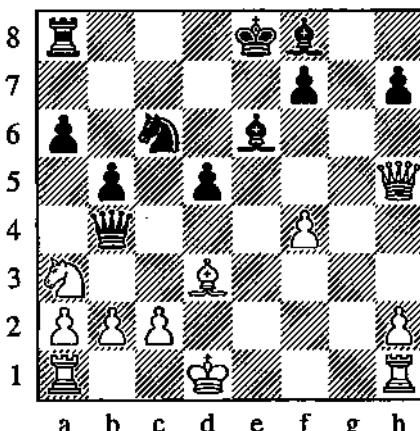
The computer says that the correct line for both sides is: 19.Qf5! Qb4! 20.Qxe6 Qd4!



21.Qc1 Qe3† 22.Qd1! Qd4† with a draw.

19...Qb4?

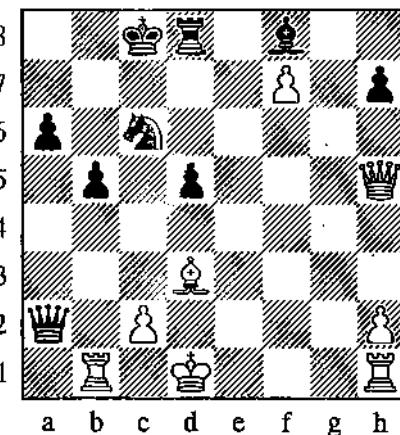
In my preparation I had believed that the position after 19...0–0–0 would be unclear. Stockfish 8 in 2017 does not share my optimism.



20.f5! Qxb2?!

This loses by force, but 20...Qd7 21.Qe2† also gives White good winning chances.

21.Qb1 Qxa3 22.fxe6 0–0–0 23.exf7 Qxa2



The last interesting moment in the game. I believed I would be winning if I was able to contain the counterplay. I thought for a while and realized that my only problem was the safety of my king. Asking myself the question, where would the king be safest, I decided this was h1. The rest of the game was easy.

24.Qe2! Qb7 25.Qf2 Qa4 26.Qg2 Qd4 27.Qhf1 Qd6 28.Qbel Qh6 29.Qg5 Qb4 30.Qe7† 1–0

If you are like me, a player with an adventurous style but a questionable opening repertoire, you will find yourself in variations you have not prepared for again and again. It is my experience that there are some lines that you should avoid, lines where there are a lot of early critical moments, where you have to find the only move again and again. But there are other main lines you can easily go into without great amounts of knowledge. And when you play a main line, you will know that your position is good to start with, so the moment when your knowledge ends, you can continue to play ambitiously.

Jacob Aagaard – Viktor Varavin

Voronezh 2002

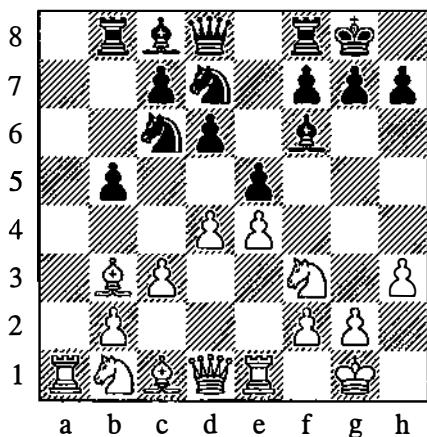
1.e4 e5 2.♘f3 ♘c6 3.♗b5 a6 4.♗a4 ♗f6
 5.0–0 b5 6.♗b3 ♗e7 7.♗e1 d6 8.c3 0–0 9.h3
 ♗d7 10.d4 ♗f6 11.a4 ♗b8

I had not seen this move before. Main line theory revolves around 11...♗b7 12.♗a3, when White scores well. I knew a little bit, but really not enough to call it theoretical knowledge.

12.axb5

This was an easy decision; White controls the a-file. I made it in a few minutes.

12...axb5



Not knowing the theory at all, I decided that the most sensible approach was to develop the pieces slowly and build for the middlegame. White mainly has to get the b1-knight to the kingside, where it is better placed. At least this was my thinking.

In order to play the classical ♘b1-d2-f1 manoeuvre, I had to support the d4-pawn. Usually the bishop is well placed on c1 in the Ruy Lopez, but here this does not work with the knight transfer.

13.♗e3

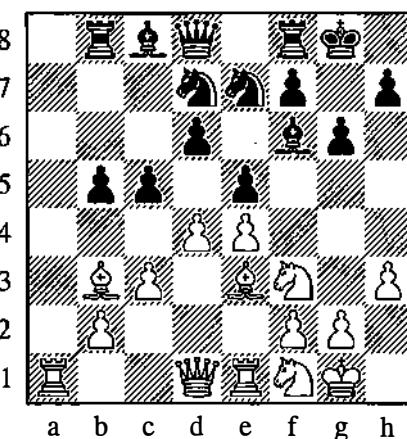
Another interesting, perhaps more ambitious attempt, was 13.d5!?, ♗e7 14.♗a3, when Black should be cautious of ♘c2-b4 coming. And where 14...b4 would allow White to transfer his knight to a5, the most direct way being 15.cxb4 ♗xb4 16.♗d2 ♗b8 17.♗c4 with an advantage.

13...♗e7 14.♗bd2 c5 15.♗f1

Going to g3 and maybe f5.

15...g6

Technically this was a novelty.



16.♗1h2!

Having seen that there is no future on f5, I am aiming for h6 (via g4) instead.

16...♗g7

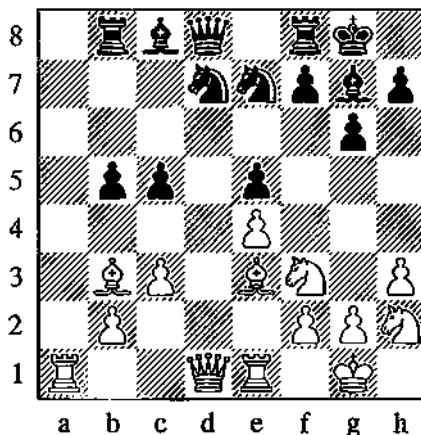
16...h5 was another move, but 17.dxe5 dxe5 18.g4! looks good for White too.

17.dxe5!?

The way I was thinking about the position was that Black wants to play ...c5-c4 in order to cut off the light-squared bishop. So I thought up a plan that would delay this as long as possible.

17.♗g4 was maybe better, but as it did not come with a gain of tempo, I looked in another direction.

17...dxe5



18.♗d6! ♜b6

I expected this.

After 18...c4 19.♕c2 it would be very difficult for Black to untangle himself.

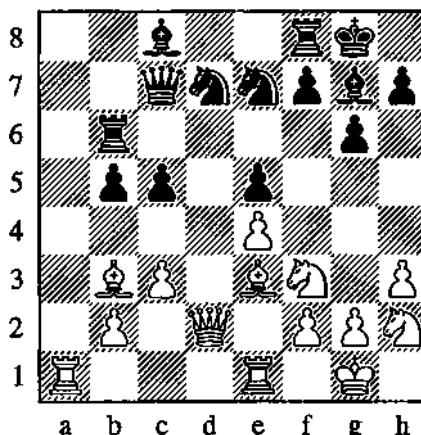
19.♗d2

The point was simply to win a tempo, delaying Black from playing ...c4 again.

19...♝c7

Black plays the critical moves too. He wants to play ...♝d6 in order to win a tempo and then play ...c4, which would equalize.

19...♝b7 20.♗g4 c4 21.♕c2 was also possible. White is better, but not overwhelmingly so.



I thought about this position in an abstract way, as well as calculating some lines. This is what I call strategic thinking and this position is ideal for it. I wanted to think further than I was able to calculate, meaning that I had to use abstract thinking, strategic concepts and calculation all in one, before going with a best guess.

20.♗ed1!

The main idea of this move is that I felt the lead in development was so great that I would have a chance to exploit it. But to succeed in this, I had to play as aggressively as possible, remembering the concept of momentum in the exploitation of a dynamic advantage.

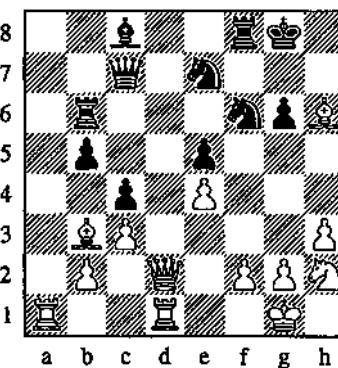
20...♝f6 21.♗g5

This is the idea.

21.♕c2 was of course possible, but this was not the purpose of how I had been playing.

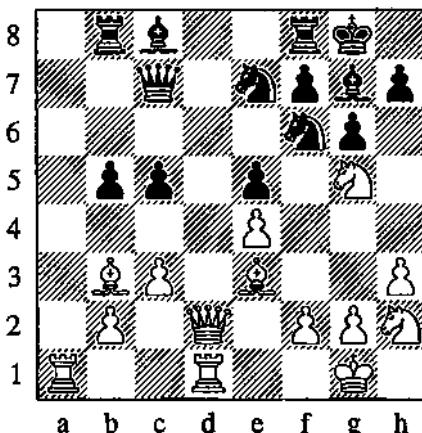
21...♝b8?

The line I had spent time calculating was 21...h6?, when after 22.♗xf7! c4 23.♗xh6† ♜xh6 24.♗xh6 I looked at some rough lines, where White seemed to have plenty of possibilities and probably even an advantage. It was all rather loosely worked out, but enough for me to commit.



The following variations should not be confused with anything I saw during the game; it was far less systematic than that. 24... $\mathbb{Q}xe4$!? (24... $\mathbb{Q}xb3$ 25. $\mathbb{Q}xf8$ $\mathbb{Q}xf8$ 26. $\mathbb{Q}h6\uparrow$ $\mathbb{Q}g8$ 27. $\mathbb{Q}a8$ gives White a winning initiative.) 25. $\mathbb{Q}e1$ $\mathbb{Q}xf2$ 26. $\mathbb{Q}a8$! (26. $\mathbb{Q}xe4$ $\mathbb{Q}b7$ is complicated; Black is OK.) 26... $\mathbb{Q}c6$ 27. $\mathbb{Q}g4$ $\mathbb{Q}xg2\uparrow$ 28. $\mathbb{Q}xg2$ $\mathbb{Q}d2\uparrow$ 29. $\mathbb{Q}g3$! $\mathbb{Q}f5\uparrow$ 30. $\mathbb{Q}f2$ $\mathbb{Q}xa8$ 31. $\mathbb{Q}xd2$ $\mathbb{Q}d6$ 32. $\mathbb{Q}g5$ $\mathbb{Q}a7\uparrow$ 33. $\mathbb{Q}e3$ and White is a piece up.

Black should have played 21... $\mathbb{Q}b7$!, when White is better, but this was a difficult defensive move to see.



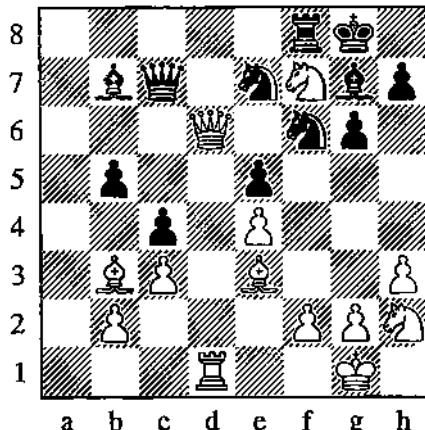
General principles can be useful. I was sure that either I would have a combination here, or I had no advantage at all. For once, my tactical abilities were up to the task.

22. $\mathbb{Q}xf7!!$ c4

Black is finally able to play this move, but it is too late.

22... $\mathbb{Q}xf7$ 23. $\mathbb{Q}d8\uparrow$ $\mathbb{Q}xd8$ 24. $\mathbb{Q}xd8\uparrow$ $\mathbb{Q}f8$ 25. $\mathbb{Q}xc5$ is totally winning. For example, 25... $\mathbb{Q}e6$ 26. $\mathbb{Q}xb8$ $\mathbb{Q}xb3$ 27. $\mathbb{Q}a7$ $\mathbb{Q}g7$ 28. $\mathbb{Q}f3$ and so on.

23. $\mathbb{Q}a7$ $\mathbb{Q}b7$ 24. $\mathbb{Q}xb7$ $\mathbb{Q}xb7$ 25. $\mathbb{Q}d6$!



This is the key move of the combination.

25... $\mathbb{Q}xd6$

25... $\mathbb{Q}ed5$ was better, but White is still close to winning after 26. $\mathbb{Q}xc7$ $\mathbb{Q}xc7$ 27. $\mathbb{Q}d6$.

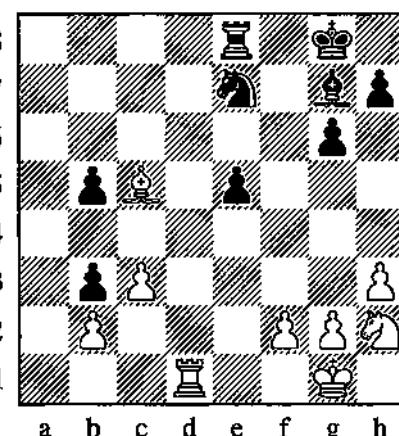
26. $\mathbb{Q}xd6$ $\mathbb{Q}xb3$!?

26... $\mathbb{Q}xe4$ was better, although after 27. $\mathbb{Q}xe4$ $\mathbb{Q}xe4$ 28. $\mathbb{Q}c2$ $\mathbb{Q}f6$ 29. $\mathbb{Q}g4$ White's position is fantastic.

27. $\mathbb{Q}xb7$ $\mathbb{Q}xe4$ 28. $\mathbb{Q}c5$! $\mathbb{Q}xc5$!?

28... $\mathbb{Q}f6$ 29. $\mathbb{Q}xb3$ was the lesser evil, when White is only a pawn up.

29. $\mathbb{Q}xc5$ $\mathbb{Q}e8$



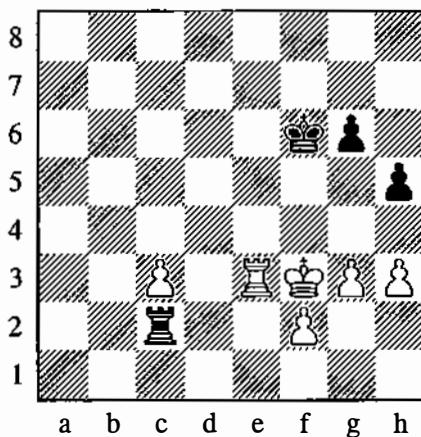
30.♗xe7!

He had missed this.

30...♝xe7 31.♝d8† ♜f7 32.♝b8 ♜d7
33.♝xb5 ♜d1† 34.♝f1 h5

Black cannot save the game anymore. A critical line is: 34...♝b1 35.♝xb3 ♜h6 36.♝b7† ♜g8 37.g3 ♜c1 38.b3 ♜b2 39.♝c7 ♜c1 40.b4 ♜xc3 41.♝xc3 ♜xc3 42.b5 and White wins.

35.g3 ♜h5 36.♝xb3 ♜c1 37.♝b4 ♜f6
38.♝g2 ♜c2 39.♝f3 e4† 40.♝xe4 ♜xb2
41.♝e3 ♜xe3 42.♝xe3 ♜c2



43.♝e4!

The final touch. I saw the last glimmer of hope die in my opponent's eyes.

43...♝g5

43...♝xf2 44.♝f3†

44.♝f4† ♜f6 45.h4 ♜c1 46.♝d5
1–0

Do not be naive

I have lost some games where I went for variations I should not have. Critical moments arose, one after the other, which I was not able to solve.

We have already seen players caught out; look at Jan Rooze and Lars Schandorff above,

and various other games in this book. But in both of these games, the problems were not insurmountable. We will be faced with something we have not prepared for from time to time. The important thing is that you should not get caught out without a life vest in shark-infested waters. If you choose to prepare something such as Black in the Najdorf, you will have to go incredibly deep and to revise your preparation frequently. Otherwise, you will end up as this poor guy did.

Wei Yi – Xu Yinglun

Ho Chi Minh City 2017

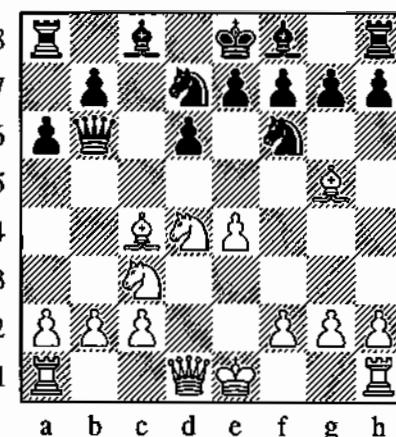
1.e4 c5

Looking over his games from the last four years, Wei Yi has a more than 50% win-rate against the Sicilian, and an overall score of 72% against it. He is a strong player on the up, but if you look at his strengths, they are closely connected to good preparation and flashy tactics. Going for a Sicilian against him comes with a certain risk.

2.♝f3 d6 3.d4 cxd4 4.♝xd4 ♜f6 5.♝c3 a6

This is another debatable choice. Wei Yi is an expert slayer in the Najdorf and the territory is extremely tactical.

6.♝g5 ♜bd7 7.♝c4 ♜b6



This is the main theoretical move, which has recently been played by such a Najdorf expert as Boris Gelfand. It is also a part of Xu Yifan's repertoire. Or in other words – he already has a target painted on his back, whether he knows it or not.

Moreover, hunting for the b2-pawn against a famous Najdorf destroyer is dangerous. I am not saying that it is stupid or a mistake, it just requires a level of preparation beyond what most normal grandmasters possess.

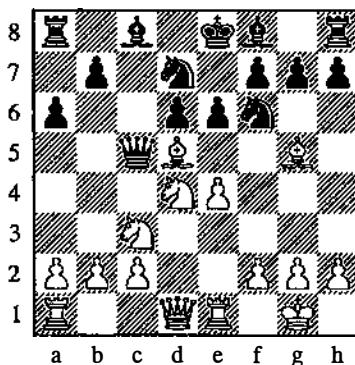
7... $\mathbb{W}a5$ is the other big alternative.

8.0-0!

This is the most dangerous move. If White is to refute this line, then this is the move. Which also means that if Black is to play this line, he has to be exceptionally well-prepared for this line. You can be forgiven (get away with) not remembering the move orders in a quiet line and having to work them out yourself. When you take on b2, you have entered another type of commitment.

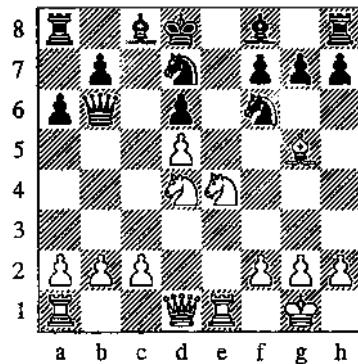
8... $\mathbb{W}xb2$

8... $\mathbb{W}c5$ 9. $\mathbb{Q}d5$ e6 10. $\mathbb{E}e1$ is another super-sharp variation.



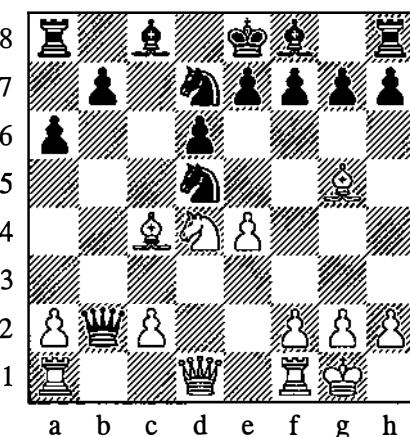
To me, Black's position looks dangerous. The engine is begging to be allowed to play: 10...exd5 (10... $\mathbb{E}e7$ 11. $\mathbb{E}e3!$ $\mathbb{W}a5$ 12. $\mathbb{Q}xe6!$ ± has also proven dangerous for Black in a number of games.) 11.exd5† $\mathbb{W}d8$ This was

played in Ulanowski – Mucha, Karpacz 2015, in the Polish u18 Championship. 12. $\mathbb{Q}e4$ $\mathbb{W}b6$



13.a4!± White had a great attack. In this type of position, the engine eventually catches up.

9. $\mathbb{Q}d5$ $\mathbb{Q}xd5$



10. $\mathbb{E}b1$

I am undecided on the value of inserting this move, but when in doubt I prefer to think inside the box, follow the big expert and do as he does. Once I have had a chance to look deeper, I would of course like to form my own opinion.

There was another game I noticed in my investigation of this line:

10. $\mathbb{Q}xd5$ $\mathbb{Q}c5$

10... $\mathbb{W}c3$ 11. $\mathbb{E}b1$ $\mathbb{W}c7$ transposes to the main game.

11. $\mathbb{Q}b3 \mathbb{Q}xb3$ 12. $a xb3$ e6



13. $\mathbb{W}d3!!$

I really like this move. The black queen is in trouble.

13...exd5?

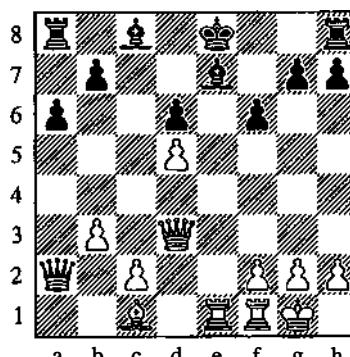
With the help of the computer we will find that Black had to play 13...h6 14. $\mathbb{B}fb1$ $\mathbb{W}e5$ 15. $f4$ $\mathbb{W}xa1$, when after the forced 16. $\mathbb{B}xa1$ $hxg5$ 17. $\mathbb{Q}c4$ White is slightly better, but nothing out of the ordinary.

14. $exd5 \mathbb{Q}e7$

The queen is also getting trapped after 14...f6 15. $\mathbb{Q}f4$ f5 16. c3.

15. $\mathbb{Q}ae1$ f6 16. $\mathbb{Q}c1$ $\mathbb{W}a2$

The queen avoided being lost, but now it is of no help to the defence.



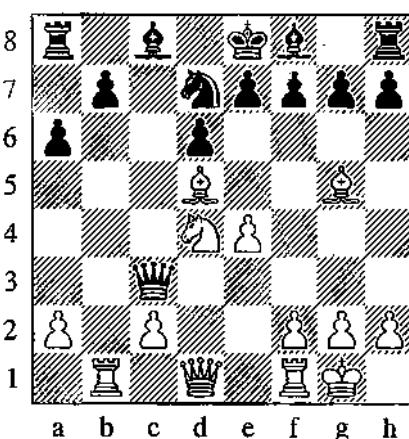
17. $\mathbb{W}g3!$

A decisive double attack on d6 and g7.

17... $\mathbb{Q}f7$ 18. $\mathbb{B}xe7\#$

1–0 Solodovnichenko – Isetoft, Vasteras 2014.

10... $\mathbb{W}c3$ 11. $\mathbb{Q}xd5$

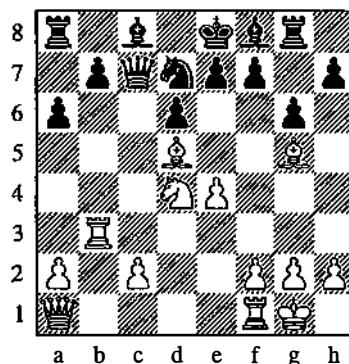


I took the liberty of looking at the variations somewhat from White's perspective. Overall, I felt White was heading towards a dangerous initiative everywhere.

11... $\mathbb{W}c7$

This looks sensible, but it does also lose time. I have analysed the main alternatives.

11... $g6$ 12. $\mathbb{B}b3$ $\mathbb{W}c7$ 13. $\mathbb{W}a1$ $\mathbb{B}g8$

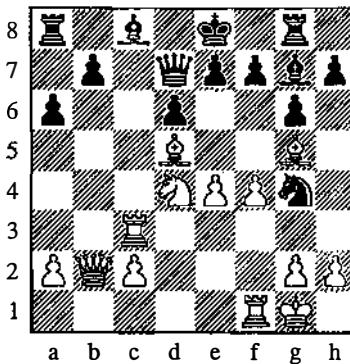


This has to be played, but it is no joy to play. Now in Azarov – Xu Yinglun, Moscow 2016, White could have improved with:

14. $\mathbb{B}f3!N$ $\mathbb{Q}e5$ 15. $\mathbb{B}c3$ $\mathbb{W}d8$

This is the computer's choice. This whole line reeks; meaning that no one would play like this, but digital necessity forces it.

15... $\mathbb{W}d7$ 16.f4 $\mathbb{Q}g4$ 17. $\mathbb{W}b2$ $\mathbb{Q}g7$ is a more natural line; Black does not give up b7 without a fight. However, White crashes through like a caveman in a hospice.



18.e5! $dxe5$ Strictly forbidden by the engine, but everything else would be rejected by humans. 19. $\mathbb{Q}xf7\#$ 20. $\mathbb{W}b3\#$ e6 21.fxe5 $\mathbb{Q}e8$ 22. $\mathbb{Q}xe6\#$ A beautiful tactic. 22... $\mathbb{W}xe6$ 23. $\mathbb{B}xc8\#$ 24. $\mathbb{W}f7\#$

16. $\mathbb{W}b2$ $\mathbb{Q}g7$ 17. $\mathbb{W}b3$ $\mathbb{B}f8$ 18. $\mathbb{Q}xb7$ $\mathbb{Q}xb7$
19. $\mathbb{W}xb7$ $\mathbb{Q}d7$ 20. $\mathbb{Q}e3$

With a most undesirable position for Black.

11...e6

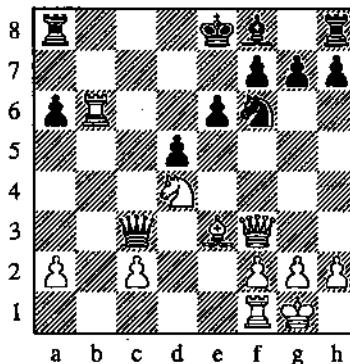
This does not really work. White wins back his pawn and has a great lead in development.

12. $\mathbb{Q}xb7$ $\mathbb{Q}xb7$ 13. $\mathbb{B}xb7$ $\mathbb{Q}c5$ 14. $\mathbb{B}b6$ $\mathbb{Q}xe4$

This may look greedy, but Black needs to get his bits out.

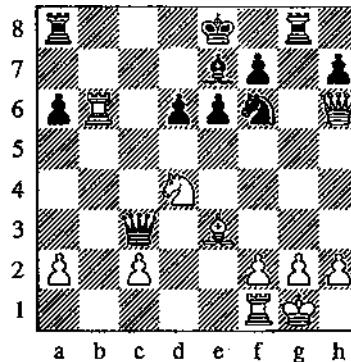
15. $\mathbb{Q}e3$ $\mathbb{Q}e7$

15... $\mathbb{Q}f6\?!$ 16. $\mathbb{W}f3$ d5 happened in Sethuraman – Al Sayed, Tromso (ol) 2014.



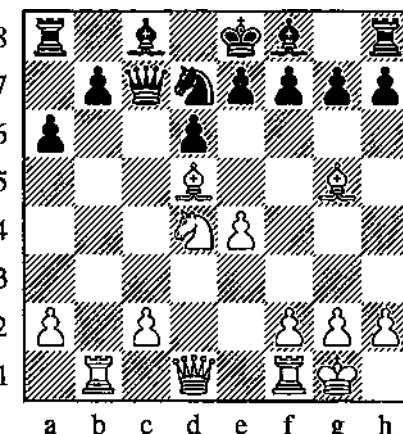
My improvement is 17. $\mathbb{B}c6\!N$ $\mathbb{W}a3$ 18.c4! with a strong attack. The critical line might very well be 18... $\mathbb{Q}d6$ 19. $\mathbb{B}c1\!$, preventing Black from castling, on account of 20. $\mathbb{Q}c2$ winning a piece. And after 19... $\mathbb{Q}e5$ 20. $\mathbb{Q}xe6\!$ White is much better.

16. $\mathbb{W}g4$ $\mathbb{Q}f6$ 17. $\mathbb{W}xg7$ $\mathbb{B}g8$ 18. $\mathbb{W}h6$



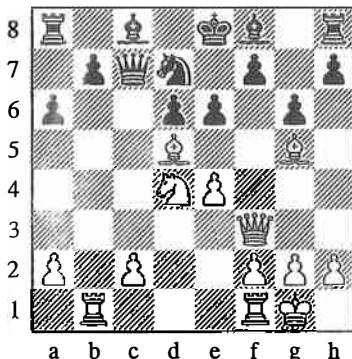
I prefer White's prospects, Sheng – Preotu, Rockville 2016.

11... $\mathbb{Q}c5$ turned out well for Black in Almiron – Zacarias, Asuncion 2015, but White would have a dangerous initiative after 12. $\mathbb{Q}c6\!N$ (or 12. $\mathbb{Q}b3\!?\mathbb{N}$ e6 13. $\mathbb{Q}d2$ $\mathbb{W}e5$ 14. $\mathbb{B}e1$), when 12...e6 13. $\mathbb{B}e1$ h6 14. $\mathbb{Q}e3$ and 12... $\mathbb{Q}d7$ 13. $\mathbb{Q}d2$ $\mathbb{W}f6$ 14. $\mathbb{Q}a5$ are both unpleasant for Black.



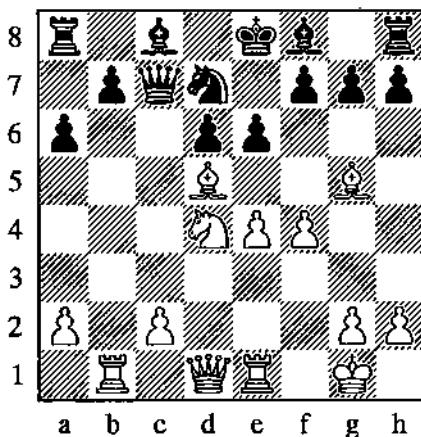
12.f4!

12. $\mathbb{W}h5$ is too direct. After 12...g6 13. $\mathbb{W}f3$ e6 the following sacrifice is certainly inspired, but it is not winning:



14. $\mathbb{W}xf7\#?$! $\mathbb{Q}xf7$ 15. $\mathbb{Q}xe6$ $\mathbb{W}a5$ (It is Black who can choose to play for a win. The critical line is 15... $\mathbb{W}c6\#?$ N 16. $\mathbb{Q}d8\#$ $\mathbb{Q}g7$ 17. $\mathbb{Q}xc6$ bxc6 18. $\mathbb{Q}xc6$ $\mathbb{E}a7$ 19. $\mathbb{Q}e3$ $\mathbb{E}c7$ 20. $\mathbb{Q}xd7$ $\mathbb{Q}xd7$ 21. $\mathbb{Q}d4\#$ $\mathbb{Q}g8$ 22. $\mathbb{Q}b8$ $\mathbb{Q}c8$ 23. $\mathbb{Q}xh8$ $\mathbb{Q}xh8$, where I suspect the bishops are easier to play with than the rooks, but a draw is the most likely result.) 16. $\mathbb{Q}d8\#$ $\mathbb{Q}g7$ (16... $\mathbb{Q}e8$ 17. $\mathbb{Q}f7\#$ would be helpful) 17. $\mathbb{Q}e6\#$ $\mathbb{Q}f7$ $\frac{1}{2}-\frac{1}{2}$ Barrientos – Mareco, San Salvador 2016.

12...e6 13. $\mathbb{Q}e1$



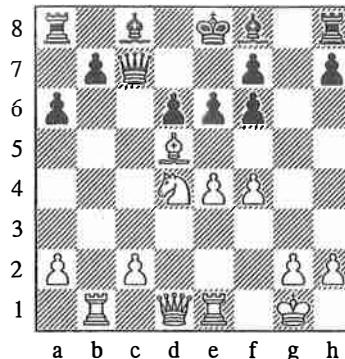
This is all well known, at least by Wei Yi. You would imagine that Xu Yinglun had anticipated an assault on this territory, but

might not have prepped 8.0–0, believing that his analysis from the previous time he had the position was sufficient.

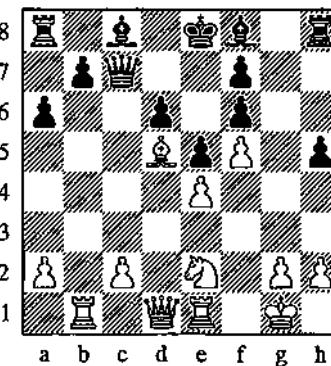
13... $\mathbb{Q}c5\#?$ N

This is not preparation. Black thought about it for too long and the engine hates it.

13... $\mathbb{Q}f6$ 14. $\mathbb{Q}xf6$ $\mathbb{g}xf6$



15. $f5!$ $e5$ (15... $\mathbb{exd}5$ 16. $\mathbb{exd}5\#$ $\mathbb{Q}d8$ 17. $\mathbb{W}h5$ is one of those Sicilian positions where Black is a piece up, but cannot get his pieces into the game.) 16. $\mathbb{Q}e2$ $h5$ Kobo – Mammadzada, Pardubice 2015.



White has more than enough compensation after 17. $\mathbb{W}d3\#?$ N $\mathbb{E}b8$ 18. $\mathbb{E}b3\pm$ with a very flexible position.

13... $\mathbb{exd}5$ 14. $\mathbb{exd}5\#$ $\mathbb{Q}e5$ may be the best chance, but White is still able to set up threats

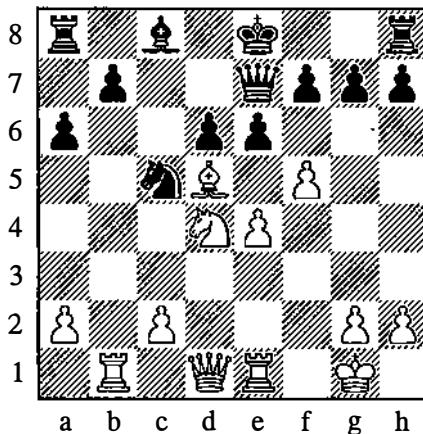
with 15. $\mathbb{W}h5\pm$. Only the future will tell for sure.

Wei Yi thought for a long time here, being out of book after his opponent's improvisation. I would assume he saw the right idea quickly, but wanted to get a good overview of all of the complications and be ready for the struggle.

14. $f5!$ $\mathbb{Q}e7?$

After this White wins by force, but even the critical line is deeply unpleasant after 14... $h6$ 15. $\mathbb{Q}h4$ $g5$ 16. $fxg6$ $fxg6$ 17. $\mathbb{W}g4$, where it is hard to believe that White has sacrificed only a pawn.

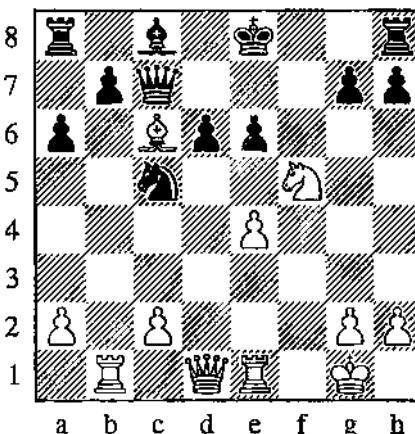
15. $\mathbb{Q}xe7$ $\mathbb{W}xe7$



16. $fxe6$ $fxe6$ 17. $\mathbb{Q}f5!$

I am sure that Xu Yinglun had seen this move, but believed that he was OK. With a bit of grit (page 197), he would have found out that this is not the case.

17... $\mathbb{W}c7$ 18. $\mathbb{Q}c6\uparrow!!$



Typical Wei Yi in the Sicilian; heading for another miniature.

18... $\mathbb{W}xc6$ 19. $\mathbb{Q}xd6\uparrow$ $\mathbb{Q}e7$ 20. $\mathbb{W}g4$ $\mathbb{Q}d7$
21. $e5!$

Black resigned. 21... $\mathbb{Q}xe5$ 22. $\mathbb{W}g5\uparrow$ $\mathbb{Q}xd6$ 23. $\mathbb{W}xe5\uparrow$ $\mathbb{Q}d7$ 24. $\mathbb{W}xg7\uparrow$ and White quickly wins at least both rooks.

1-0

Become a specialist

"I still believe in having your own systems," Garry Kasparov said in an interview. It made an impact on me. I learned that it was important to find pet lines and know them well. Below we shall see a line I defended many times in the Sicilian, a line I have played since 1985.

But before we turn to that, I would like to show a few games I played in the Tarrasch Variation of the Queen's Gambit Declined. In 2010 Nikos Ntirlis came into my life, with a lot of analysis on this opening and a determination for it to be published by Quality Chess. I liked what I saw, but was uncertain about some of the analysis and especially about a player rated below 2000 writing an opening book. We agreed to work together on the book and it was eventually published at the end of 2011 under the name *Grandmaster Repertoire 10 – The Tarrasch Defence*. While working on it,

I got the chance to play it a number of times with very good results: four wins and two draws. And in one of the draws, it was my own failure to convert a winning endgame that was the problem.

The most delightful of these games was the following.

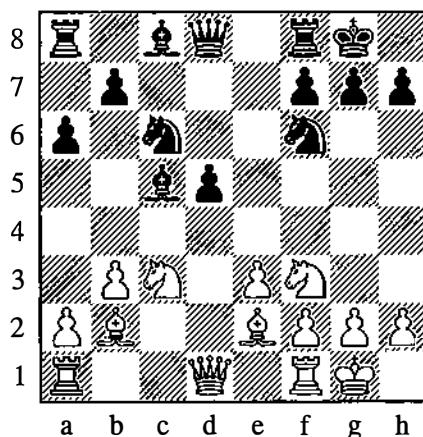
Karsten Rasmussen – Jacob Aagaard

Aarhus 2011

1. $\mathbb{Q}f3$ d5 2. d4 c5 3. c4 e6 4. e3 $\mathbb{Q}f6$ 5. $\mathbb{Q}c3$ a6

Even though this is not big main line theory, it was still something Nikos and I had studied.

6. cxd5 exd5 7. $\mathbb{Q}e2$ $\mathbb{Q}c6$ 8. 0–0 $\mathbb{Q}d6$ 9. dx c 5 $\mathbb{Q}xc5$ 10. b3 0–0 11. $\mathbb{Q}b2$



I had a good feeling for these positions, but not an accurate recollection of all the ideas. Here I decided on a pawn sacrifice. My experience is that the confidence it takes to give up a pawn often gives a psychological edge. Of course, you need to believe that the sacrifice is playable to go for it, and it should not be easily refutable – preferably it should be correct. But a bit of guts is very useful.

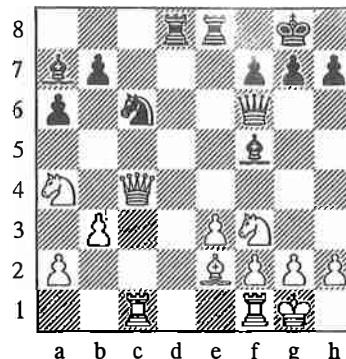
11... $\mathbb{Q}e8!$?

The pawn sacrifice. 11... $\mathbb{Q}a7$ is simpler.

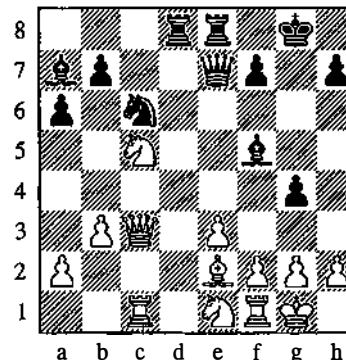
12. $\mathbb{Q}c1$

For a long time I believed that White was better here, but analysing it carefully now, I see that the game is quite balanced.

12. $\mathbb{Q}a4$ $\mathbb{Q}a7$ 13. $\mathbb{Q}xf6$ $\mathbb{W}xf6$ 14. $\mathbb{W}xd5$ certainly looks dangerous for White, but Black does not have an advantage after 14... $\mathbb{Q}f5$ on account of 15. $\mathbb{Q}ac1$! $\mathbb{Q}ad8$ 16. $\mathbb{W}c4$.



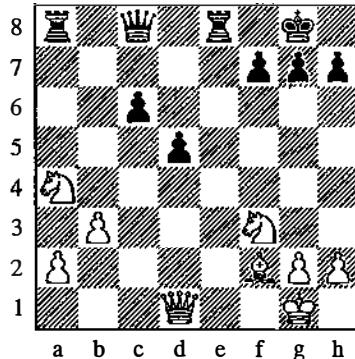
Black does not win a piece with ...b5. But Black can still gain a lot of counterplay with: 16...g5! (16... $\mathbb{Q}c8$ 17. $\mathbb{W}h4$ gives White a chance to play for an advantage) 17. $\mathbb{W}c3$ (Another variation goes: 17. h3 $\mathbb{Q}c8$ [17...h5!? is also good] 18. $\mathbb{W}c3$ $\mathbb{Q}d4$ 19. $\mathbb{W}b2$ $\mathbb{Q}xc1$ 20. $\mathbb{Q}xc1$ $\mathbb{Q}xf3\#$ 21. $\mathbb{Q}xf3$ $\mathbb{W}xb2$ 22. $\mathbb{Q}xb2$ $\mathbb{Q}xe3$ with equality.) 17... $\mathbb{W}e7$ 18. $\mathbb{Q}c5$ There are lots of other moves; the position is simply very complicated. 18...g4 19. $\mathbb{Q}e1$



19... $\mathbb{B}d5$ (19... $\mathbb{Q}e5!?$) 20. $\mathbb{Q}xb7$ $\mathbb{Q}b4$ 21. $\mathbb{W}c7$ $\mathbb{B}d7$ 22. $\mathbb{W}a5$ $\mathbb{B}d5$ 23. $\mathbb{W}c7$ $\mathbb{B}d7$ with a repetition.

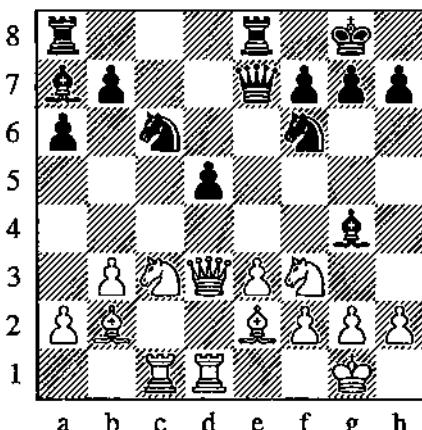
12... $\mathbb{Q}a7$ 13. $\mathbb{W}d3$

A very interesting line goes: 13. $\mathbb{Q}a4$ $\mathbb{Q}e4$ 14. $\mathbb{Q}xa6!?$ $\mathbb{Q}xe3$ 15. $\mathbb{B}xc6$ $\mathbb{Q}xf2$ 16. $\mathbb{B}xf2$ $bxc6$ 17. $\mathbb{Q}xc8$ $\mathbb{W}xc8$ 18. $\mathbb{Q}d4$ $\mathbb{Q}xf2\#$ 19. $\mathbb{Q}xf2$



We have a non-standard position that the Macedonian grandmaster Vladimir Georgiev has played with White a few times with decent results. I am not sure it would work in correspondence chess, but it does seem to be the kind of position where the better-prepared player would have good chances to win.

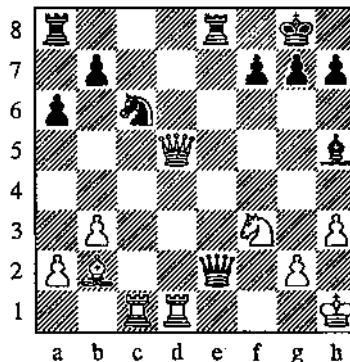
13... $\mathbb{Q}g4$ 14. $\mathbb{B}fd1$ $\mathbb{W}e7$



15. $\mathbb{Q}a4??$

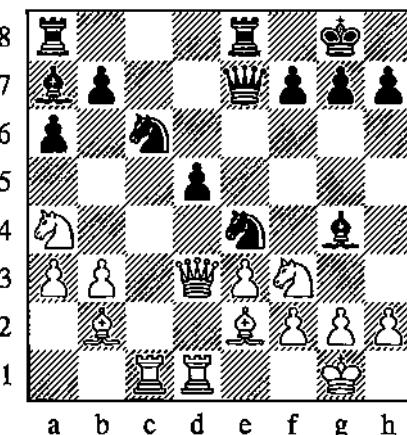
15. $\mathbb{Q}xd5?$ does not work on account of 15... $\mathbb{Q}xd5$ 16. $\mathbb{W}xd5$ $\mathbb{Q}xe3$.

But White can improve things by interposing a move: 15.h3! $\mathbb{Q}h5!?$ Black can also return to e6, but then his position is much less threatening. 16. $\mathbb{Q}xd5$ $\mathbb{Q}xd5$ 17. $\mathbb{W}xd5$ $\mathbb{Q}xe3$ 18.fxe3 $\mathbb{W}xe3\#$ 19. $\mathbb{Q}h1$ $\mathbb{W}xe2$



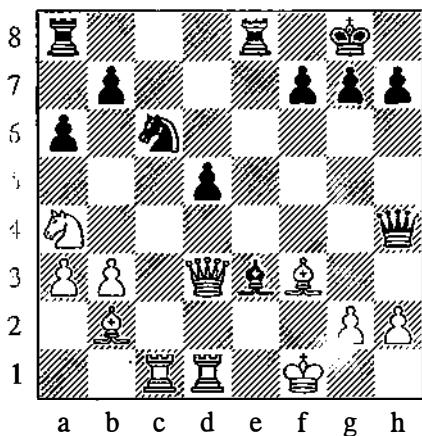
20. $\mathbb{W}xh5$ $g6!$ (20... $\mathbb{W}xb2?$ 21. $\mathbb{Q}g5$ $h6$ 22. $\mathbb{W}xf7\#$ $\mathbb{Q}h8$ 23. $\mathbb{W}xb7$) 21. $\mathbb{W}h4$ $\mathbb{W}xb2$ 22. $\mathbb{Q}g5$ $\mathbb{W}g7$ 23. $\mathbb{Q}d7$ $\mathbb{Q}e7$ 24. $\mathbb{Q}xe7$ $\mathbb{Q}xe7$ 25. $\mathbb{Q}xh7$ $\mathbb{W}b2$ 26. $\mathbb{Q}f1$ $\mathbb{Q}f5$ 27. $\mathbb{Q}f6\#$ $\mathbb{Q}g7$ 28. $\mathbb{Q}h5\#$ $\mathbb{Q}g8$ with a draw.

15... $\mathbb{Q}e4$ 16.a3



Black's position is glorious. Of course, there was part of me that wanted to play 16... $\mathbb{W}ad8$ without thinking, but we should never lose the chance when it presents itself.

16... $\mathbb{Q}xf2!$ 17. $\mathbb{Q}xf2$ $\mathbb{Q}xe3\#$ 18. $\mathbb{Q}f1$ $\mathbb{Q}xf3$
19. $\mathbb{Q}xf3$ $\mathbb{W}h4$



Crashing through on the dark squares. I did not have everything worked out, but I was confident at this point. The end was quicker than I had expected, but life is like that sometimes.

20. $\mathbb{B}c2$ $\mathbb{W}xh2$ 21. $\mathbb{Q}e2$ $\mathbb{Q}d4\#$

0–1

One of the most important lessons I learned regarding this book was to trust my own judgement. After it was published I did not want to play the Tarrasch, afraid of getting out-prepared. But then I began thinking that it showed a lack of credibility, not wanting to play it.

So I did, at the Danish Championship. Allan Stig Rasmussen played the dullest line against the opening, which required a bit of accuracy from Black to equalize, but held no dangers for White. I had a bad day, having lost motivation after the first half of the tournament being rather disappointing. I did not remember the analysis and was careless. I lost without a fight. Afterwards Lars Schandorff told me that he had intended to play the same variation against

me, agreeing that it was essentially harmless, but also risk free. My grandmaster colleagues know me well and knew that I would be likely to fail to remember the analysis. And they were right.

I did not really care about the game, but it damaged the reputation of the book. Several books showed this game as an answer to the Tarrasch afterwards, which was frankly ridiculous and lazy. The problems were already solved in our book.

The Tarrasch is not a top-tier opening – the accuracy needed to equalize with Black is higher than in the Semi-Slav. This is acceptable, if you play it as a surprise or in an open tournament. But if you play it in your national championship where the opponents know you are coming, you need a different level of accuracy, either in your preparation or in your play. Or be wiser and surprise them, as I did with the Queen's Gambit Declined when I returned in 2014.

I did play the Tarrasch a few times after this, against players I believed would not have bought the book. Only once did I regret this, when it turned out my opponent was fully prepared. That was a local league game. Luckily a quick draw offer allowed me to escape unembarrassed.

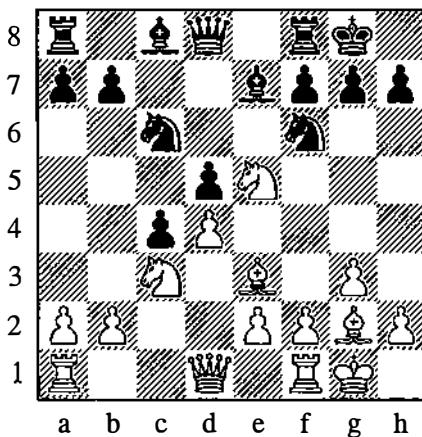
In another local league game, I got to use my expertise in the opening against a local international master. Although he is a strong player who occasionally wins the Scottish Championship and played for Scotland in the 2014 Olympiad, he is not up-to-date on openings at all. I initially struggled a lot against him, scraping draws in his time trouble. Eventually I started to get the better of him, understanding how to play him. The following game allowed me to use my expertise in full.

Roddy McKay – Jacob Aagaard

Glasgow 2012

1. $\mathbb{Q}f3$ c5 2. g3 c5 3. $\mathbb{Q}g2$ $\mathbb{Q}c6$ 4. d4 $\mathbb{Q}f6$ 5. 0–0 e6 6. c4 $\mathbb{Q}e7$ 7. cxd5 exd5 8. $\mathbb{Q}c3$ 0–0 9. $\mathbb{Q}e3$ c4

The key lesson I learned about the centre in the Tarrasch Defence is that Black should not play ...cxd4, as it gives White control of the d4-square. On the other hand, he does not have to fear dxc5, as he will take control over the d4-square when recapturing.

10. $\mathbb{Q}e5$ 10... $\mathbb{Q}f5$

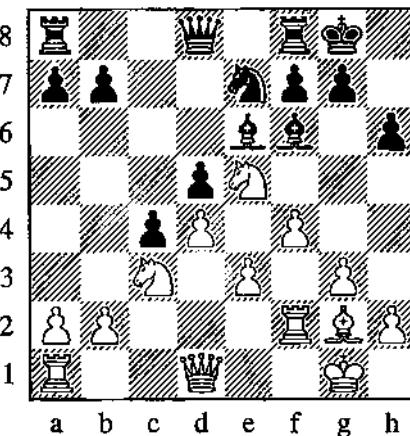
10...h6 is interesting, preparing to play ... $\mathbb{Q}f5$, but I was ready for the main line a moment ago and I am ready now. 10...h6 is a more important option for people who want to play the 9. $\mathbb{Q}g5$ cxd4 line.

Another point is to avoid the trap: 10... $\mathbb{Q}e6$?! 11. $\mathbb{Q}xc4$! dx c 4 12. d5±

11. $\mathbb{Q}g5$ $\mathbb{Q}e6$ 12. e3 h6 13. $\mathbb{Q}xf6$ $\mathbb{Q}xf6$ 14. f4 $\mathbb{Q}e7$ 15. $\mathbb{Q}f2$

This has been played twice in the database. My response is obvious, but still a novelty. Knowing the typical ideas of the positions helped me a lot during this game.

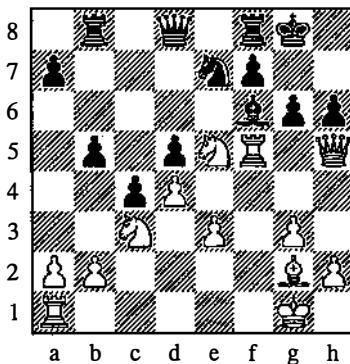
15.g4 is Khalifman's idea, but it is neutralized by 15...b5!N as can be seen in Chapter 4 of *Grandmaster Repertoire 10 – The Tarrasch Defence*.

15... $\mathbb{Q}b8$!N 16. $\mathbb{Q}h5$ g6!

I could not resist the temptation of hitting the queen back and playing this standard regrouping; especially after calculating the consequences of $\mathbb{Q}xh6$ accurately.

However, in the cold light of day, one is tempted to ask what White's idea is after 16...b5. Maybe it was 17. f5 planning 17... $\mathbb{Q}c8$ 18. $\mathbb{Q}g4$.

But what about: 17... $\mathbb{Q}xf5$ 18. $\mathbb{Q}xf5$ g6



Here the computer gives the amazing line: 19. $\mathbb{Q}xd5$?? $\mathbb{Q}xd5$! (I do not like 19...gxh5 20. $\mathbb{Q}xf6$ † $\mathbb{Q}h8$ 21. $\mathbb{Q}xh5$ $\mathbb{Q}g7$ 22. $\mathbb{Q}f1$ with

more than enough compensation for the queen.) 20.♕xg6 ♕xe3 21.♗f3 ♖xd4 22.♕xf8 ♜xf8 23.♗b1 and allegedly the position is equal – though I prefer Black in a practical setting.

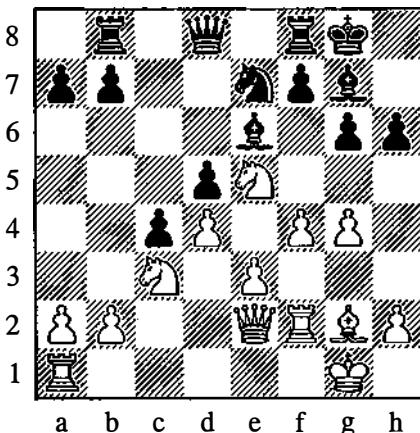


23...♝d1† 24.♔h1 ♜e8! 25.♕f5 ♜e1† 26.♔f1 ♜g7 with good compensation.

17.♗e2

17.♗xh6?! is refuted by: 17...♝f5 18.♗h3 ♜xe5! The move order is important. 19.fxe5 ♜xe3† A key point is 20.g4? ♜xg4 21.♗f4 ♜xe5 22.♕h6 ♜g4! and Black is much better.

17...♝g7 18.g4



18...f5

This is not how you normally play in this variation, and here it is just a little inaccurate I think.

I played quite quickly throughout the game, not spending the time to see that 18...b5 was ever so slightly more accurate, and that White did not have 19.f5 gxf5 20.gxf5 because of 20...♝xf5! 21.♗c6 ♜g5†.

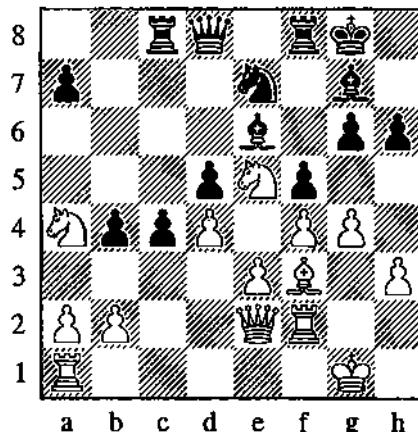
19.h3

Slow. 19.gxf5! ♜xf5 20.♗f3 ♜e6 21.♕g3 ♜f5 22.♗f3 with even chances was better.

19...b5 20.♗f3 b4!?

Preparing to sacrifice the exchange, if allowed.

21.♗a4 ♜c8



22.♗g2

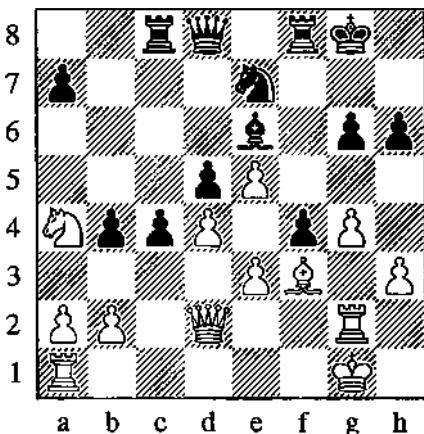
My intention was to answer 22.♗c5 with 22...♜xc5 23.dxc5 ♜xe5 24.fxe5 ♜c7 with an interesting position.

22...♝xe5 23.fxe5 f4

23...♜a5 24.b3 c3 was also possible. The computer says Black is just better, but I personally find the position rather unclear.

24.♗d2

24.♗c5? certainly does not work now. After 24...♜xc5 25.dxc5 fxe3 26.♗xe3 d4 White's position is unbearable.

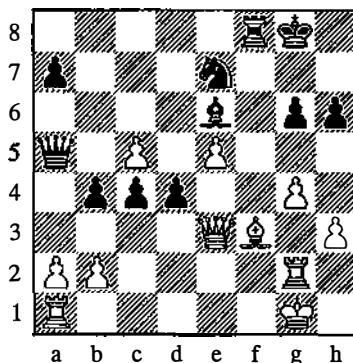


24... $\mathbb{W}d7$

I rather liked this move, even if the details were lost on me.

There are other good moves such as 24...c3!?

But the main question is of course why I did not play 24... $\mathbb{W}a5$. What I saw was that my usual idea does not work here: 25. $\mathbb{Q}c5$ $\mathbb{B}xc5$ 26.dxc5 fxe3? (26...g5!?) 27. $\mathbb{W}xe3$ d4



This fails to achieve compensation on account of 28. $\mathbb{W}xd4!$ $\mathbb{B}xf3$ 29. $\mathbb{W}d6$ $\mathbb{Q}f7$ 30. $\mathbb{B}f1\pm$ and White keeps his extra exchange without having to face an avalanche of pawns.

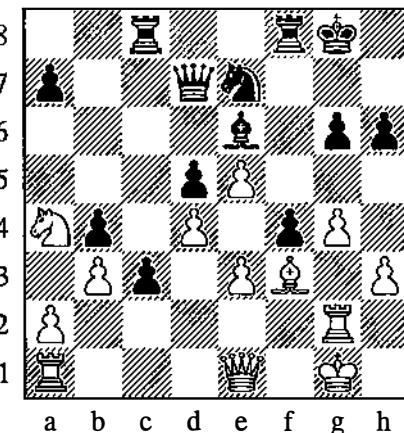
25.b3

I did not have full control over 25. $\mathbb{W}xb4$ fxe3 26. $\mathbb{B}f1$ $\mathbb{Q}c6$ 27. $\mathbb{W}c3$ $\mathbb{Q}xe5$ 28.dxe5 $\mathbb{W}xa4$ 29. $\mathbb{W}xe3$ $\mathbb{Q}h7\mp$, but Black is doing OK here.

25. $\mathbb{Q}c5$ is still met with 25... $\mathbb{B}xc5$ 26.dxc5 fxe3 27. $\mathbb{W}xe3$ d4??, although the position is not nearly as clear as I imagined during the game (and I still found it pretty unclear). The main point is that it is unpleasant for White.

25...c3 26. $\mathbb{W}e1$?

I expected 26. $\mathbb{W}d3$, which I found stronger because it fights against the ... $\mathbb{Q}e7-h4$ manoeuvre. It was to become apparent that my opponent had not anticipated this idea at all.



26...g5!

The attraction of putting the knight on h4 is just too great to miss.

26... $\mathbb{Q}c6$! with the point of 27. $\mathbb{Q}c5$! $\mathbb{Q}xe5$! was something I did spot during the game, but I did not see the deeper point of it, which is to play ... $\mathbb{W}e7-g5$, force White to take on f4 and then win the d4-pawn. This is too deep for someone who was trusting his wrists to find the best moves.

27.a3

Seeking counterplay.

27.h4? $\mathbb{Q}g6$ 28.hxg5 hxg5 would only favour Black as he is the one on the attack.

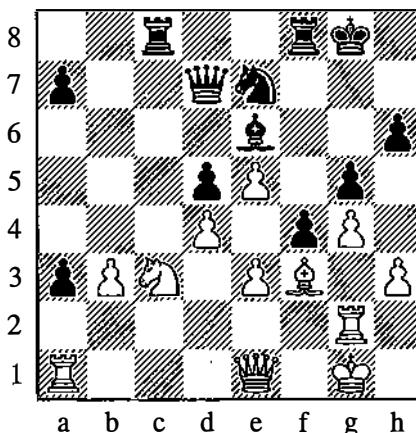
27...bxa3!?

I refrained from playing 27... $\mathbb{Q}g6!$ because I did not see what to do after: 28.axb4? $\mathbb{Q}h4$ 29. $\mathbb{E}f2$ $\mathbb{Q}xf3\#$ 30. $\mathbb{E}xf3$ $\mathbb{Q}xg4$ 31.hxg4 $\mathbb{W}xg4$ † 32. $\mathbb{Q}f2$ fxe3† 33. $\mathbb{W}xe3$



Admittedly I did not look very hard, or I would have seen 33... $\mathbb{E}xf3\#$ 34. $\mathbb{W}xf3$ $\mathbb{E}f8$ winning at once. I was a bit restless, playing too fast.

28. $\mathbb{Q}xc3$



Maybe there is some difficult improvement here, but in practical terms there was nothing better for him with 40 seconds on the clock.

28... $\mathbb{Q}g6\#$ 29. $\mathbb{E}xa3?$

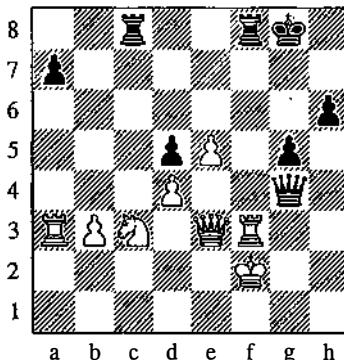
Roddy was running out of time.

After 29. $\mathbb{E}d1$ $\mathbb{Q}h4$ 30. $\mathbb{E}f2$ my intention had

been to play 30... $\mathbb{W}e7$, which it turns out is actually quite a good move. But even stronger would have been 30...h5! 31.exf4 hxg4 with a devastating attack.

29... $\mathbb{Q}h4$ 30. $\mathbb{E}e2$

I was expecting: 30. $\mathbb{E}f2$ $\mathbb{Q}xf3\#$ 31. $\mathbb{E}xf3$ $\mathbb{Q}xg4$ 32.hxg4 $\mathbb{W}xg4\#$ 33. $\mathbb{E}f2$ fxe3† 34. $\mathbb{W}xe3$

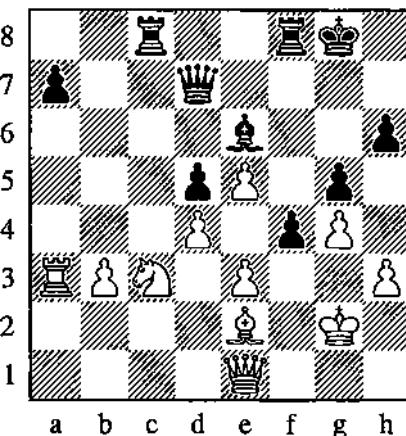


I had looked at ideas such as ... $\mathbb{W}xf3\#$ and ... $\mathbb{E}xc3$ afterwards, but the computer points to a simple solution I would have found for sure, had I gathered my thoughts. 34... $\mathbb{E}xf3\#$! 35. $\mathbb{W}xf3$ and now either 35... $\mathbb{W}xd4\#$ or 35... $\mathbb{E}f8$, both winning.

30... $\mathbb{Q}xg2$

30... $\mathbb{E}f3$ also won of course, but I saw a simple way to win a rook and went with it.

31. $\mathbb{E}xg2$



31...f3†! 32.Qxf3 Wf7

White resigned. The point is of course that after 33.Qe2 Black wins with 33...Bx3! 34.Wxc3 Wf2† 35.Qh1 Wxe2 36.Qa1 f2 and mate is near.

0-1

As most people study a variation with the intention of playing it, not of publishing a book, those concerns are probably limited to a handful of readers. But you can develop your own systems, and then abandon a line before everyone you usually face knows what to do against it. Then you develop another line. In some cases, you can use the same lines for all of your life; as long as you do not do so unconsciously. Do not be naive.

Repair your lines

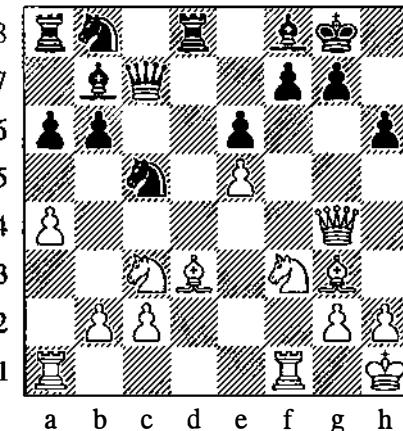
Our attraction to copying others' play is to a large degree because we want to reduce the amount of time it takes working on something. Often this means that we see an impressive game and form an opinion based on the result; as people did with the Tarrasch book after my loss to Rasmussen (even though that game was dull and unimpressive). You will find that your pet lines get killed from time to time. This is not the moment for despair, but for rejoicing. Lazy people will think that your line does not work anymore, but you will do the job of repairing it and will get a chance to use it in the near future, because all of your lazy opponents will be sort of unprepared for it, just hoping that you just have not seen that your line is in trouble. This is one of the reasons why I was naturally attracted to less mainstream openings, like the Tarrasch. People would get so optimistic when I played it, and then get hit by a hundred hours of deep preparation.

A similar thing happened to my last-round opponent in my first Olympiad.

Diego Valerga – Jacob Aagaard

Turin (ol) 2006

1.e4 c5 2.Qf3 d6 3.d4 cxd4 4.Qxd4 Qf6
 5.Qc3 a6 6.a4 e6 7.Qe2 Qe7 8.0-0 Wc7 9.f4
 0-0 10.Qh1 b6 11.e5 dxe5 12.fxe5 Qfd7
 13.Qf4 Qb7 14.Qd3 Qc5 15.Wg4 Ed8
 16.Qg3 Qf8 17.Qf3 h6



18.Qf4

A lot of chess players hope that they will be able to win the game without any real effort. It is a part of our insecurity in our own abilities. I have been there, I don't judge. But it is not a good place to be. Not just because of how we feel, but because it is a bad strategy. A better strategy is to look at the lines of yours that are in trouble and find solutions. This is what I did with this variation, and I quite liked what I did.

18...Qxd3!N

This was my improvement.

The year before the variation had received some pretty poor publicity:

18...Qh8?



19. $\mathbb{W}h5?$

The actual refutation of this line is:
 19. $\mathbb{Q}xh6!! \mathbb{g}xh6$ 20. $\mathbb{Q}g5$ $\mathbb{Q}xd3$ 21. $\mathbb{Q}xf7†$
 $\mathbb{W}xf7$ 22. $\mathbb{E}xf7$ $\mathbb{Q}xe5$ 23. $\mathbb{Q}xf8†$ $\mathbb{E}xf8$ 24. $\mathbb{W}xe6$
 $\mathbb{Q}bd7$ 25. $\mathbb{Q}xh6†$ $\mathbb{Q}g8$ 26. $\mathbb{W}g5†$ $\mathbb{Q}h8$ 27. $h3$

and White has a serious advantage.
 I should confess that I did not know about
 this refutation back in 2006, but I disliked
 the whole thing immensely.

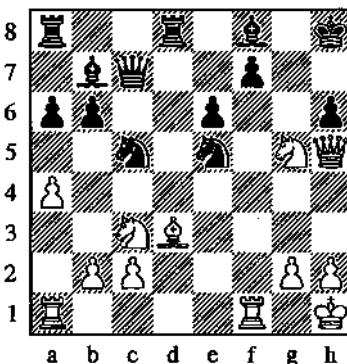
19... $\mathbb{Q}c6$

According to the computer, 19... $\mathbb{Q}xd3$
 20. $cxd3$ $\mathbb{E}xd3$ also works. A possible
 continuation could be 21. $\mathbb{Q}xh6$ $gxh6$
 22. $\mathbb{Q}g5$ $f5!$ 23. $exf6$ $\mathbb{E}d2$ and the position
 is complicated – or 0.00 according to the
 computer. White can, as so often, take a
 perpetual with 24. $\mathbb{Q}f7†$ $\mathbb{Q}h7$ 25. $\mathbb{Q}g5†$.

20. $\mathbb{Q}xh6!$

This is still the right way to play, although
 not as clear as it could have been.

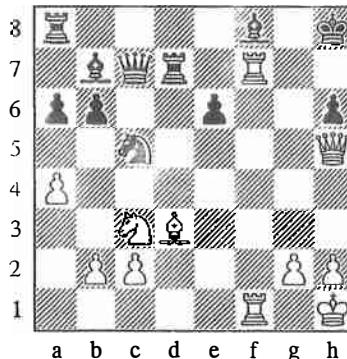
20... $gxh6$ 21. $\mathbb{Q}g5$ $\mathbb{Q}xe5$



22. $\mathbb{Q}xf7†$ $\mathbb{Q}xf7$ 23. $\mathbb{Q}xf7$ $\mathbb{Q}d7?$

23... $\mathbb{Q}xg2†!$ 24. $\mathbb{Q}xg2$ $\mathbb{Q}xd3$ 25. $cxd3$ $\mathbb{Q}d7$
 with equality was better.

24. $\mathbb{Q}af1$



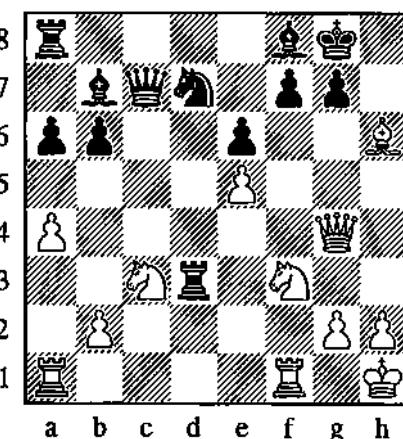
24... $\mathbb{Q}xd3?$

24... $\mathbb{Q}xg2†$ 25. $\mathbb{Q}xg2$ $\mathbb{E}xf7$ 26. $\mathbb{E}xf7$ $\mathbb{Q}xd3!$
 with an important check on f4 would have
 kept Black in the game, although 27. $cxd3$
 $\mathbb{W}c6†$ 28. $\mathbb{Q}h3$ $\mathbb{Q}g7$ 29. $\mathbb{W}g6$ $\mathbb{Q}g8$ 30. $\mathbb{Q}e4$
 $\mathbb{W}d5$ 31. $\mathbb{Q}g3$ $\mathbb{Q}g5$ 32. $\mathbb{W}xg5$ $hxg5$ 33. $b3±$
 would still have caused Black a lot of
 suffering.

25. $\mathbb{E}xf8†$

1–0 Volokitin – Vescovi, Bermuda 2005.

19. $cxd3$ $\mathbb{E}xd3$ 20. $\mathbb{Q}xh6$ $\mathbb{Q}d7$



I had analysed this position for hours. The
 excitement of getting it on the board was

immense. I was almost bursting, trying to keep my cool.

21.♕f4?

I had also analysed 21.♕e4 ♜c8 with the conclusion that the chances were even. I think this holds. 22.♕xg7 ♜xg7 23.♕f6† ♜f8 24.♕h7† ♜g8 25.♕f6† is one way to show this.

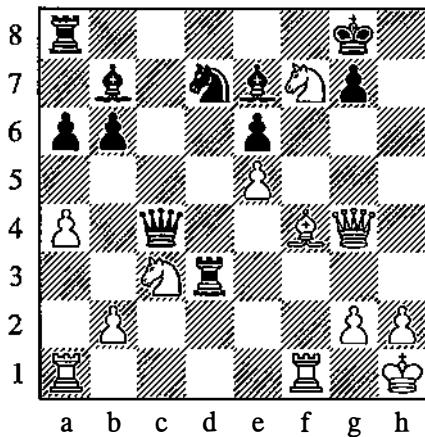
21...♛c4!

The pin is very uncomfortable.

22.♕g5 ♜e7! 23.♕xf7?

I did not see this move at all in my preparation, which was a good way to learn.

23.♛h5 ♜xg5 24.♛xg5 ♜f8 and ...♕g6 with a clear advantage was what I had seen at home.



At this point I had a chance to think for a long time, knowing that my position was very promising, maybe already winning. Yes, this is indeed putting too much confidence in the engines, as my opponent certainly could have seen something the machine did not – in 2006, that is. In 2017, I think my reasoning would be more justified.

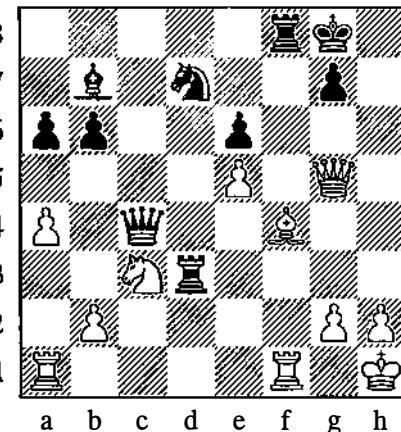
23...♝f8! 24.♕g5

24.♕h6† ♜h7 25.♛h5 also does not work. Black wins after 25...g6 and, for example, 26.♛e2 ♜xc3.

24...♝xg5

There are a lot of other refutations; I just saw one and played it.

25.♛xg5



25...♝d4

There is also a pin down the f-line. Curiously, 25...♝d2 also wins.

26.♛e7 ♜dxg4 27.♜xf4 ♜xf4 28.♜g1 ♜xg2†!

A fine way to end a pretty terrible tournament.

29.♝xg2 ♜g4† 30.♝f2 ♛f4†
0–1

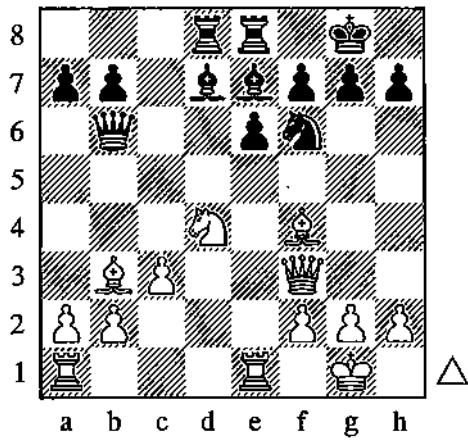
I am a firm believer that if you are willing and able to do the work, then being unfashionable and defending lines you believe are better than their reputation will be an immense asset. You will manage to surprise your opponents, it will suit your style and will give you a depth of knowledge they cannot compete with, and you will be anything but naive. Your chess will benefit immensely from this.

Chapter 13

Analyse Your Own Games

Jacob Aagaard – Istvan Almasi

Budapest 1996

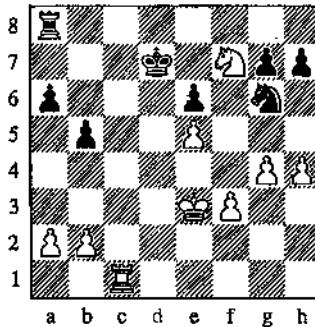
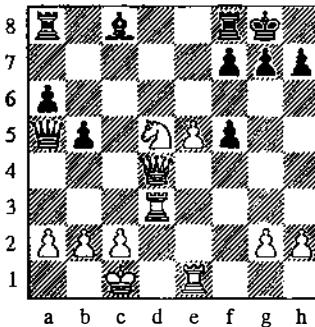


White to play

We can all learn from our games; but mainly from our mistakes. However, in this position I think I found the right way to continue.

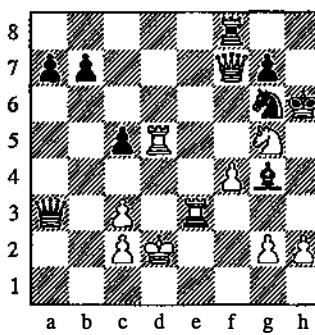
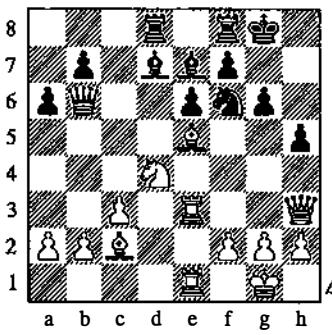
Test yourself against the book

This book is not an exercise book, but an experienced trainer can always find interesting moments in games that can be more effective for the student if he thinks about them first. On this page, I have included a few positions from this chapter that you can look at, should you feel so inclined. As long as it does not make you put off reading the chapter!



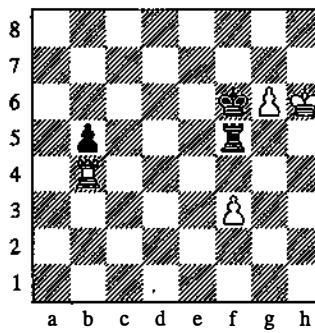
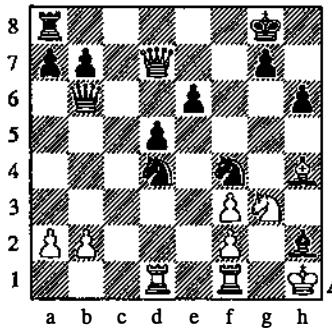
More than one way! Find yours...
(see page 327)

Never give up!
(see page 342)



One move and Black resigned
(see page 322)

I zeroed in on this combination,
just when it became irrelevant...
(see page 333)



A nice combination
(see page 324)

What was Adhiban fearing
during the game?
(see pages 335/6)

I am not sure there has been any more popular path to improvement over time than analysing one's own games. It is the recommendation and practice of the greatest players throughout history, Alekhine, Botvinnik and Kasparov. These were not the greatest talents and never professed to be, but they kept working at their game, eliminating weaknesses and learning about the game by digging deeper and deeper. Former Board 1 for the US, Alex Yermolinsky wrote a book called *The Road to Chess Improvement*, which was about analysing your own games forensically, as a way to improve your game.

My books over the last twelve years have mainly been exercise books, but this does not mean that I value solving exercises more highly than analysing your own games and understanding your strengths and weaknesses. All my games in this book have gone through lots of analysis in order to understand better what happened and to understand what I should do differently in the future.

One of these concerned...

The French Problem

In the 1990s, as I went from yo-yoing in the 2200 area at the beginning of the decade, to becoming an International Master and playing for a GM-norm in 1997, before plateauing just below 2400, I did all right against the French Defence. Here is a pleasant memory.

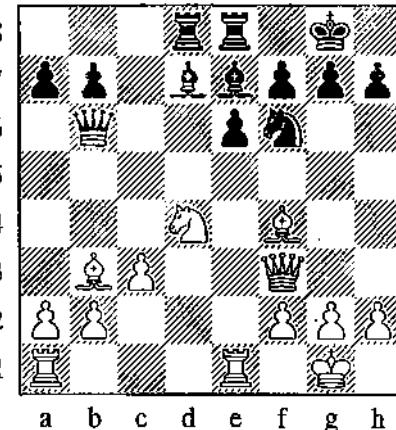
Jacob Aagaard – Istvan Almasi

Budapest 1996

1.e4 e6 2.d4 d5 3.Qd2 c5 4.exd5 Qxd5
 5.Qgf3 cxd4 6.Qc4 Qd6 7.0–0 Qf6 8.Qb3
 Qc6 9.Qbx d4 Qxd4 10.Qxd4 Qe7 11.c3
 0–0 12.Qf3 Qc7 13.Qb3 Qd7 14.Qg5 Qad8
 15.Qfe1 Qfe8

I am not sure why the rook should be better placed here than on f8.

16.Qf4 Qb6



Apparently, this had occurred in a Petrosian game. At this point I played a better move than the automatic 17.Qad1.

17.Qe2?

The knight is very solid on d4. There is nothing on the d-file but exchanges, which is what Black is looking for.

17...a6 18.Qael Qh8?!

I cannot remember or now find the idea of this move.

18...Qc6 19.Qxc6 Qxc6 20.Qxc6 bxc6 would give White a permanent advantage in the endgame, but is preferable to the alternatives.

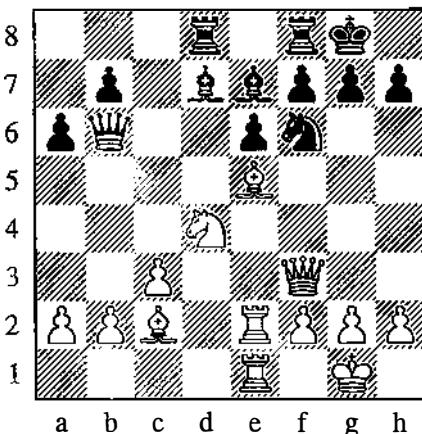
19.Qe5 Qf8

This concession is rather serious. Black is preparing ...Qd5, which should have been played a while back.

20.Qc2

The threat of Qd3 followed by a return to f3 is very unpleasant.

20...Qg8

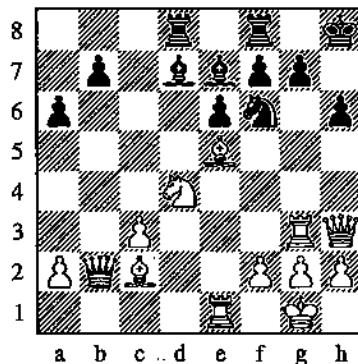


Another retracing of steps. Black has played passively and lost four tempos. It is no surprise that White has a winning attack.

21. Wh3 g6

A concession.

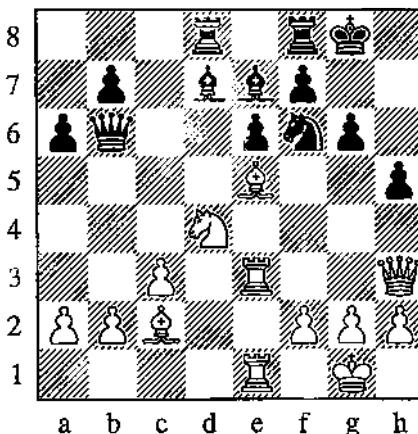
Against 21...h6, I was preparing a simple attack. 22. Ee3! For example: 22... Wxb2 23. Eg3 Wh8



24. Exg7! Whxg7 25. c4 Wxa2 26. Wg4† Wh8 27. We4 Whg8 28. Wxf6 and Black will have to give up the queen and suffer for a long time, probably with nothing to show for it.

22. Ee3 h5

An unpleasant move to have to play. But 22... Wxb2 23. Wh4! Wh5 24. Wxh5! shows how bad Black's position has become.



23. Wh4!

Black resigned. 23... Qd5 24. Whxh5! with mate is coming.

1-0

However, after I became an international master and started aspiring to defeat grandmasters, I struggled. I lost a number of games and in others I got really bad positions. The following game was not atypical, although it did feel to be a low point.

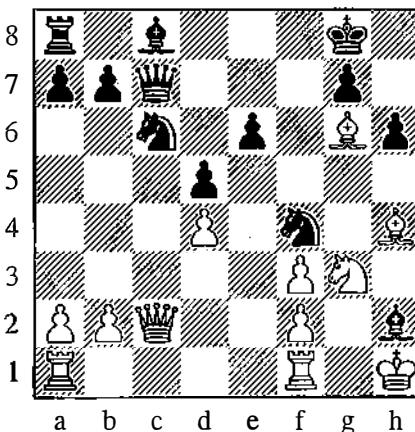
Jacob Aagaard – Evgeny Gleizerov

Hoogeveen 2000

1.e4 e6 2.d4 d5 3.Qd2 Qf6 4.e5 Qfd7 5.c3 c5 6.Qd3 Qc6 7.Qe2 cxd4 8.cxd4 f6 9.exf6 Qxf6 10.Qf3 Qd6 11.0-0 Wc7 12.Qg5 0-0 13.Qh4 Wh5 14.Wc2 h6 15.Qg6 Exf3 16.gxf3 Qxh2† 17.Qh1 Qf4 18.Qg3

So far, we have been following main line theory. I certainly will not pretend that I had any feeling of control in this position, but at least I was marginally prepared, which by no means was a given for me at this point in time.

But shallow preparation against one of the big experts of an opening is usually a bad idea.



18...Wb6!N 19.Wad1 Wxd4

I find myself in a complex position in an opening where I am generally unprepared and have little feeling for what is going on. It is not a surprise that my position quickly fell apart.

20.Wxd4? Wxd4 21.Wh7† Wh8 22.Wxh2 g5
23.Wc7 Wg7
0–1

After the game Evgeny told me he had already picked up one point with this idea in a rapid game, so technically I was not facing a novelty.

The problem with this game was not so much that I had failed to anticipate a complicated novelty from my opponent or that I lacked playing strength. I realized that my inability to play White in the French was a recurring problem in my games going back years and years. This was not a difficult conclusion for me to reach, as I had realized the same about being Black against the Reti, done the work and won some nice games.

Meanwhile others showed how to deal with this variation.

Goran Todorovic vs Jesse Kraai

Budapest 2003

1.e4 e6 2.d4 d5 3.Qd2 Qf6 4.c5 Qfd7 5.c3
c5 6.Qd3 Qc6 7.Qe2.cxd4 8.cxd4 f6 9.exf6
Qxf6 10.0–0 Qd6 11.Qf3 Wc7 12.Qg5
0–0 13.Qh4 Qh5 14.Wc2 h6 15.Qg6 Wxf3
16.gxf3 Qxh2† 17.Qh1

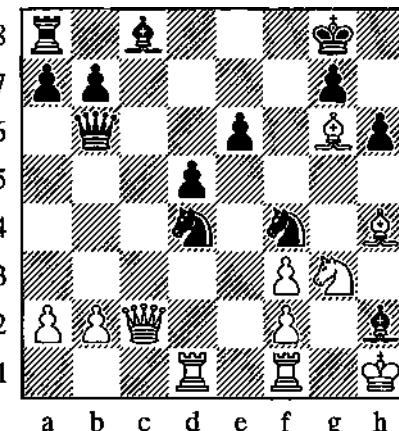
17.Qg2 has been played a few times. My feeling is that it is a better try for an advantage.

17...Qf4 18.Qg3 Wb6

Later on, Black players responded with 18...e5! 19.Wxh2 Wd6 20.Qh7† Qh8 when their chances are no worse, despite being a rook down. With the aid of engines, I think we have reached the conclusion of this variation being non-critical.

19.Wad1 Wxd4?

This loses by force. The engine gives 19...Qd7!N, when after 20.Wxh2 Wxd4 21.Wxd4 Wxd4 22.Wd1 We5 it proclaims that Black has enough compensation, even at a relatively great depth. It would take serious work to find out if this is true or not. I doubt anyone will want to try this out; 18...e5 seems to solve all of Black's problems.



20.Wa4!

This is what I should have played. It is easy to see now.

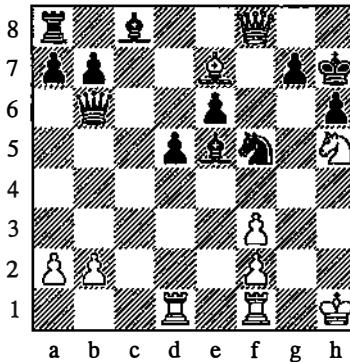
20... $\mathbb{Q}d7$

An attempt to resurrect a line already in trouble. The high point had been Gleizerov's game against me.

The previous game had gone:

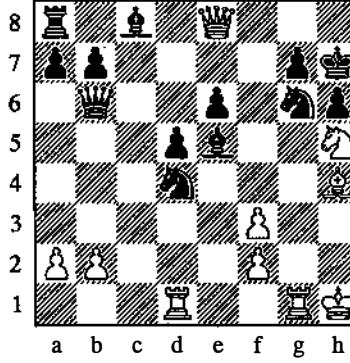
20... $\mathbb{Q}xg6$ 21. $\mathbb{W}e8\#$

21... $\mathbb{Q}f8$ 22. $\mathbb{Q}h5$ $\mathbb{Q}e5$ 23. $\mathbb{Q}e7$ $\mathbb{Q}f5$ 24. $\mathbb{W}xf8\#$
 $\mathbb{Q}h7$ has been played in a few games, but is untenable. The following long line shows how bad Black's position is. Those who want to go deeper into it can do so on their own time.



25. $\mathbb{B}de1!$! $\mathbb{Q}d4$ 26. $\mathbb{B}g1$ $\mathbb{Q}d7$ 27. $\mathbb{W}xa8$ $\mathbb{Q}xe7$
 28. $\mathbb{W}f8$ $\mathbb{Q}f5$ 29. $\mathbb{B}g4$ $\mathbb{W}xb2$ 30. $\mathbb{B}eg1$ $\mathbb{W}c3$
 31. $\mathbb{Q}h2$ $\mathbb{Q}b5$ 32. $\mathbb{W}f7$ $\mathbb{Q}h8$ 33. $\mathbb{W}xe6$ $\mathbb{W}xf3$
 34. $\mathbb{Q}f4$ $\mathbb{Q}h4$ 35. $\mathbb{W}c8\#$ $\mathbb{Q}h7$ 36. $\mathbb{W}c2\#$ $\mathbb{Q}h8$
 37. $\mathbb{B}1g2$ $\mathbb{Q}xg2$ 38. $\mathbb{Q}g6\#$ $\mathbb{Q}h7$ 39. $\mathbb{Q}e5\#$ $\mathbb{Q}d3$
 40. $\mathbb{Q}xg7\#$ $\mathbb{Q}xg7$ 41. $\mathbb{W}c7\#$ and White wins.

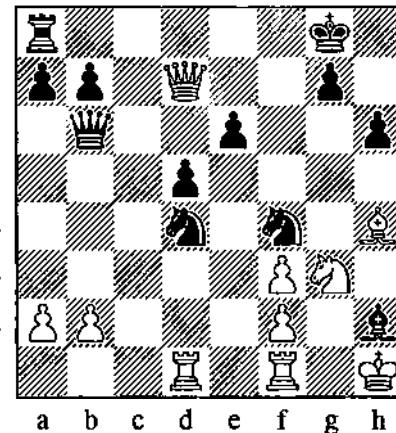
22. $\mathbb{Q}h5$ $\mathbb{Q}e5$ 23. $\mathbb{B}g1$



23... $\mathbb{Q}f4$

A later game saw a nice finish: 23... $\mathbb{Q}h8$
 24. $\mathbb{B}xg7\#$ $\mathbb{Q}xg7$ 25. $\mathbb{B}g1$ $\mathbb{W}c7$ (25... $\mathbb{Q}f5$
 26. $\mathbb{B}xg7\#$ $\mathbb{Q}xg7$ 27. $\mathbb{Q}f6\#$ is pretty) 26. $\mathbb{Q}f6\#$
 1–0 Petenyi – Arslanov, Herceg Novi 2008.
 24. $\mathbb{Q}xf4$ $\mathbb{Q}xf3$ 25. $\mathbb{Q}g6$ $\mathbb{W}c6$ 26. $\mathbb{W}h8\#$
 1–0 Ildachev – Gleizerov, Abu Dhabi 2002.

21. $\mathbb{Q}f7\#$! $\mathbb{Q}xf7$ 22. $\mathbb{W}xd7\#$ $\mathbb{Q}g8$

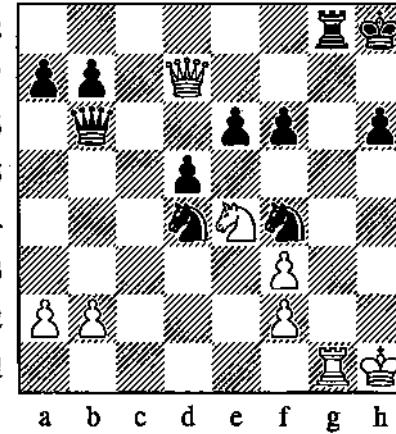


23. $\mathbb{Q}f6\#$

A big improvement on 23. $\mathbb{B}xd4$ $\mathbb{W}xd4$
 24. $\mathbb{Q}xh2$ $g5\#$ Miroshnichenko – Borovikov,
 Alushta 2001.

23... $\mathbb{Q}xf6$ 24. $\mathbb{B}g1$! $\mathbb{Q}xg1$ 25. $\mathbb{B}xg1$ $\mathbb{Q}h8$
 26. $\mathbb{Q}e4!$ $\mathbb{B}g8$

26... $\mathbb{Q}h5$ 27. $\mathbb{Q}xf6$ and mates.



27. $\mathbb{W}h7\#!$

1–0

When you look at your games and realize that you have a weakness, you have only taken the first step towards doing the one thing that will really matter...

Making your weaknesses a strength

I have done this many times. I had no comprehension of the endgame. Towards the end of my career, I considered it a strength. The same with simple positional play; it completely overtook my tactics. The same is the case with some openings. In this case, the French Defence.

I spent a lot of time checking Anand's games against the French, on the recommendation of grandmaster Sune Berg Hansen. I was never great at memorizing theory and did not make this my main focus. I did learn some theory in some variations around this time, but was still focusing on understanding the arising structures and the common problems. I played through a lot of games, played a lot of blitz games online. I actually won quite a few nice games in the French against famous grandmasters. I also played some training games with friends, although this was more in the Sicilian.

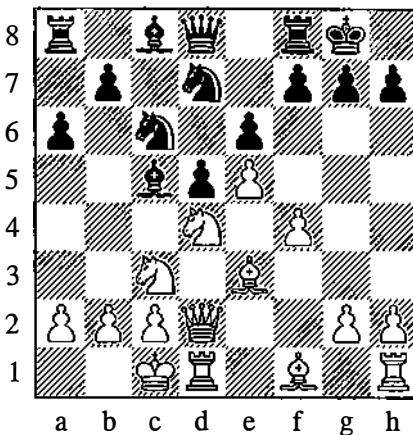
In 2003 I worked a lot on chess in general. I had decided that it was not just a hobby I was good at, but that chess would provide my income through an idea for a publishing company I had, called Quality Chess. As a result, I put a lot more effort into my remaining books for Everyman, *Excelling at Chess Calculation* and *Excelling at Technical Chess*, which were published together in the summer of 2004. The work on these books and on my game in general paid off and I made my

first grandmaster norm in the 2003-04 Rilton Cup in Stockholm. In the last game, I got a chance to show my increased understanding of the French Defence against a grandmaster.

Jacob Aagaard – Stellan Brynell

Stockholm 2004

1.e4 e6 2.d4 d5 3. $\mathbb{Q}c3$ $\mathbb{Q}f6$ 4.e5 $\mathbb{Q}fd7$ 5.f4 $\mathbb{Q}c5$ 6. $\mathbb{Q}b3$ $\mathbb{Q}c6$ 7. $\mathbb{Q}e3$ $\text{cx}d4$ 8. $\mathbb{Q}xd4$ $\mathbb{Q}c5$ 9. $\mathbb{W}d2$ 0–0 10.0–0–0 a6



11. $\mathbb{W}f2!?$

Kramnik had won a great game against Radjabov, which for a time gave Black something of a headache. I had previously played Nijboer's 11. $\mathbb{Q}b3$, but assumed Brynell would be prepared.

11... $\mathbb{Q}xd4$ 12. $\mathbb{Q}xd4$ $\mathbb{W}c7$ 13. $\mathbb{Q}d3$ $\mathbb{Q}xd4$ 14. $\mathbb{W}xd4$ b5

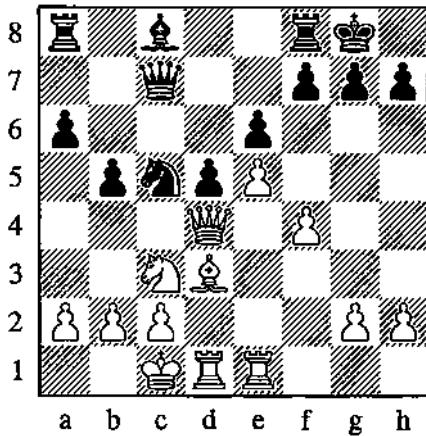
14... $\mathbb{W}c5$ has been played in some games. I am not sure that White is better after 15. $\mathbb{Q}e2$ b6 16. $\mathbb{Q}he1$, but it is a position it would be hard to lose, and which gives Black few winning chances. One of my pre-match tactics was to expect Brynell to stray from passive positions, as a draw would do him no good either.

15. $\mathbb{Q}he1!$

Out of book. Preparing $\mathbb{E}e1-e3-h3$ and overprotecting the e5-pawn in order to play f4-f5 seemed logical. I considered 15. $\mathbb{W}f2$ in order to keep the queens on, but Black plays 15... $b4$ 16. $\mathbb{Q}e2$ $a5$ followed by ... $\mathbb{Q}c8-a6$ exchanging his problem bishop. White cannot prevent this forever, but it is useful to postpone it.

15... $\mathbb{Q}c5?$

Stellan said that he had this position before, playing 15... $\mathbb{Q}c5$. In the resulting endgame, Black has hardly any winning chances. Whether White's chances are that great is hard to tell, but I had picked up some strategic ideas from Korneev – Kraai, Zalakaros 2003, and Grischuk – Ilyushin, Krasnoyarsk 2003.



16.f5!

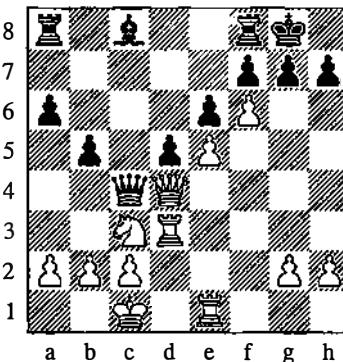
Allowed to play this, I hesitated only to make sure that I was not rushing. I had noticed that this was a weakness of mine that had to be controlled. If not, I could start moving too fast in positions where I would have preferred to think.

The move itself is obvious. White has an attack and a good structure. Coming is f5-f6, keeping Black's pawns on the light squares, creating threats against the black king.

Stellan now thought for about 50 minutes, looking puzzled as to what had happened to him. He later explained that he had mixed up his variations. If ... $\mathbb{Q}c8-b7$ and $\mathbb{Q}c1-b1$ were included, then it was a theoretical position where Black should be OK. But here his choices were unpleasant.

16... $\mathbb{exf}5$

A big concession, but Stellan did not want to allow f5-f6, even if the queens come off: 16... $\mathbb{Q}xd3\#$ 17. $\mathbb{Q}xd3$ $\mathbb{Q}c4$ 18.f6!



I evaluated White's position as winning. The endgame is indeed excellent, but chess is usually a little more complicated than I was imagining at this point.

17. $\mathbb{Q}xd5$ $\mathbb{Q}xd3\#$

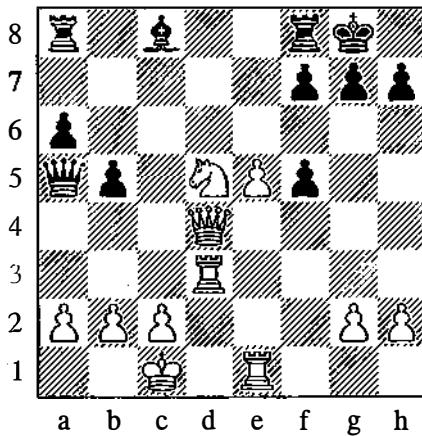
Stellan refrained from 17... $\mathbb{W}a7$ due to 18. $\mathbb{W}f4\#$. Black will have to take on d3 or lose a pawn without solving any of his problems. Add in $\mathbb{Q}f6\#$ threats for fun.

18. $\mathbb{Q}xd3$ $\mathbb{W}a5?!$

Stellan had already accepted that he might lose the game and thus went for a position where he was playing for two results, a draw not being one of them!

I considered 18... $\mathbb{Q}c4$ during the game, as did Stellan. He did not like 19. $\mathbb{W}f2\#$, when the attack is overpowering. I was

thinking about going into the endgame, which is also great. But nowhere near as devastating as Stellan's suggestion, which just wins.



At this point I instantly got a feeling that this was a great moment, and quickly saw that I had a possible combination. I went through the variations carefully, trying to find any problems with them and actually saw the odd moves that were played in the game. Despite my emotions erupting, I did my falsification (see page 178).

19.b4!

I saw this move intuitively. It is very forcing, which appealed to my way of thinking at that point. After this, it was all about careful calculation.

I am sure it will not surprise many to hear that the engine gives White a number of direct wins. However, this one turns out to get the highest score, whether or not you play this move or the knight check on f6 first.

19... $\mathbb{W}xa2$ 20. $\mathbb{Q}f6\#$

The idea behind the previous move.

20...gxf6

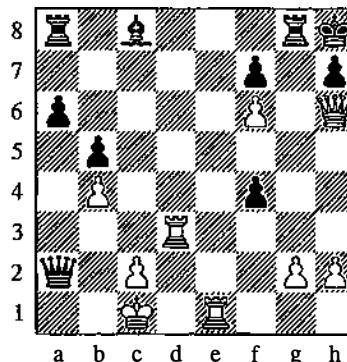
The alternative 20... $\mathbb{Q}h8$ was also under control.



After 21. $\mathbb{Q}h3$ $gxf6$ (21...h6 22. $\mathbb{W}f4$ and $\mathbb{Q}xh6\#$ is mate) 22. $\mathbb{W}h4$ $\mathbb{W}a1\#$ 23. $\mathbb{Q}d2$ $\mathbb{Q}d8\#$ 24. $\mathbb{Q}e2$ $\mathbb{W}xe5\#$ 25. $\mathbb{Q}f1$ White wins the queen.

21. $\mathbb{Q}g3\#$

I had seen the rest of the game, but I like even more the line my 2004 laptop gave me: 21. $\mathbb{W}h4\? f4$ 22. $\mathbb{W}xf6$ $\mathbb{Q}h8$ 23. $\mathbb{W}h6$ $\mathbb{Q}g8$



I had seen this and that I had 24. $\mathbb{Q}e8\!$ winning. But the full festivities happen after 24. $\mathbb{W}g7\#$! $\mathbb{Q}xg7$ 25. $\mathbb{Q}e8\#$ $\mathbb{Q}g8$ 26. $\mathbb{Q}xg8\#$ $\mathbb{Q}xg8$ 27. $\mathbb{Q}d8\#$.

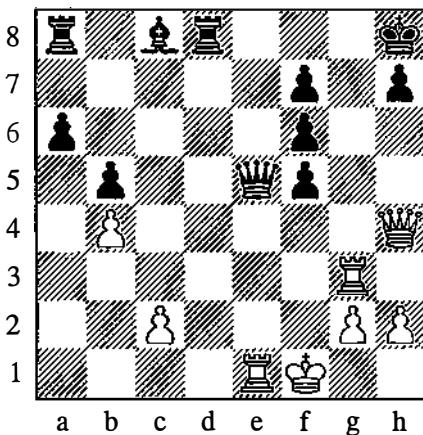
21... $\mathbb{Q}h8$ 22. $\mathbb{W}h4$

Black is forced to give a lot of checks.

22... $\mathbb{W}a1\#$

22... $\mathbb{W}e6$ 23. $\mathbb{Q}h3$ with mate.

23. $\mathbb{Q}d2$ $\mathbb{Q}d8\#$ 24. $\mathbb{Q}e2$ $\mathbb{W}xe5\#$ 25. $\mathbb{Q}f1$



Black is a piece up and struggling to prevent mate. I had the time, so I had worked out with certainty that Black had to give up a piece at this point.

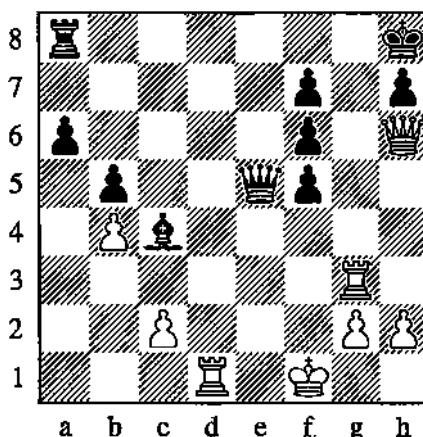
25...♝d1

25...♝d6 26.♝h3 is all over. And against 25...♝xg3 I was planning 26.♝xf6! ♜g7 27.♝xd8† ♜g8 28.♝f6† ♜g7 29.♝e8#.

26.♝xd1 ♜e6

26...♝b7 could be tried with the trap 27.♝h3? ♜xg2†. But 27.♝h6 wins on the spot. Amazingly I had seen this too.

27.♝h6 ♜c4†



Here something very interesting happened. I had played the last nine moves relatively quickly, but now stopped. I thought both king moves won on the spot and found it hard to decide between them. My emotions were all over the place. The only time I had ever lost control of them to the same extent was against Jens Ove Fries Nielsen in 1995 (see page 173).

In the end, I made the move that felt safest. I did not see that 28.♝f2?? loses to 28...♛e2†.

28.♝g1!

1–0

The story could end there, especially after this wonderful king march from c1 to g1, which seemed almost unique at the time. Little did I know that my success in the French, against Stellan, was going to continue for a long time.

Jacob Aagaard – Stellan Brynell

Copenhagen 2006

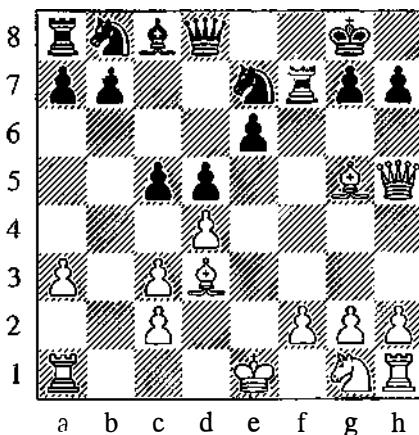
1.e4 e6 2.d4 d5 3.♗c3

For years I played 3.♗d2 out of a fear of doubled pawns. The solution was of course to make a weakness into a strength, to work on this structure and find out how to play it.

3...♝b4 4.e5 c5 5.a3 ♜xc3† 6.bxc3 ♜e7 7.♝g4 0–0 8.♗d3 f5

I had anticipated that Stellan would play this variation. I had Khalifman's recently published *Opening for White According to Anand 1.e4, Volume 7*, which dealt with this variation, with me on the train. This was my preparation...

9.♗xf6 ♜xf6 10.♗g5 ♜f7 11.♗h5

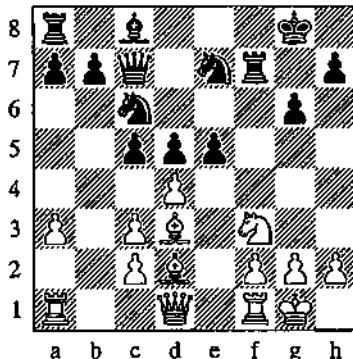


11...h6?

Stellan had done some work in the morning in an attempt to make this variation work. He failed, but decided to play it anyway, as he had to play something. For someone who has played the French for as many years as Stellan has, this strikes me as a weird attitude.

Almost two years earlier I had had the same line in a league game where Stellan and I were sitting on the same side. I had not managed to get that much out of the opening then, but still managed to win a good game:

11...g6 12.♗d1 ♗a5 13.♗d2 ♖bc6 14.♗f3
♗c7 15.0–0 e5



16.♗xe5?!

Recently White has been successful after 16.dxe5 ♖xe5 17.♗e2?!. For example:
17...♗d7 18.♗e1 ♖xf3† 19.♗xf3 ♖c6

20.♗g5± Eljanov – Naiditsch, Isle of Man 2016.

16...♗xe5 17.dxe5 ♖xe5

17...c4? was something I feared during the game, but I am less certain about its value now.

18.c4 d4

However, I am certain that the simplest here is 18...♗f5!, which is also the most popular move. Black has completely equalized, as practice confirms.

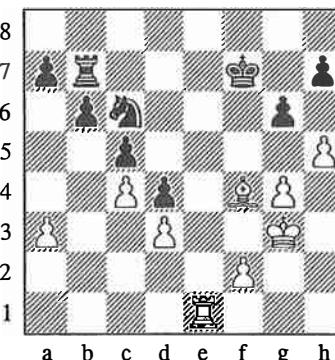
19.♗e1?!

I don't think this was based on a positional evaluation. I just believed an endgame might be in my interest.

19...♖xe1 20.♗axel ♗f5 21.h3 ♗c6 22.♗h6
♗e7 23.♗xe7 ♗xe7 24.g4 ♗xd3

I was very happy to get my pawns untangled. Black is still OK, but I like 24...♗d7 better.

25.cxd3 ♗f7 26.♗g2 b6 27.♗f4 ♗c6 28.♗e1
♗d8 29.♗g3 ♗d7 30.h4 ♗b7 31.h5



I have slowly tried to improve my position, but it would be a travesty to claim that it has mattered much. Black is fine and after something like 31...b5 or 31...♗e7, a draw would be very likely. But instead my opponent makes a small blunder.

31...gxh5?

The only way for this to make sense is to believe that he missed my next move.

32.♗h1 ♗e7 33.♗xh5 ♗g7

Suddenly Black has big problems everywhere.

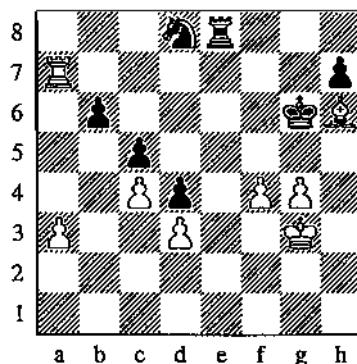
34.♕h6† ♔g8?

34...♔g6 35.♕f4 ♔g7 was better, but I am sure I would have found 36.♕d5 with a lot of problems for Black.

35.♕f5 ♕e8 36.f4 ♔d8

It is worth noticing that an endgame like 36...♕e7 37.♕e5 ♔f7 38.f5 ♔c6 39.♕xe8 ♔xe8 40.♕f4 does not hold for Black. White puts the king on e4, bishop on f4 and exploits the weaknesses on both flanks to squeeze a win out.

37.♕g5† ♔f7 38.♕g7† ♔f6 39.♕xa7 ♔g6



40.f5†!

Not strictly necessary, but an attractive way to end the game.

40...♔xh6 41.♕h4 ♔e6

41...♕g8 42.♕d7 was my point. Sadly, it is not a strict zugzwang, as it also threatens g4-g5†.

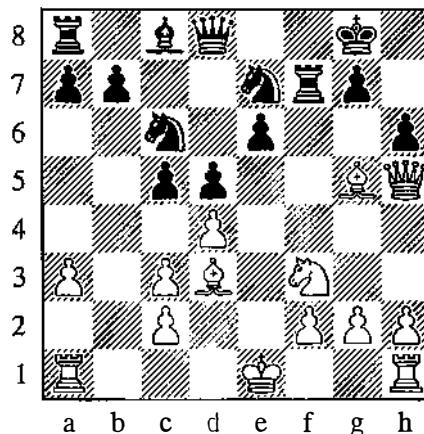
42.♕b7

The rest was not necessary, but in team matches the games have a tendency to go on a bit too long.

42...♕a8 43.♕xb6 ♕xa3 44.♕xe6† ♔g7 45.♕g5 ♕xd3 46.♕e7† ♔g8 47.♕f6 ♕e3 48.g5 h5 49.g6 h4 50.g7 h3 51.♕xe3 dxe3 52.♕g6 h2 53.f6

1–0 Aagaard – J. Akesson, Sweden 2004.

12.♕f3 ♔bc6

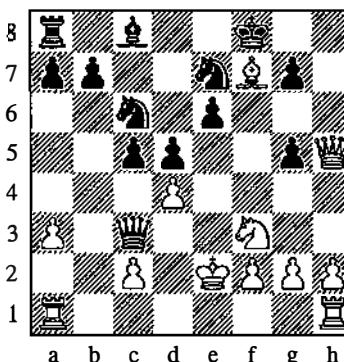


13.♕h7†!

I am able to follow my preparation.

13...♔xh7

13...♕f8 had been played in one game at the time and White had missed the winning move: 14.♕g6! ♕a5 There is nothing else. 15.♕xf7 ♕xc3† 16.♕e2 hxg5

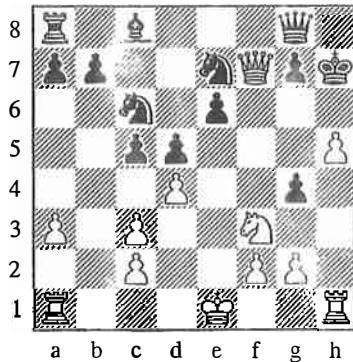


At this point I was planning 17.♕e8, which is still the favourite of the engine. But I think the following human solution is correct: 17.♕hd1! ♕xd4† 18.♕xd4 cxd4 19.♕e1 ♕d7 20.♕f1 ♕g8 And in Van Delft – Wempe, Hoogeveen 2008, White could have taken a short cut to the full point with the obvious 21.♕xe6.

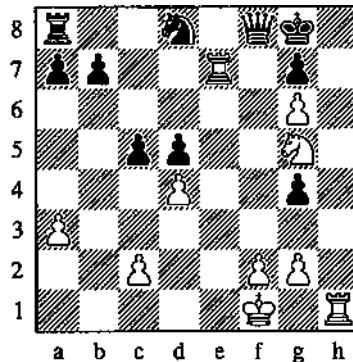
14.♕xf7 hxg5 15.♕xg5†

Of course, I wanted to make 15.h4 g4 16.h5 work, but after 16...♕g8 the engines of

2017 agreed with my conclusion; that White is struggling not to be worse.



But opening preparation is not about looking at the engine and not doing anything yourself. That way you will never find anything that your opponents have not already looked at. In this case Parimarjan Negi analysed the variation in detail for his 2014 book, *Grandmaster Repertoire – 1.e4 vs. The French, Caro-Kann and Philidor*. What he found was astounding: 17.♕g5† ♖h8 18.♗g6! ♔d8 19.c4! ♕d7 20.cxd5 exd5 21.♔f1 ♖f5 22.♖e1 ♜f8 23.♗xe7 ♖xg6 24.hxg6† ♖g8

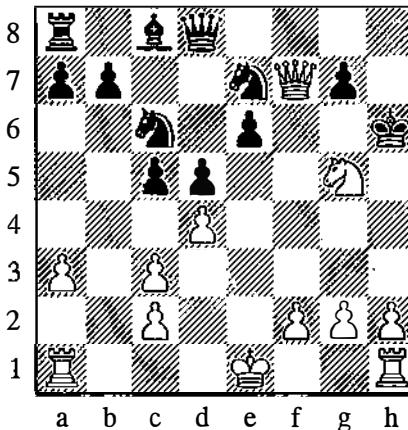


25.♖e1!! Black has no defence against 26.♕h7, winning the queen.

How did Parimarjan find this beautiful line? The engine did not suggest it as its top possibility. He carefully went through all the options that seemed interesting to him, until he found an exception. Another word for this

is tunnelling, which you can find a description of on page 382.

15...♗h6



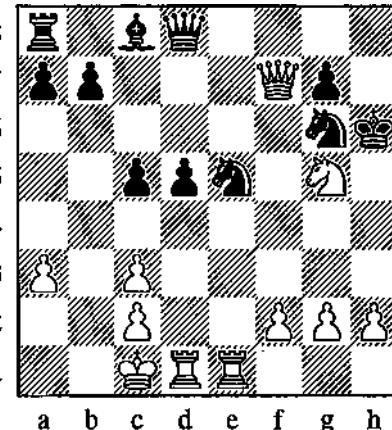
16.0–0–0!

In his book Alexander Khalifman recommended 16.♗xe6 ♖xe6 17.♘xe6† with an advantage. I agreed with the evaluation, but I did not feel this was the right way to go for me. With the black king on h6, I wanted to go for the attack. It is who I am and it felt right in the position.

16...e5

One of the things I had seen was that 16...♗a5 17.♘d3 is directly over. Any ...e6-e5 attempts will be met with ♗e6, winning.

17.dxe5 ♗xe5 18.♗he1 ♗7g6



19.f4!

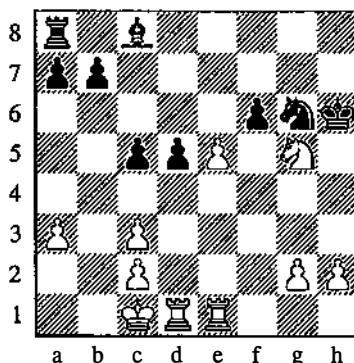
After the game, I was not happy with this choice, even though the move is utterly natural.

I believed that 19.h4 made more sense, although this is not the case after 19... $\mathbb{Q}g4!$? 20.f3 $\mathbb{W}a5$, when White is better, but will have to find some awkward moves to prove it.

19... $\mathbb{Q}c4?!$?

This is the only move that gives counterplay, but at the same time it loses by force.

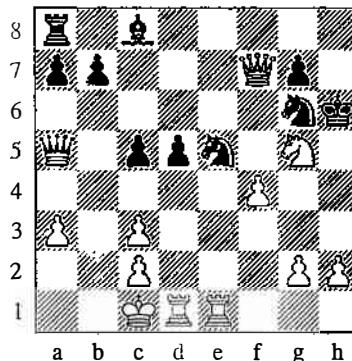
What I suddenly feared during the game was that Black could escape into a decent endgame with 19... $\mathbb{W}f6$, which happens to be the only move. But this fear does not take into account that it is a truly dreadful move to have to play for Black. After: 20. $\mathbb{W}xf6$ gxf6 21.fxe5



Black cannot play 21...fxg5 22.e6 $\mathbb{Q}e7$ as I believed, on account of 23. $\mathbb{R}f1!$, when the outcome is already sealed.

Instead he would have to go into the dreadful ending after 21... $\mathbb{Q}xg5$ 22.exf6 $\mathbb{Q}xf6$ 23. $\mathbb{R}xd5$, where Black looks a long way away from both making a draw and general enjoyment.

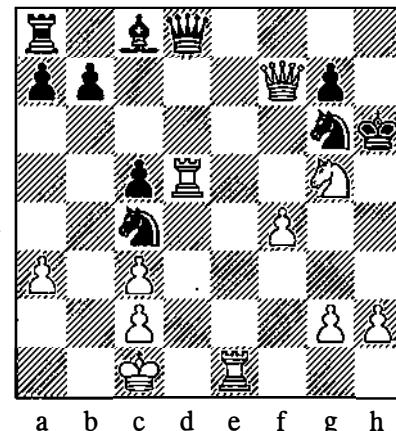
19... $\mathbb{W}a5$ gives White a few good continuations.



I would probably have played 20. $\mathbb{R}xe5$ $\mathbb{Q}xe5$ 21.fxe5 $\mathbb{W}xc3$ 22. $\mathbb{R}xd5$ because of the direct attack on the king. The only relevant line continues 22... $\mathbb{W}e3\#$ 23. $\mathbb{Q}b1$ $\mathbb{W}xg5$ 24. $\mathbb{W}g8!$ and Black will have to give up the a8-rook to prevent a worse fate at the hands of the white rook and queen tandem.

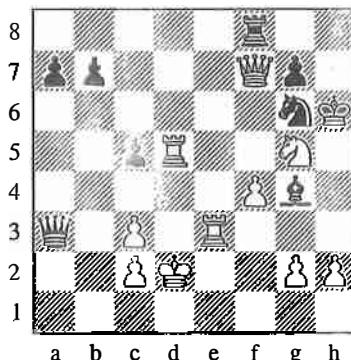
20. $\mathbb{R}xd5!$

The other move I seriously considered was 20. $\mathbb{R}e6$ $\mathbb{Q}xe6$ 21. $\mathbb{W}xe6$, when after 21... $\mathbb{W}b6$? 22. $\mathbb{W}h3\#$ $\mathbb{Q}h4$ 23. $\mathbb{W}xh4\#$ $\mathbb{Q}g6$ Black looked, and indeed is, no worse.

**20... $\mathbb{W}b6$**

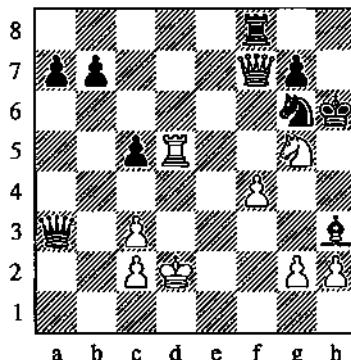
Admission: I had entirely missed this move. I had spent a lot of time looking at 20... $\mathbb{W}a5$, when I had found 21. $\mathbb{R}e6!$ with the idea that 21... $\mathbb{Q}xe6$ 22. $\mathbb{W}xe6$ is totally over. The only resistance I had found for Black was:

21... $\mathbb{W}xa3\#$ 22. $\mathbb{Q}d1$ $\mathbb{Q}e3\#$ 23. $\mathbb{E}xe3$ $\mathbb{Q}g4\#$
24. $\mathbb{Q}d2$ $\mathbb{E}f8$

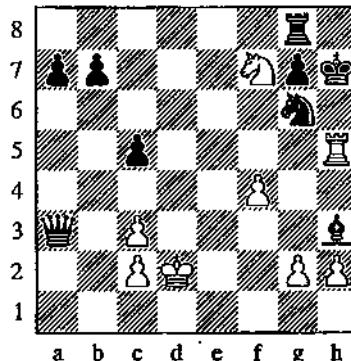


At this point, I was toying with different ideas, including something with 25. $\mathbb{W}g8!?$, which I could not make work. After 25... $\mathbb{E}xg8$ 26. $\mathbb{E}h3\#$ Black has 26... $\mathbb{Q}h4!$.

It was only after the game I realized that my idea had been sound, but a reversal of the move order was required: 25. $\mathbb{E}h3\#!!$ $\mathbb{Q}xh3$



26. $\mathbb{W}g8!!$ $\mathbb{E}xg8$ 27. $\mathbb{Q}f7\#$ $\mathbb{Q}h7$ 28. $\mathbb{E}h5\#$

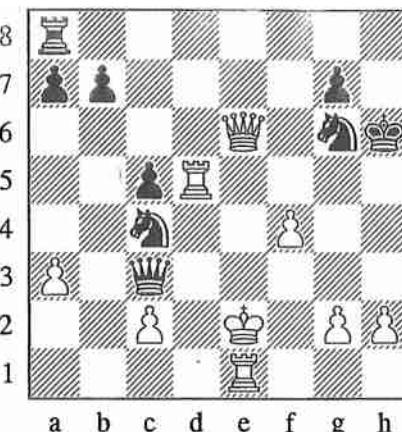


One of the most beautiful combinations in my career and as so often, one I did not get the chance to play. But I was so close; so close!

21. $\mathbb{Q}e6!$

After thinking for a very long time, I found the win with great certainty.

21... $\mathbb{A}xe6$ 22. $\mathbb{W}xe6$ $\mathbb{W}b2\#$ 23. $\mathbb{Q}d1$ $\mathbb{W}a1\#$
24. $\mathbb{Q}e2$ $\mathbb{W}xc3$



25.f5

Absolutely sufficient.

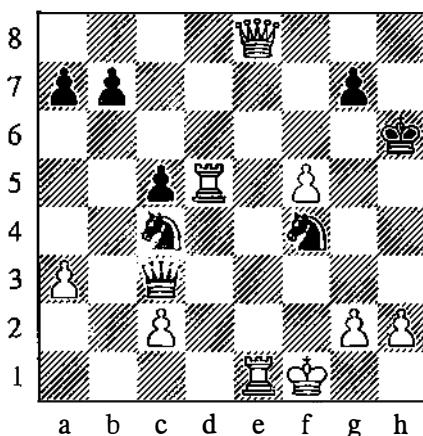
I wanted to play 25.g4, but after 25... $\mathbb{Q}ce5$ 26. $\mathbb{E}xe5$ $\mathbb{W}xe5\#$ 27.fxe5 I allowed myself to be afraid of the fork 27... $\mathbb{Q}f4\#$.

25... $\mathbb{E}e8!?$

Reminiscent of 25... $\mathbb{E}d1$ two years earlier.

Another line I saw during the game was 25... $\mathbb{Q}ce5$ 26. $\mathbb{Q}f1$ $\mathbb{E}f8$ 27. $\mathbb{E}dx5$ $\mathbb{E}f6$ and now the key move 28. $\mathbb{E}5e3!$, when it is all over. The engine might give three or four different wins a few moves earlier in this variation, but when you are at the board, you long to find just one, giving you a chance to move on to solving other problems.

26. $\mathbb{W}xe8$ $\mathbb{Q}f4\#$ 27. $\mathbb{Q}f1$



This time the king only made it to f1, but the parallel is amazing. The rest was not very serious.

27... $\mathbb{Q}g5$ 28. $\mathbb{W}e7\#$ $\mathbb{Q}g4$ 29. $h3\#$ $\mathbb{Q}xh3$
30. $\mathbb{E}e4\#$ $\mathbb{Q}f4$ 31. $\mathbb{E}xf4\#$ $\mathbb{Q}xf4$ 32. $\mathbb{W}h4\#$
1-0

For some reason, whenever I play Stellan I am White. The next time he relied on the Petroff Defence and made the draw, only to return to the French Defence a few years later. This time I chose the Tarrasch Variation with 3. $\mathbb{Q}d2$ and got a decent position out of the opening. Rather than beating him to a pulp with wild tactics and cross-board king marches, I squeezed him with a typical slight advantage against the bad French bishop and won in the endgame.

A simple process

Analysing my own games and the games of others has provided a repeated sense of joy throughout my career in chess. It has also been the thing that has helped me the most. Throughout this book, you will see analysis of my games and see the insights into my own decision making process, as well as general insights into chess that have inevitably come from my analysis of games and my thinking

about both what has been going on in the head and on the board.

The actual analysis of the games used to be more complicated than it is now. It would take many hours to go through a game carefully and you would miss a lot. Yusupov once told me that he wondered if the reason why we have so many teenage grandmasters these days is because they are receiving a higher level of information. Not just from computers, but also from books, as the authors all use computers and get better and better at using them intelligently.

The most important thing to do when you analyse your games is to apply your critical thinking, and to be curious and open about where the analysis will take you. I heard a story about a strong grandmaster who had drawn a game in a team competition. His teammates all presumed that he had been winning at some point, but the player simply said that he had gone over the game with his laptop and it had not been able to find anything. This was fifteen minutes after the game had been played.

It was pretty clear that he had only played through the moves played in the game, not actually tried out various things and seen where it would take him. Just looking at the engine's numerical reporting is not analysing your games!

Here are the simple guidelines to follow:

Take your time; be curious

You will never get to enjoy something you are rushing through. You have to remember that you are not only looking for the known unknowns, but also the unknown unknowns, the surprising revelations that you did not anticipate.

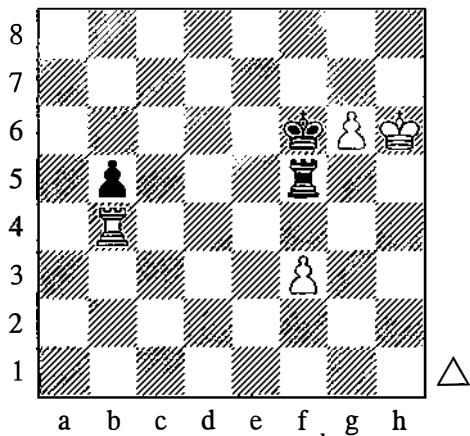
Try out different ideas

With the rise of the engines, one thing that has happened is that a lot of people think they

are analysing their games when all they are doing is noticing where the computer would have played differently, and why. This can even happen to grandmasters.

Liviu-Dieter Nisipeanu – Baskaran Adhiban

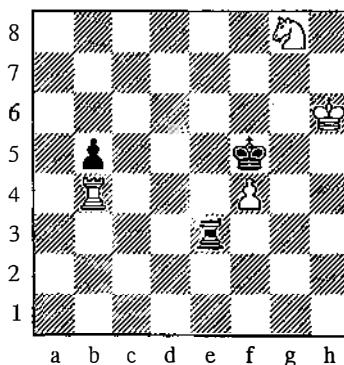
Wijk aan Zee 2016



Adhiban is one of my favourite players. His imaginative approach to the game and fighting spirit is as admirable as it comes. In 2016 he won the B-group at the Tata Steel tournament. In the top section in 2017 he played with great vigour and came in third after the two leading players in the world, Wesley So and Magnus Carlsen.

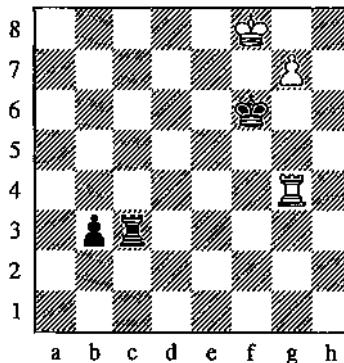
I have chosen him as an example for this book because he is someone who analyses his games carefully and I have often enjoyed his annotations. But like everyone else, he is not immune to making mistakes.

In this game Nisipeanu played the reasonable-looking 55.f4? ♕d5 56.♕b1, when Adhiban found a really nice way to hold the game: 56...♕d8! 57.g7 ♕d3!! (57...♕d2! also holds) 58.g8=♕† ♕f5 59.♕b4 ♕e3!



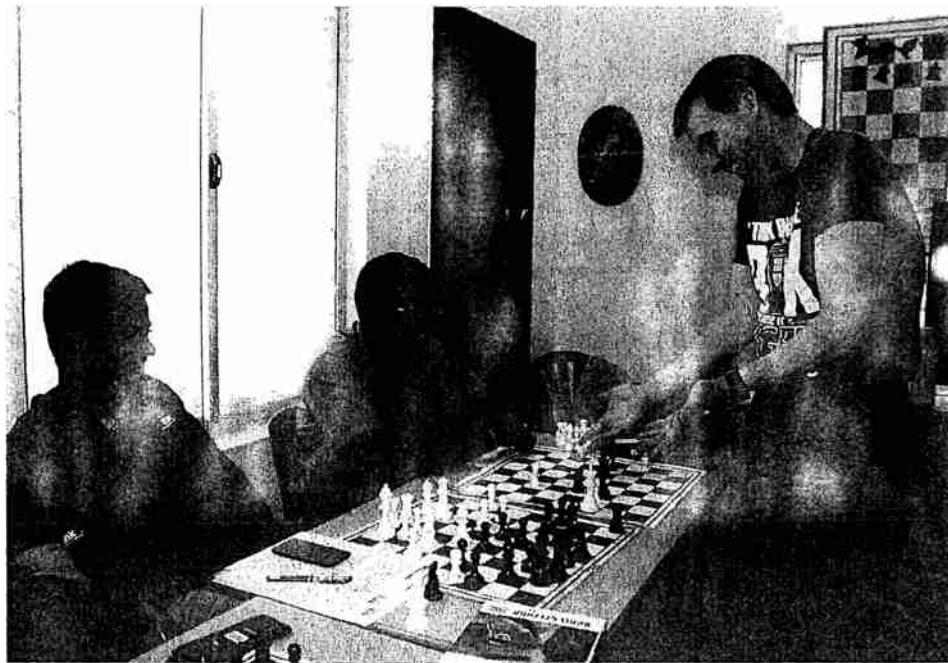
Black is escaping to a rook and knight versus rook ending. After 60.♕d4 ♕e4 61.♕d5† ♕xf4 62.♕xb5† Nisipeanu tested his opponent for the remaining 49 moves before Adhiban was able to claim a draw.

In his annotations on the ChessBase website, Adhiban wrote that there was no win available in this position. His main line went: 55.♕g4 ♕xf3 56.♕h7 ♕h3† 57.♕g8 b4 (57...♕h5? 58.g7 ♕e7 59.♕f4! wins for White) 58.g7 b3 59.♕f8 ♕c3



60.♕g6† ♕e5 61.♕e6† ♕xe6 62.g8=♕† ♕d6 and Black makes a draw by the skin of his teeth.

At the time, when I looked at the game with the engine, I noticed that there was another promising move, which Adhiban had not mentioned. Later I had the chance to give Adhiban the position at a training camp in

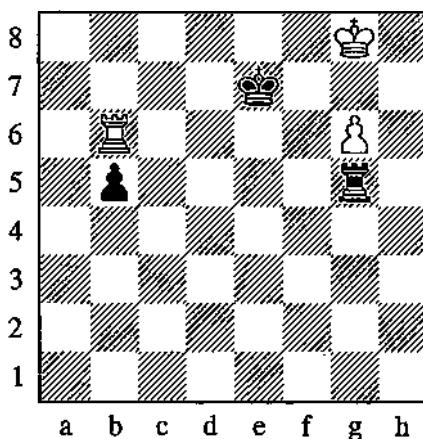


Chennai, while typesetting this chapter. I am not sure what happened to his ChessBase article, as he said this was the move he had feared during the game.

55.♗d4!

This is the move not mentioned by Adhiban in his article. The winning line is instructive, but not too hard for a grandmaster to find if he has enough time.

55...♝xf3 56.♗d6† ♔e7 57.♗b6 ♘h3†
58.♔g7 ♘h5 59.♔g8 ♘g5



White's rook and king are ideally placed. It is not even close.

60.g7 ♘h5 61.♗b7† ♔e8 62.♗b8† ♔e7
63.♗b6!

Black is in zugzwang.

63...♔e8 64.♗e6†

Also after 64.♗b7 White wins.

64...♔d7 65.♔f7

White wins.

Give the machine time to think

Computers are powerful and useful, but they are not omniscient. Most of the time it is preferable to try out various ideas and see what the engine suggests, without taking those suggestions – and especially the evaluations – seriously. The engine can calculate long lines, but towards the end of its horizon, it will get it wrong. Over and over again.

You are the master; it is the servant

Challenge the machine! Don't believe it, don't trust it. Treat it as you would a friend you are analysing with. Pay attention to the ideas and arguments, but don't trust it blindly. You are responsible for finding the truth, the machine does not care.

If you do not understand it in a way that you can explain it to a human, it has no value
The summary says it all. Variations are numeric figures. What you need in your conclusions is something you can explain to others without relying too much on variations. Obviously, chess is played with moves, but these are found in a thought process. Often these days, you will see annotated games with long computer lines, which none of the players were ever close to seeing. I do think variations can be interesting as a proof of an argument, but there will not be many important lines to show. The key two or three ideas are enough.

Put your assumptions under a microscope

This is an important part of analysing your game. Put in the variations you saw during the game, test what you believed. Be curious. Use it as a chance to learn more about chess; not to judge yourself.

Draw conclusions

Learn something – about the opening; about yourself; about chess in general. Check other games with the same piece configuration, pawn structure and so on. Make the effort put into playing count for something; use it to improve your game.

If you can, show your games to a coach or a friend for feedback

A part of what I do as a coach is discussing my students' games. Often, they are much better players than me, so I am not being instructive. But I can be inquisitive, ask questions about approach, time usage, mentality and so on. I am also good at spotting patterns, as we tend to make the same mistakes repeatedly.

Make tournament reports

This is something I employed when I went from international master to grandmaster. I would categorize the mistakes I made in my games over a tournament and see which topics were recurring. It is the same thing I try to do for my students at the moment. The last recurring pattern I recalled was one player who did not apply enough attention to the important moments in his games and sort of treated these decisions like any other decision, rather than raising his level of concentration, something he is quite capable of doing. This cost a full point in his last tournament, which he nevertheless managed to win.

Play games that are worth analysing!

There have been times in my playing career when I did not feel confident about my play at all. My preparation was off, I was unfit, both physically and in chess terms, and everything else was just bad. What I used to tell myself, and anyone who was asking, was that my ambition for the coming tournament was to play games it would be fun to analyse. You will find a lot of games in this book played with that sentiment. In particular, the year I made three grandmaster norms

in five tournaments, my focus before entering the tournaments was not on the title, but on playing games it would be fun to analyse afterwards.

Analyse other people's games

While I find it important to learn from my own mistakes, I have always preferred to learn from other people's mistakes. The process is less painful. While finishing this book, the Women's World Championship was taking place in Tehran. I had been there as a second to the first-round opponent of Tan Zhongyi, and was following her progress with mixed feelings. Although Tan Zhongyi is very strong, she does not greatly inspire me as a player; she is very technical and plays unambitiously in both the opening and middlegame, relying on her opponents' mistakes to win games. On the other hand, after being knocked out by her, it would be a band-aid on the wound if Tan Zhongyi did manage to win the crown.

Still, my favourite player in the event, after we were knocked out, was the lady occupying the room next to mine. Anna Muzychuk's path to the final had been smooth, with many wins and a few draws. But after not getting anything from the white pieces in the first game, she lost for the first time in the second game of the final. Analysing this game, I was mainly interested in Muzychuk's choices.

Tan Zhongyi – Anna Muzychuk

Tehran (2) 2017

1.d4 d5 2.c4 c6 3.Qf3 Qf6 4.Qc3 e6 5.Wd3

White is currently struggling to prove any advantage against the Semi-Slav, so this choice is certainly no better than any other.

5...dxc4

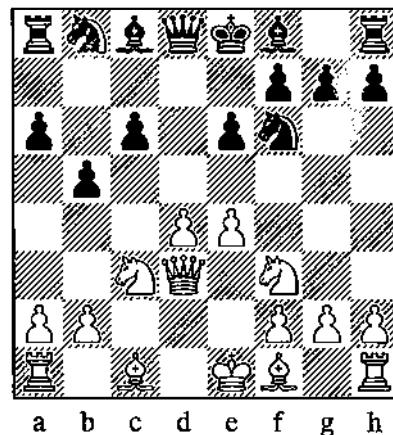
The most commonly played move.

5...b6!? is a very interesting alternative. 6.cxd5 cxd5 is probably playable for both sides...

6.Wxc4 b5 7.Wd3 a6!?

7...Qbd7 8.e4 b4 is more theoretical, but I see nothing wrong with Muzychuk's move.

8.e4



8...c5

I think this is a psychologically poor decision by Muzychuk. Tan is a typical Chinese player with great technique, who does not really make mistakes or poor decisions. On the other hand, her games can be rather uninspiring and it is rare to see her outplay grandmasters with grand strategies, wild attacks or great opening preparation. But play a few inaccurate moves against her in the endgame and you will be in trouble.

8...Qb7 was the flexible choice. 9.e5 Qfd7 10.a4 c5! 11.axb5 axb5 12.Qxa8 Qxa8 with even chances is just one possible direction such a game could take.

9.dxc5!

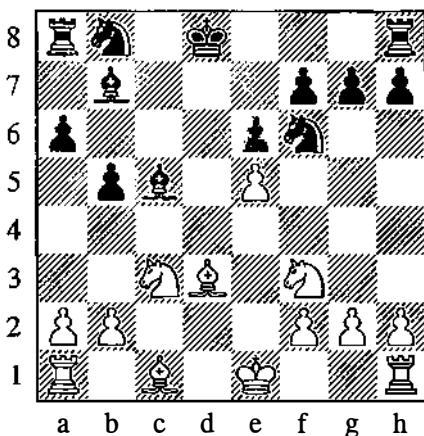
This is both the best move and the one that benefits White's strengths the most.

9...Qxc5 10.Wxd8† Qxd8 11.Qd3 Qb7



For those interested in opening theory, the best way to equalize here is 11... $\mathbb{Q}bd7!$ 12.0–0 $\mathbb{Q}d6!$ 13. $\mathbb{Q}e1$ $\mathbb{Q}g4$, but there is nothing particularly wrong with what Black played in the game.

12.e5



12... $\mathbb{Q}g4?$

This is a common pattern in chess; a few inaccurate moves end with a real mistake.

There are two patterns. A general lack of feeling for the position that leads to poor decisions, one of which is greater than the rest. Or a plan which is bad because its logical culmination contains a tactical flaw. I have a feeling that this mistake belongs to the first category.

The move is bad because the knight is somewhat lost in space after this. It is not going to e5 or f2, which would be one of the dream directions, but instead to h6, which is an awful square.

12... $\mathbb{Q}d5$ 13. $\mathbb{Q}e4$ $\mathbb{Q}d7$ would still keep the position more or less in balance.

13. $\mathbb{Q}e4!?$

Stockfish says that 13. $\mathbb{Q}e4!$ is even stronger, but the text is also very unpleasant for Black.

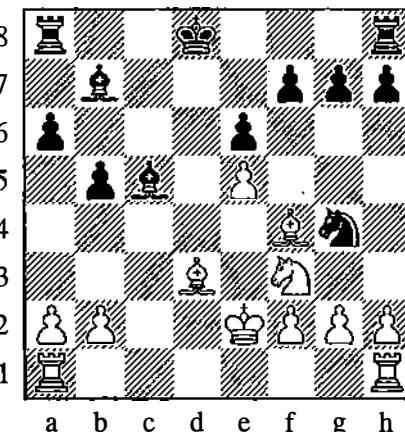
13... $\mathbb{Q}b4\ddagger$

I seriously doubt that Muzychuk believed she was about to win material. But I still think we should have a look at 13... $\mathbb{Q}xe4$ 14. $\mathbb{Q}xe4$ $\mathbb{Q}xf2$, where White plays 15. $\mathbb{Q}xa8$ $\mathbb{Q}xh1$ 16. $\mathbb{Q}g5\ddagger$ $\mathbb{Q}c7$ 17.b4! $\mathbb{Q}b6$ 18. $\mathbb{Q}e2$ $\mathbb{Q}f2$ 19. $\mathbb{Q}c1$ $\mathbb{Q}d7$ 20.h3 and the knight is trapped. $\mathbb{Q}h4$ is coming.

14. $\mathbb{Q}e2$ $\mathbb{Q}d7$ 15. $\mathbb{Q}f4$ $\mathbb{Q}c5?!$

15...f6 16.exf6 $\mathbb{Q}gxf6$ would be a serious structural concession. But it is only one weakness and all the black pieces are playing.

16. $\mathbb{Q}xc5$ $\mathbb{Q}xc5$



The position has clarified somewhat. White has a slight space advantage, mainly through control of the d6-square, a lead in development, because her king is on the second rank and it is her move, and finally, Black has not managed to solve her problems with the knight on g4.

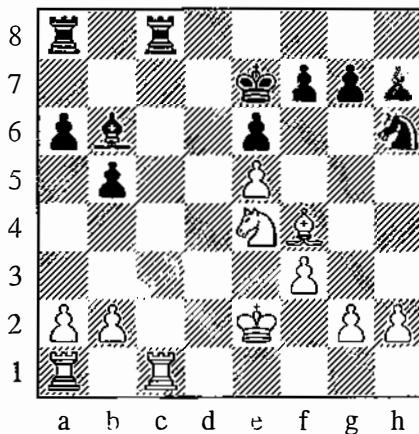
17. $\mathbb{Q}hc1$ $\mathbb{Q}b6$ 18. $\mathbb{Q}g5!$

Tan reacts with active moves.

18... $\mathbb{Q}e7$

18... $\mathbb{Q}d7?!$ is perhaps marginally better, but this is not a very human move.

19. $\mathbb{Q}e4$ $\mathbb{Q}xe4$ 20. $\mathbb{Q}xe4$ $\mathbb{Q}hc8$ 21.f3 $\mathbb{Q}h6$



22.g4!?

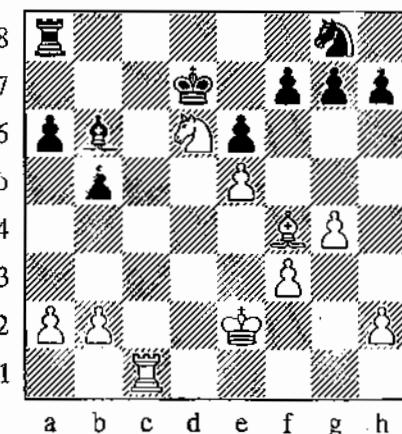
A normal move for a technical player. White prevents the knight from rejoining the game.

But it was stronger to exploit the lead in development with: 22.Qg5†! Forcing the king back. 22...Qf8 23.Qxh6 gxh6 24.Qd6 Qd8 25.Qd3 and White's position is overwhelming.

22...Qg8 23.Qd6 Qxc1 24.Qxc1 Qd7?!

This is either a simple blunder in a difficult position or an attempt to bring the knight back into the game, at the cost of a pawn.

24...Qf8!? with a passive and unpleasant position was probably a better try.



25.Qxf7

When you can take a pawn, you do, of course.

25...Qe7

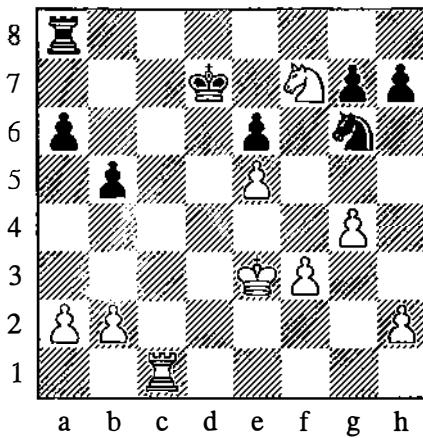
25...Qf8 fails on account of 26.Qd1† and now 26...Qe7 27.Qd6! or 26...Qc6 27.Qe3! Qxe3 28.Qd8†, which it is possible Muzychuk missed the first time around.

26.Qe3 Qxe3 27.Qxe3 Qg6?!

Black is also in a bad way after 27...Qd5† 28.Qd4 Qf8 29.Qg5 Qf4† 30.Qe4, where she cannot take on f3: 30...Qxf3? 31.Qc5† Qe7 32.Qxe6! Qxe6 33.Qc6† and the resulting rook endgame is winning for White.



But she could try 30...g5?!, asking White to show how she intends to make progress. White has an extra pawn, but the conversion is non-trivial.



This is a big moment for White. She has won a pawn and if she manages to fend off the counterplay, she will simply win the game.

Tan spent four and a half minutes on this, but did not manage to solve the problem.

28.h4?

The winning line was 28.♔e4! ♔f8 29.♕g5 ♕f4† Black has to do something before the knight goes to h3. 30.♗e3 ♔a4 31.♗d1† ♔e7 32.♗d6 White is winning. For example: 32...♕f4 33.b3 ♕g2† 34.♗f2 ♔xa2† 35.♗g3 and damage will happen shortly.

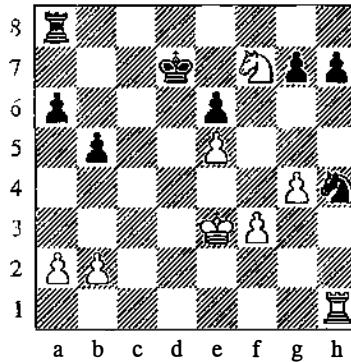
28.f4?! also works. 28...♕xf4 (28...♔f8 29.f5 sort of transposes, except the h7-pawn will go to g6) 29.♕xf4 ♔f8 30.♗d1† ♔e7 31.♗d6 ♕xf7† 32.♗e3 and the rook endgame appears to be winning for White, although the margin is not immense.

28...♔f8?

Muzychuk misses her chance to create resistance. At the moment, the game is going from bad, to worse, to awful, to “get out of my way, I need to leave this place” for Black. She

must have been on the lookout for a chance to change this narrative. Here it was:

28...♘xh4! 29.♗h1



29...♕g2†!

Even 29...♕xf3 would have been worth contemplating for the human eye, had it seen it. White is better after 30.♗h3! ♔e1 31.♗xh7 ♔c8 32.♗xg7 ♔c2, but things can still go wrong.

30.♗f2 ♔e7!

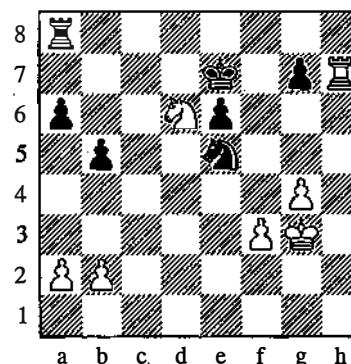
This is of course the key move.

31.♗d1!

It turns out this is the only way for White to keep some advantage.

31.♕g5?! h6! is funny. Black continues to harass the white knight.

31.♗xg2 ♔xf7 32.♗xh7 also does not win. Black has 32...♗d8! 33.♗g3 ♔d5 34.f4 ♔d3† (hence not on the c-file) 35.♗h4 ♔d2 and Black has enough counterplay to make a draw. 31...♗f4 32.♗xh7 ♔d3† 33.♗g3 ♔xe5



34.♕e4±

Black should make a draw with decent play.

29.h5! ♔e7

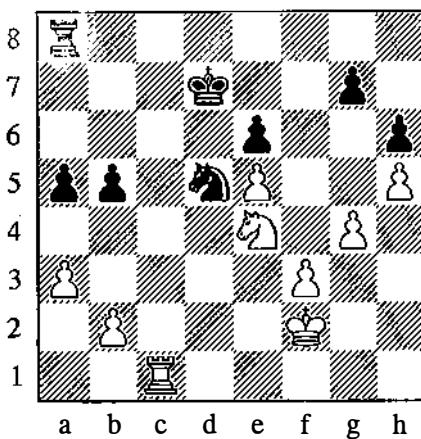
29...♝xf7 30.hxg6 hxg6 31.♗d1† ♕e7

32.♗d6 and White wins.

30.♔g5 ♔d5† 31.♔f2 h6 32.♔e4 ♕a8

32...♔f4 33.♔c3 and White keeps control.

33.a3 a5



The position has clarified and White has an extra pawn for nothing. What follows is a perfect display of technique from Tan Zhongyi.

34.♘c3!

The exchange of knights will make everything simpler. The basic idea in endgames is to exchange pieces if you are material up and pawns if you are material down.

34...♝c8 35.♗d1 ♕e7 36.♗xd5†

Played rather quickly. Tan knew she was winning.

36...exd5 37.♗xd5 ♜c2† 38.♗e3 ♜xb2
39.♗e4 a4 40.f4 ♜b1 41.♗f5 ♜b3 42.♗c5
♗d7 43.♗g6 b4 44.axb4 ♜xb4 45.♗f5
♗e7 46.♗c7† ♜f8 47.♗a7 ♜g8 48.g5 hxg5
49.fxg5 ♜b6 50.♗xa4 g6† 51.hxg6 ♜b1

52.♗a8† ♜g7 53.♗a7† ♜g8 54.g7 ♜f1†

55.♗g6 ♜a1!?

Just asking!

56.♗f7

There will be no stalemate, so Black resigned.

1–0

There are some interesting lessons to learn from this game, besides simply understanding the game of chess better (which in itself is a valuable enough reason to analyse games): a reminder to get into positions you feel comfortable with; to take your opponent's personality into consideration in your preparation (I think 5.♗d3 was a predictable possibility); to take your time to correctly assess the position at the end of the opening (12...♗g4?).

But by far the biggest lesson of the game has to do with the chance Black had on move 28. Up to this point the game was following a clear narrative; Black made a mistake in the opening and White displayed good technique, slowly consolidating her advantage. There were a few minor twists, but most games have these. This moment was different. Black was able to change the character of the game greatly and did not take it. I seriously doubt this is about seeing or not seeing particular moves in the variations, but rather it is a question of attitude. The tactical nature of 28.h4? should have acted as a trigger for Black to look for hope. After 28...♜f8? she never got another chance and could as well have stopped the game there. (Muzychuk won Game 3 and the match was decided in a play-off in Tan Zhongyi's favour.)

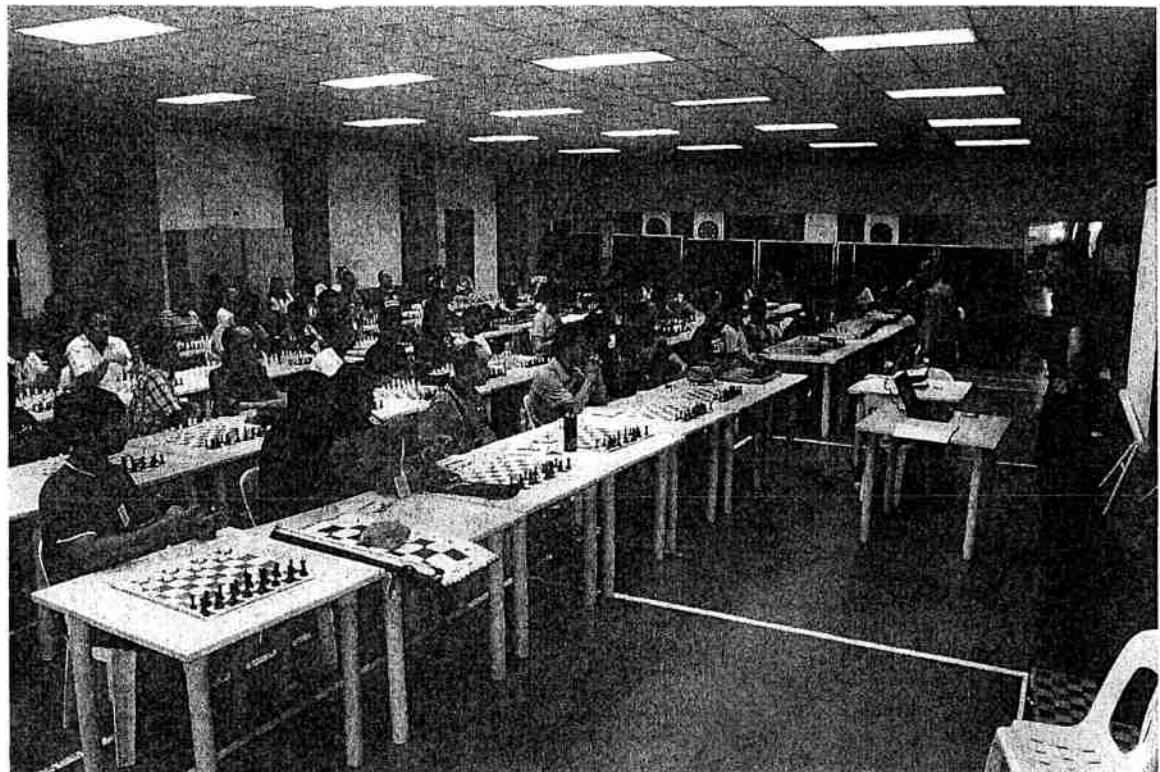
If I was Muzychuk's trainer, I would definitely have talked much more about this moment than all of the decisions in the rest of the game combined. A change here could lead to a different trajectory for her game in the future. Although this would of course have to wait till after the match.

This brings me to the final point in this chapter.

Dvoretsky's system

Mark Dvoretsky was an amazing trainer and the best chess writer there has been. The thing I always liked about working with him was that he focused on simple things. Mark always encouraged his students to analyse games, especially their own, and then used this as the starting point for the training. If a player was struggling to win won positions, he would find exercises on this topic. If the problem was another, he would have exercises for this too.

I would propose to you that you analyse your games and learn a lot from them. If you find you have specific weaknesses, work on them. Don't miss out on that important step! Remember Carlos Alomar: *The purpose of education is action!*

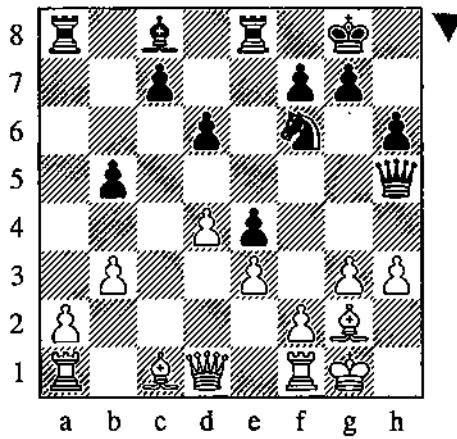


Chapter 14

Training Methods

Schoene – Gerlef

Germany 1998

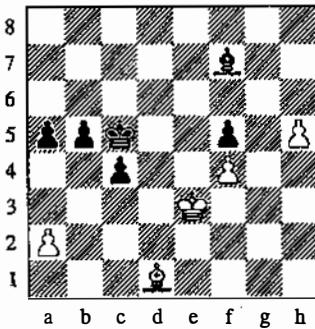


Black to play

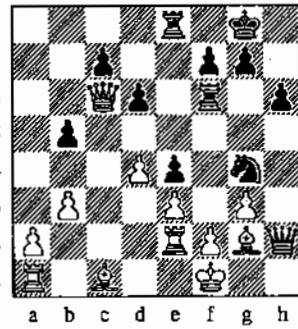
Playing positions is one of the many training methods discussed in this chapter. You can try out taking the black pieces in this position and see if you can do well against a training partner or a friend with this book as a reference point.

Test yourself against the book

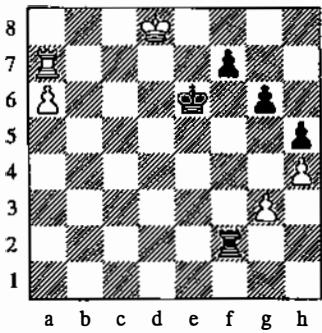
This book is not an exercise book, but an experienced trainer can always find interesting moments in games that can be more effective for the student if he thinks about them first. On this page, I have included a few positions from this chapter that you can look at, should you feel so inclined. As long as it does not make you put off reading the chapter!



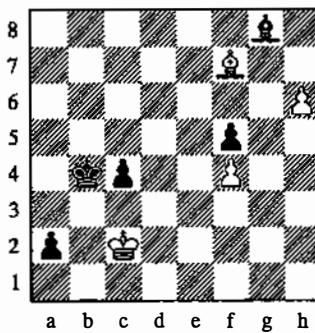
Show off your technique!
(see pages 356/7)



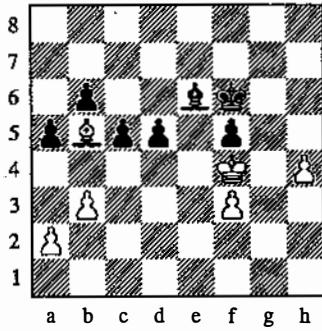
The final trick!
(see page 360)



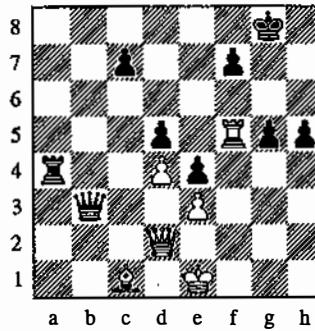
White to play and win
(see page 353)



Is Black still winning?
(see page 357)



Could you win this endgame
against perfect defence?
(see page 354)



Black still has winning
chances here!
(see page 359)

There are different dimensions in which you can improve your chess. As this book comes to a close, I want to mention a few of them and outline my favourite training methods. As I said in the second chapter, the most common psychological mistake people make is to believe the myth of where there is a will, there is a way. The reality is that our motivation increases when we see that our dreams are within reach. **Where there is a way, there is will.** If you feel uncertain about the value of what you are doing, you are unlikely to stick with it, not just in the long run, but also in the effort you put into the training you are doing.

The methods described in this chapter are not ordered according to importance, although some are more useful than others. It is my experience that as wide a training regime as possible will offer the best results. In order to improve in chess, we need to improve our thinking process. There is not just one way to do this. Rather, the more ways we do it, the better. Here are eleven great ones.

1. Solve exercises and studies

Mark Dvoretsky always said that the most effective way to improve in chess was through training. By training, he meant anything that involved a simulation of the decision making we do at the board. The common way to do this is by solving exercises.

Solving exercises is the chess equivalent of going to the gym. You solve different types of exercises to strengthen different parts of your decision making. There are a few guidelines I would like to propose in the solving of exercises.

Warm up (if you want to)

It is perfectly acceptable to get your brain into gear with a collection of simple exercises. Solving them is also useful; everything does not have to be maxed out all the time, and it will hopefully have a positive impact on your confidence.

Aim for exercises just beyond your ability

Remember, improvement lies beyond our comfort zone. When something is difficult, offering you resistance, it is frustrating and at times even painful. When you feel this way, please use this as a trigger to know that you are improving. One of the most common reasons for people to give up is that they feel they are not improving; and the thing that makes them feel this way is the feeling of frustration, which causes a physical sensation in the body that is unpleasant. Remember, evolution does not care about your chess abilities.

If you solve none of the exercises you are working on, then they are too hard for you and the frustration will not get the counterweight of pride and joy from solving difficult exercises. If you solve all the exercises or only fail to solve exercises because you are not concentrating, you are not improving.

Write down the main points of your solutions

Most of us are very forgiving of ourselves. One way this comes out is that we have a tendency to read the solutions as if they were something we had seen. When we write down the main points of our solutions, this is not something we can do. Either we wrote it down, or we did not. Writing down commits us to a move in a different way from just thinking it. So many times my students have told me that in some position they were planning to play “something like X or Y”, which is

no commitment at all. We are training decision making; anything that helps us to get better at this is a good thing.

About one in ten will use this as an inspiration to write down everything that goes through their head. This is not useful. Make decisions, based on your various thinking methods. Then write down the main points of the solutions, just enough so that you would be able to replicate the solution later, not enough for someone else to be able to follow your thought process. You want to do this swiftly; your main focus is the solving.

Be aware what you are training

When we solve exercises, we don't do it to solve the exercises, we do it to improve. If you were in the gym, working on your push-ups, you would hopefully be focusing on having a full range of movement, making sure you work all the muscle groups involved. As technique is important in physical exercise, it is also important in chess training.

First of all, you will always want to train your concentration levels. If you feel you are not concentrating, stop and deal with it. Do you have to sit still for a minute or two, thinking about nothing? Do you need to meditate? Do you need to drink water or eat something? Do you need to remind yourself why you are training? Everyone has different reasons why they cannot concentrate and different solutions for this. Whatever yours is, it will start by you realizing that you are not concentrating.

I strongly recommend that you do the three questions on all positions before you start solving a position. Your intuition will benefit immensely from this over time.

Then focus on the technique you are training. If it is calculation, make sure you slow down and work systematically through the problem. Be aware of resistance and so on.

Keep a training diary

This is not for everyone, but for those who are able to work systematically, it is a great thing to record your progress. Our emotions are dependent on so many things, not least the weather and other physical sensations. To base your progress on how you feel things are going is not invaluable, but if it is underpinned by facts, you will be much closer to the truth.

I would personally keep my solutions in the training diary, but everyone will have their own preferences.

I always write down my level of concentration from 1-10 and I ask my students to do the same.

The other five books in the *Grandmaster Preparation* series are workbooks with exercises in most areas of chess. The coming books in the *Grandmaster Training* series will be similar. They will include defence, critical moments, mixed decisions and technical decisions.

I have also written a book called *Practical Chess Defence*, based on difficult defences to combinations that were once believed to be brilliant. And I collected a lot of combinations for a book which was completed by John Shaw, called *Quality Chess Puzzle Book*.

All of these books are designed in the same way, with increasingly difficult exercises in each chapter, meaning that once you have the feeling of being further away from home than you can swim, you can proceed to the next chapter.

My books have been quite popular and I am very grateful for the feedback and support from all over the world. The secret to their success is most likely that I enjoyed putting them together and did not try to cut corners in writing them. But there are a lot of good training books out there, so I would not say that you should necessarily use my books. I also like *Imagination in Chess* by Paata Gaprindashvili and the books by Mark Dvoretsky of course. For players who are laying their foundations, I have a great fondness for the books by Artur Yusupov, ever since he presented the first German edition to me. At the moment, there are ten books in the series, all published by Quality Chess.

2. Analyse games

Analyse your own games

This is essential. We spend a lot time analysing our games. Not analysing them is a bit like solving exercises and not checking the solutions or not thinking about what you have learned from the experience. I have written more about this in Chapter 13.

Analyse other people's games

When I wanted to improve my technical abilities, I analysed a lot of endgames. When I wanted to understand the underlying concepts of attacking chess, I analysed a lot of attacking games. In both cases, I was not only looking at variations, I also made general conclusions, which I then tested by using them in solving exercises.

3. Play out training positions

I use this method a lot with my students in face-to-face training. I use two types of positions.

Firstly, positions with non-forcing character, where there are many options and we are trying to use our general decision making. Afterwards we discuss the various decisions and how they could have been reached in a better way.

At least as frequent are positions where accuracy is needed. It will not be possible to calculate everything till the end from the beginning.

You can see a training position I played with Sam Shankland in his foreword and two positions at the end of this list.

4. Work on your openings

My main work is on the middlegame, with the endgame in second place. Most games are decided in the middlegame, for sure, but I have not done the work to find out if the opening phase is more important than the endgame, in a practical sense. I doubt it, but it requires a lot of serious empirical work. And it will definitely be a different answer, based on whichever level you are at. But sadly, I have not done this work yet. The process of writing a book always bring up new questions if you do the work honestly; but if you stop to answer them all, you miss the deadline by forever and a day.

I did once ask Filipe El Debs to look at fifty games where grandmasters around 2500 had lost

and determine where they made their errors. In all but one game, they had made all their serious errors in positions of inferiority. Any serious investigations into the importance of the opening will have to take findings like this into account and expand their scope.

Either way, the opening is important and doing well in one of the three main phases of the game is an essential part of being successful. In Chapter 12 you have seen some of my own thoughts on opening preparation. I am sure you have your own. Expand them, expand your preparation.

5. Memorization

Whether you study the opening or endgame theory, it is not just to get a feel for the positions, but to be able to remember them in the heat of battle. I play the guitar and we say that when you have learned a piece of music by heart, then you are ready to practise. Too often we see top grandmasters get to theoretical endings only to misplay them horribly. In their 2011 World Cup match, Judit Polgar had a rook and bishop against rook advantage against Leinier Dominguez. The outcome was uncertain all the way till the end, as both players seemed unfamiliar with the theory. Obviously both players have studied it at some point, but it was with certainty a decade or more ago in both their cases. Judit won the game and the match, but Fabiano Caruana was not as lucky in the 13th round of the 2016 Candidates tournament. He had the winning Philidor position against Peter Svidler, but was not able to close the deal. In the last round, he then had to defeat Sergey Karjakin with Black, a task that proved too difficult to do.

Top players are used to spending time memorizing their openings, and a lot of the fatigue you see at top tournaments comes from them spending too much time on this. The memorization and practice of endgame theory on the other hand can be done between tournaments. But as there is no pressure from an impending game, or because there is a problem in an opening variation that needs to be dealt with (there always is), it gets no attention.

At a lower level, we tend to look at things and somehow believe that we will remember them, despite plenty of evidence to the contrary. Practising memorization is important. In Chapter 12 on openings, I have described my preferred memorization practice.

I also recommend that you base your opening study on serious openings. It does not have to be the same openings as Carlsen, Caruana or Kramnik, but it should not be openings based on tricks and traps.

6. Read books

This is a very popular training method. We can learn a lot from other people's thoughts on the game. The best players have read lots and lots of books. They expand their minds.

High on the list of books worth reading are game collections by top players.

7. Work on your blindfold abilities

In the early 2000s I played a number of tournaments together with Esben Lund. We would walk

back from the games, sometimes spending hours to get to the hotel, discussing the games we had played, analysing them in our heads. I am certain it helped me immensely. Boris Gelfand has told of the same experience from his childhood, as he shared on page 39 in *Dynamic Decision Making in Chess*, and many other times.

When I was young I would play through games on the board, but go through all the analysis in my head. This is a great exercise as well. Or you can design your own exercises.

Whichever way you get there is unimportant; the key idea is to improve the clarity with which you see a position in your head.

8. Play training games

This does not work without a friend or training partner, but these days it is possible to find these all over the world. I have set up a South American player with an Indian player, just to mention one curious set-up. Training games will never be as serious as the real thing, but they can give you an insight into your openings and weaknesses in your decision making.

The key point is to make sure you are concentrating when you play them. My life motto is to do everything as if it was the most important thing in that moment. The same holds true for training games.

9. Follow games online

With so many top tournaments being broadcast live on the Internet, this is an exciting new way to improve. In the past, you would have to be in the tournament hall in order to follow games live; now you can sit at home, trying to guess the moves of the grandmasters in real time.

There are three steps to doing this in a helpful way (I am presuming that you have already turned off the engine evaluations; otherwise it is not training, it is entertainment):

1. Write down the moves you want to make and the reason for them. If you want, you can note down which type of decision you think each move should be categorized as and which sort of thinking you should apply.
2. Put the game and your thoughts during the game into a ChessBase file. Try to annotate the game based on your own thoughts and what happened in the game.
3. Analyse the game with an engine and revise your notes.

This will improve your game immensely.

10. Work with other people

We are flock animals; we are not designed to do things on our own. Chess is a solitary game, but only when we play tournaments. The rest of the time, we should seek out training partners, trainers, friends, family. Anyone who wants to be part of our work should be allowed to do so; and some of them don't know this yet, so you might have to suggest it to them!

There has in the last few years been a lot of discussion about why there are so few female chess players in the world elite. I personally think that the main reason is that women are more social creatures than men. This is nature or nurture, I do not know. Neither do I care. This gender difference is not to be understood as a comment on gender politics. But it does seem to me that men on average are more willing to work on their own. You have to do so, if you want to become a strong chess player, but working with others on top increased the motivation of just about everyone I have ever worked with.

11. Play strong tournaments

A great character strength is to be able to rise to the occasion. Like everything else, doing so requires practice. Choose tournaments where you will be able to face the strongest opposition. This will give you a chance to see where your training has taken you and a good idea about how you should continue your work to progress in chess.

Playing out training positions – a shortcut to experience

There are many ways to do just about everything. Finding the right move can be done by many different ways as well. We know that elimination in defence can cut our calculation time; but there are those who solve these kinds of problems by something akin to divine intervention (intuition), hard calculation and so on.

I believe that although there are many ways to do most things, this does not mean that they should be rated equally. As with the defence example: elimination has a tendency to be a faster and more accurate way of dealing with this type of problem. It has a higher hit rate than other known methods, which is why we teach it.

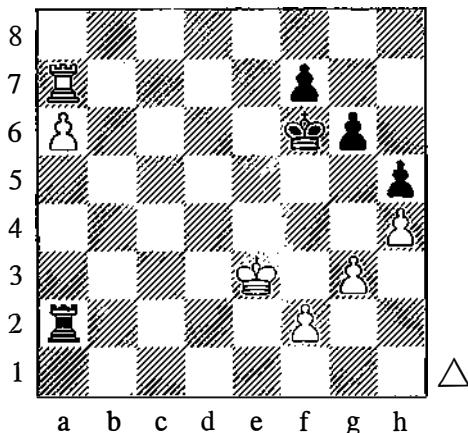
The other five volumes in the *Grandmaster Preparation* series are all exercise books. When you try to help thousands of people develop their skills in various areas, this is the best way. But when you are working with a talented player or a small group of talented players, it gives the experienced trainer a chance to take the players out of the gym and onto the pitch. Sure, there are no spectators, no referee, no prizes beyond pride, but still it is a more real-life experience.

The material is not hard to come by for an experienced trainer. With over ten million games in my database and about a thousand books in the library at Quality Chess, I have never feared I would be unable to come up with new positions for playing.

Below I have chosen three practical examples that I have used with my students; in this case all of them grandmasters.

The first of them is maybe the most famous endgame position in modern times, due to the extensive analysis by Steckner, Dvoretsky, Müller and many others. In this case, I had two GMs play against each other. You will have to forgive me for not using their names, but just referring to them as White and Black. Being a trainer is a bit like being a friend/lawyer/priest all-in-one; all of which are roles that require complete confidentiality.

The Steckner Position

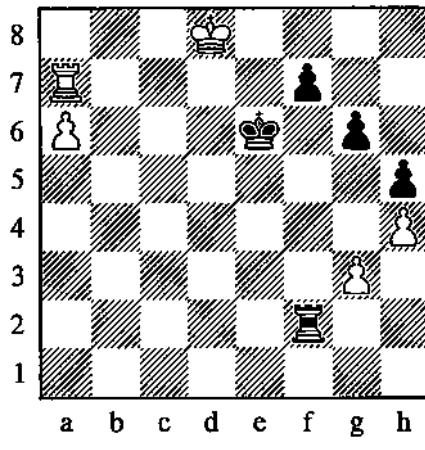


The scenario for this game is that White is theoretically unprepared, while Black cannot remember the details, but has studied it at some point.

1. ♕d4! ♔e6?

1... ♕xf2? is the move given in the 4th edition of *Dvoretsky's Endgame Manual*. I am sure it will be heavily revised for the 5th edition. 2. ♕c7 ♕a2 3. a7 ♔f5 4. ♕c4 ♔g4 5. ♕b3!! is Steckner's famous idea, leading to a won position because of the quick transfer of the rook to a4.

2. ♕c5 ♕c2† 3. ♕b6 ♕b2† 4. ♕c7 ♕c2†
5. ♕d8 ♕xf2

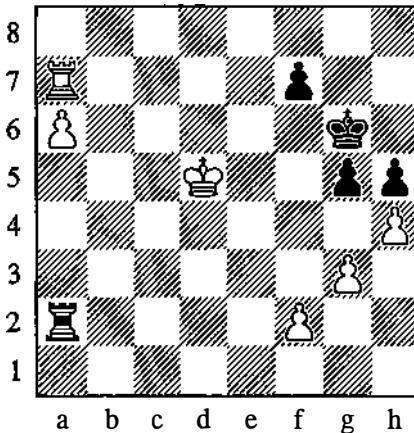


6. ♕e7†! ♔f6 7. ♕e8! ♕a2 8. ♕xf7† ♔e5 9. a7 ♔e6 10. ♕f8
Black resigned.

White had not studied the position previously, while Black had read *Dvoretsky's Endgame Manual*. We can see that just reading about the position is not enough. Again, there are many ways to develop the skills necessary to play such positions. One of them is practical experience, as in this exercise.

1...g5! is a rare omission in what I consider the best book written on chess. I am not sure why Mark did not include it; and frankly, I was afraid to ask. The main reason to include it is that a big fan of the book, who has reportedly read it four times cover to cover (no small feat; great does not mean easily accessible!) did not manage to win when he had the position over the board. 2. hxg5† Maybe not the greatest test. 2... ♕xg5 3. ♕c4 ♕f2 4. ♕d7 ♕a2 5. a7 ♕g4 6. ♕b3 ♕a6 7. ♕d4† ♕xg3 8. ♕a4 ♕xa7 9. ♕xa7 h4 10. ♕xf7 h3 11. ♕c3 h2 12. ♕h7 ♕g2 13. ♕d3 h1=♕ 14. ♕xh1 ♕xh1 ½–½ Grischuk – Radjabov, Odessa (blitz) 2008.

2. ♕d5 is the more ambitious try and for some time it was believed that White was winning here, as 2...gxh4 surprisingly loses. Poghosyan of Armenia found an elaborate draw after 2...g4!!, with a subtle point on move 7. Personally, I cannot see what is wrong with 2... ♕g6!.



With the idea 3...f6, 4... $\mathbb{Q}f5$ and then counterplay against the white pawns. The draw seems to flow quite easily. I put this on my blog, challenging people to refute it, but no one did.

General endgame play

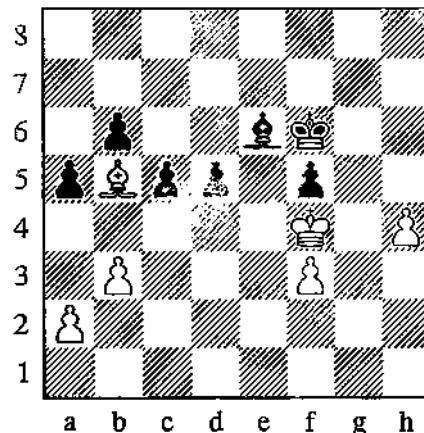
Obviously, this is a highly-specialized position which was only reached in a handful of games. (Its attraction to modern theory is certainly that it is just outside the reach of computers and specialized programs like FinalGen.) But it is still relevant to the development of endgame skills. Certainly, Black realized the dangers of passive play in rook endings a pawn down, and also realized the difference between having read *DEM* once and really knowing the essential endgame theory.

We should also not forget that the study of generic positions helps us understand the underlying dynamics of the game. While it is rare that we will end up in a specific theoretical ending, a general understanding of the mechanics of rook endings is certainly useful. We might reach 3-5 rook endings a year, if we play a lot. But in training it is quite easy to play 50-100 rook endings in a one or two week training camp; or over a few months of training. The experience garnered would take an average professional career to collect!

The same goes for other endings of course. In a recent group training session, I had the students play the following bishop ending, which I had annotated for *Grandmaster Repertoire – Endgame Play*.

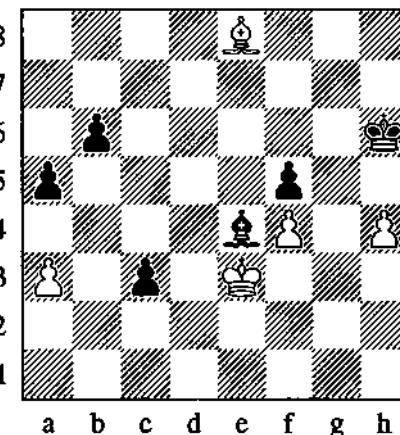
Hikaru Nakamura – Fabiano Caruana

Thessaloniki 2013



In the game, Caruana violated Rubinstein's mantra of "do not hurry" and pushed one of his passed pawns too early. As a result he did not manage to get the connected passed pawns he could have had, and failed to win the game.

57...c4? 58.bxc4 dxc4 59.♔e3 c3 60.a3 ♔d5
61.♔a4 ♔b7 62.f4 ♔e4 63.♔b5 ♔g6 64.♔e8†
♔h6

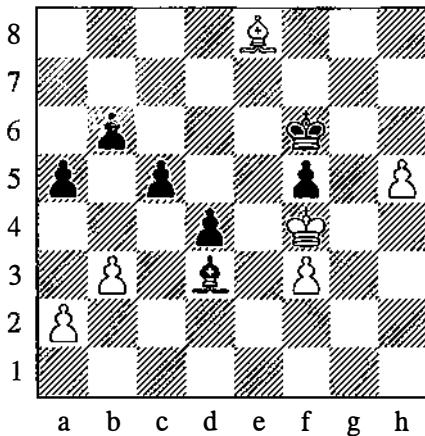


65.a4 ♜b1 66.♗e2 ♛c2 67.♗e3 ♛e4 68.♗e2
 ♜g7 69.♗e3 ♜f8 70.♗d7 ♜e7 71.♗b5 ♜d6
 72.♗e8 ♜e6 73.♗e2 ♜f6 74.♗e3 ♜g7 75.♗e2
 ♜h6 76.♗e3 ♛b1 77.♗e2 ♛c2 78.♗e3
 ♜b3 79.♗d3 c2 80.♗d2 ♜g7 81.♗c1 ♜f6



82.♗d2 ♗g7 83.♗c1 ♗f6 84.♗d2 ♗g7 ½-½
Nakamura – Caruana, Thessaloniki 2013.

The main line I found myself included improving the bishop quickly. 57...d4?! 58.♗e8 ♘d5 59.♗b5 ♘b7! The bishop is going to a better diagonal. One of the ideas is that Black can play ...a4 in many lines. 60.♗e8 ♘a6 61.h5 ♘d3



62.♗c6 b5 63.♗b7 c4 64.bxc4 bxc4 65.♗a6 ♘e2 66.♗b5 c3 67.♗a4 d3 68.♗e3 f4† It is time to resign. This is the way I personally approached the position, using the computer only to refine a few sidelines.

Surprisingly all four of my students chose the same first move:

57...♗f7

Partly a waiting move.

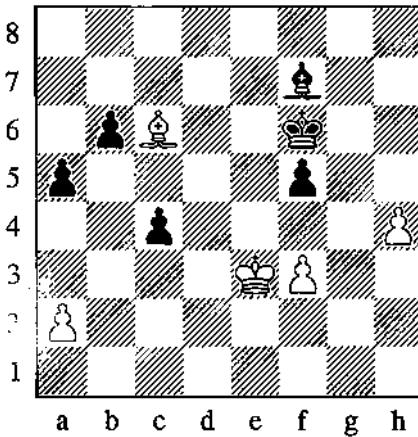
58.♗c6

Against 58.♗e2 one student mentioned 58...a4 59.♗d1 a3?! before I realized that I had made the wrong defensive try and took back two moves.

58...d4

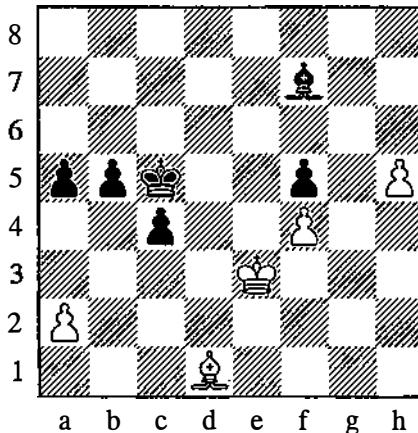
Also possible is 58...c4. I do not really like this move, but objectively it works. I prefer a

more patient approach, which we talked about after the exercise. 59.bxc4 dxc4 60.♗e3



This position was reached in two training games:

- a) 60...♗e5?! 61.f4† ♘d6 62.♗a4 ♘c5 63.♗d1 b5 64.h5



I have managed to create counterplay. I should still lose, but it now requires some accuracy from Black's side. A good moment to talk about the importance of using the strongest piece on the board better!

64...a4?

64...b4? was the other suggestion from the player, but this also fails to win. After 65.h6

$\mathbb{Q}g8$ 66. $\mathbb{Q}c2$ $\mathbb{Q}h7$ 67. $\mathbb{Q}d1$ Black surprisingly cannot improve his position.

64... $\mathbb{Q}b4!$ was the right move. The king is stronger in front of the pawn, where it dominates important squares. 65. $\mathbb{Q}d4$ $\mathbb{Q}a3$ 66. $h6$ $\mathbb{Q}g8$ 67. $\mathbb{Q}c2$ $\mathbb{Q}xa2$ 68. $\mathbb{Q}xf5$ $a4$ 69. $\mathbb{Q}c3$ $a3$ And Black wins because of ... $b4\ddagger$ and ... $\mathbb{Q}b2$.

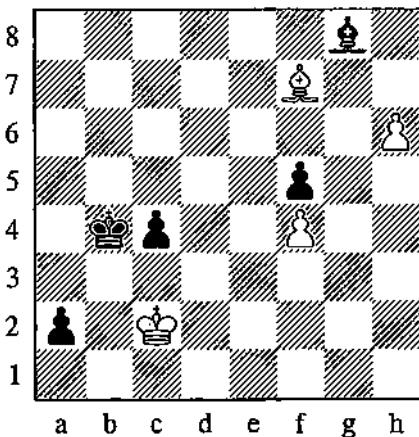
65. $h6$ $\mathbb{Q}g6$ 66. $\mathbb{Q}h5$ $\mathbb{Q}h7$ 67. $a3$ $b4$ 68. $axb4\ddagger$ $\mathbb{Q}xb4$

The passed pawns have been split, but true to his nature, Black remained very optimistic.

69. $\mathbb{Q}d2$ $a3$ 70. $\mathbb{Q}c2$ $\mathbb{Q}g8$ 71. $\mathbb{Q}f7?$

Not the most logical move; 71. $\mathbb{Q}b1$ was simpler.

71... $a2!$



A very nice try. The player thought he was winning. But White has a great solution.

72. $\mathbb{Q}h7!!$

72. $\mathbb{Q}b2?$ $\mathbb{Q}xf7$ 73. $h7$ $c3\ddagger$ and White is quickly mated.

72... $\mathbb{Q}xh7$ 73. $\mathbb{Q}b2$

White is in time.

73... $a1=\mathbb{Q}\ddagger$ 74. $\mathbb{Q}xa1$ $\mathbb{Q}c3$ 75. $\mathbb{Q}b1$ $\mathbb{Q}d2$

76. $\mathbb{Q}xc4$ $\mathbb{Q}e3$ 77. $\mathbb{Q}e6$ $\mathbb{Q}xf4$ 78. $\mathbb{Q}xf5$

A draw was agreed.

$\frac{1}{2}-\frac{1}{2}$

b) 60... $c3!$ was stronger, as played by one player. After 61. $a4$ $f4\ddagger$ 62. $\mathbb{Q}d3$ $\mathbb{Q}g6!$ I had to

resign. Not surprisingly this was the youngest of the players; they have a tendency to be more concrete. I do not fully endorse this method; as we will see with the next result, concrete play risks leading to oversights. I generally prefer solutions that do not rely on calculation; though at times they do not exist, so it is a difficult balance to strike.

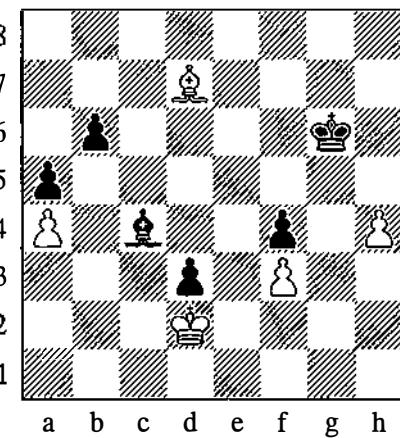
59. $\mathbb{Q}d7$ $\mathbb{Q}h5$

A different training game continued:

59... $\mathbb{Q}g6$ 60. $\mathbb{Q}b5$ $\mathbb{Q}f7$ 61. $\mathbb{Q}d7$ $c4?$

This fails in quite similar ways to the game.

62. $bxc4$ $\mathbb{Q}xc4$ 63. $a4$ $d3$ 64. $\mathbb{Q}e3$ $f4\ddagger$ 65. $\mathbb{Q}d2$ $\mathbb{Q}g6$



66. $\mathbb{Q}e8\ddagger$

This is what the player had missed. He wanted to invade the kingside via h5. Now White escapes with a draw.

66... $\mathbb{Q}h6$ 67. $\mathbb{Q}c3$ $\mathbb{Q}d5$ 68. $\mathbb{Q}xd3$

Black still has some practical chances, but the disappointed player offered a draw.

$\frac{1}{2}-\frac{1}{2}$

This example shows how calculation can go wrong.

60. $\mathbb{Q}b5$

60. $\mathbb{Q}xf5$ $\mathbb{Q}xf3$ 61. $\mathbb{Q}d3$ was maybe a tougher defence.

60... $\mathbb{Q}g6$ 61. $\mathbb{Q}c6$ $\mathbb{Q}g7!$

Black has stabilized the position. Now the king is improved.

62. $\mathbb{Q}b5$ $\mathbb{Q}h6$ 63. $\mathbb{Q}g3$ d3 64. $\mathbb{Q}f4$ d2 65. $\mathbb{Q}e2$ $\mathbb{Q}h5$ 66. $\mathbb{Q}e3$ $\mathbb{Q}xh4$ 67. $\mathbb{Q}xd2$ $\mathbb{Q}g3$

I resigned.

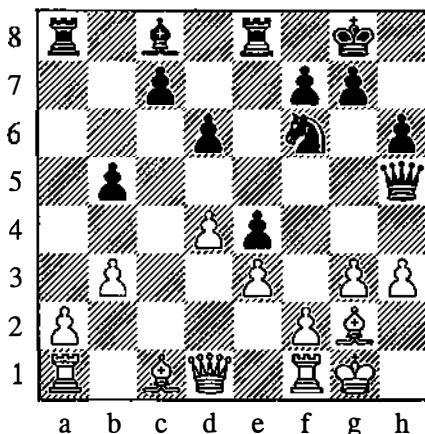
0–1

Middlegame training

Playing interesting positions is also a good way of developing other skills, for example areas such as attack and defence. The following very promising position is one of my favourites. Three players have tried it, all with different results.

Schoene – Gerlef

Germany 1998



The exercise is abandoned and discussed if it does not start with the same first few moves. Actually, this happened with the third of the games we shall see below. The player in question is a bit cautious by nature, which is by no means a great disadvantage as a chess player. He just needs to understand when he should overcome his caution. The roughly 50 attacking games we have played in training

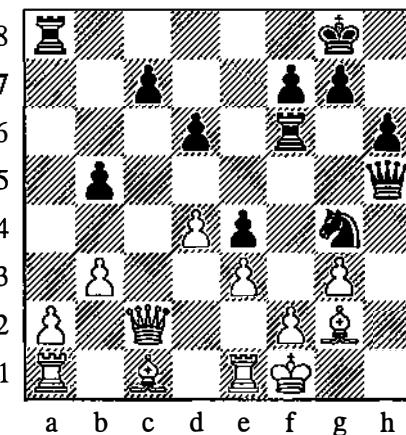
over the last 2-3 months have greatly improved his feeling for this, in a way that reading books such as *Attacking Manual 1&2* and Anand's *My Best Games of Chess* had not. He needed to know that he could handle an attack correctly.

In the real game in 1998 a draw was agreed on move 28 after 18... $\mathbb{W}xd1?$, but only one move makes sense:

18... $\mathbb{Q}g4!$

This sacrifice cannot be calculated to the end, but the attacking ideas are quite rich, so it is definitely worth the risks. Especially in a training game!

19.hxg4 $\mathbb{Q}xg4$ 20. $\mathbb{B}e1$ $\mathbb{E}e6!$ 21. $\mathbb{W}c2$ $\mathbb{E}f6$
22. $\mathbb{Q}f1$



This position arrives by force. In my own terminology 18... $\mathbb{Q}g4$ was a *revolution*. It ends in this position where there is no direct way to continue. The targets have moved and you have to build up your attack again (*evolution*). This is actually the purpose of the exercise. Basically, Black should make something out of the rook on a8, but it is quite easy to fail to do so when there are still active possibilities with the pieces we have in the attacking zone already.

In this position two different moves have been tried in training games against me. The first move has been played twice.

a) 22...d5!? 23.♗e2 ♗h2†! 24.♔e1 ♗f3†
25.♗d1 ♗g1 26.♗e1 ♗h2

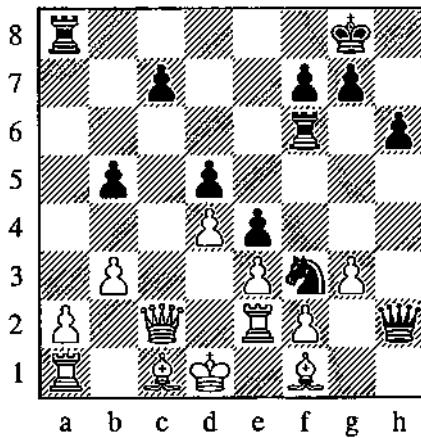
26...♗aa6! is a beautiful way to include the last piece into the attack

27.♗f1 ♗f3†

27...♗aa6 28.f4!? offers some resistance.

28.♗d1

Here the two games went in different directions.



a1) 28...♗aa6? 29.♗xc7 ♗h7?

29...♗ac6 would still have kept the balance.

30.♗d7 ♗ae6 31.♗d2

The player threw in the towel.

1–0

a2) 28...♗g1! 29.♗e1 h5!

A very strong idea by the player. It is not so easy for White to stop the passed pawn.

29...c5!? 30.dxc5 ♗d8! is another very dangerous idea.

30.a4 g5 31.♗e2 ♗xe1 32.♗xe1 ♗xf2

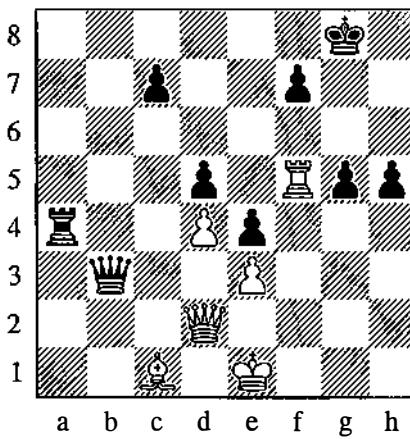
33.♗xb5 ♗xg3

33...♗g2?! was potentially stronger, but also far less obvious. For example: 34.♗d2 ♗b8! and Black wins after 35.♗e2 h4 or 35.♗c2 c6! 36.♗f1 ♗xg3 when Black keeps control and soon advances the h-pawn.

34.♗a2 ♗f3† 35.♗e2 ♗g2 36.♗f1!

Never give up!

36...♗xf1 37.♗xf2 ♗d3† 38.♗d2 ♗xb3†
39.♗e1 ♗xa4 40.♗f5



40...♗a2?

The final mistake; ironically right after the rook has joined the game.

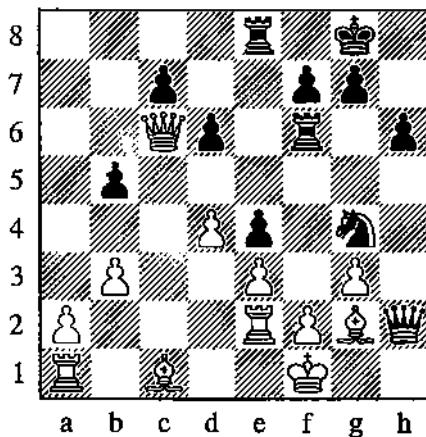
40...f6! 41.♗xf6 ♗a2 42.♗d1 ♗xd1† 43.♗xd1 ♗g7 followed by the advance of the two passed pawns would still have won.

41.♗xg5† ♗f8 42.♗d1 ♗c3† 43.♗d2 ♗b2
44.♗e2 c5 45.♗xd5 c4 46.♗c5 ♗a1† 47.♗f2
♗a2 48.♗a5 ♗xa5 49.♗xa5 c3 50.♗xc3 ♗xc3
51.♗xh5 ♗d2† 52.♗e2 ♗a5
½–½

The third player handled the attack much better. The rook on a8 is given a role.

b) 22...♗e8! 23.♗e2 ♗h2! 24.♗c6!?

24.a4 $\mathbb{W}xg3$ is hopeless as well, so I played for another trick.



24... $\mathbb{Q}f8!!$

I resigned. There is no way I can avoid losing the g3-pawn and then everything else.

0-1

The trick was of course that 24... $\mathbb{Q}e7?$ would even leave Black a bit worse after 25. $\mathbb{W}a8\#$ $\mathbb{Q}h7$ 26. $\mathbb{Q}xe4\#$ g6 27. $\mathbb{Q}xg6\#$! and 28. $\mathbb{W}g2$, when the defence is ready and White can advance the a- or e-pawn.

Do this at home

If you want to do this kind of training yourself, there are two ways to do so. You can have a group of three players, where you all find positions for playing out. One player presents the position and the two others play it out. There is a natural rotation. Alternatively, if you are only two players, find positions where one side has the advantage. The defender will know the analysis and can use it as a crutch, but should still think for himself.

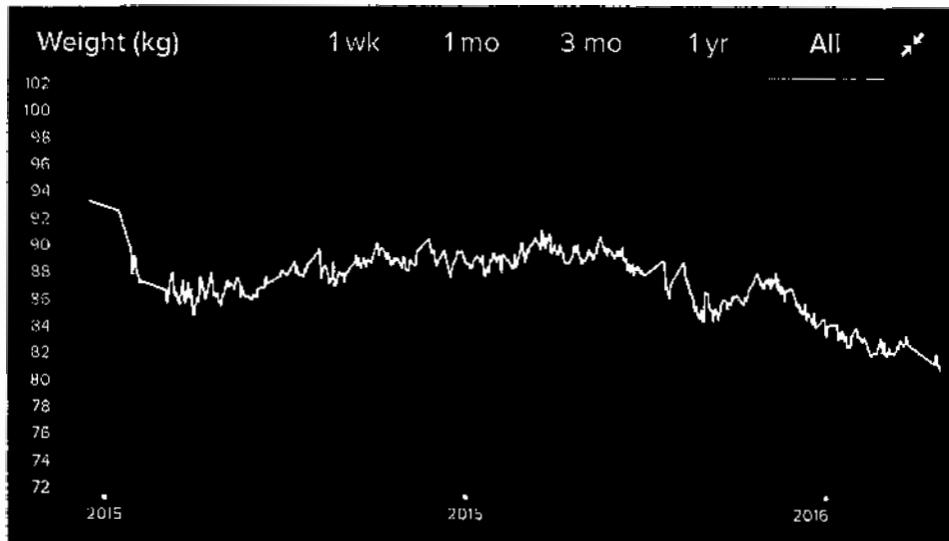
Afterwards you analyse the games, probably with a computer, and discuss them between yourselves. Then repeat.



Doing dips in Hong Kong before a lecture with my brother in arms Sagar Shah.

Appendix 1

Nutrition



Before going into this subject, I have to declare that I am neither a doctor nor a nutritionist, and am therefore not qualified to give medical advice. My opinions are based on years of reading and experimenting in this subject, in search of something that really works.

There is a plethora of opinions on nutrition available these days. I have personally spent a lot of time on this subject and formed very clear opinions, based on information I have managed to acquire over the years. I usually have to be provoked to speak about my convictions, as it is probably the most contentious subject known to man. Everyone eats and no one wants to be told they should be doing it differently.

I will give you my opinions, all underpinned by the reading of scientists, not tabloid articles. There is science that makes different assertions, but judging from the results I see in my own wellbeing and that of others, I have grown to believe that the following is a reliable path to physical wellbeing, a happier life and, eventually, better chess.

But first of all, I want to emphasize this: **although good nutrition and exercise can assist us in playing chess better, it is not remotely as effective as studying chess is.** If you want to improve in chess, improving your physical wellbeing can help, but it is a minor thing compared to improving your chess.

I think it is important to keep a clear head for the game. Eat slow-releasing foods such as full-grain bread, fruit, nuts and so on, before and during the game. If you have to have sugary stuff, get it after the game.

There is plenty of science that shows that lack of sleep and the consumption of alcohol decreases the quality of brain activity for days. This is important for chess.

I recommend that you get enough sleep to wake up without an alarm.

Regarding alcohol: I don't drink anymore. I do not like the downsides (mainly who I became when intoxicated). But I do understand that some people will relax better if they have a beer after the game. To most people, chess is a hobby, even if it is one they want to excel at. I shall offer no moralizing here. Find a balance.

I am convinced that a healthy lifestyle is based on **real food**. The healthiest foods are green vegetables, then vegetables of other colours (the colours signal the presence of different vitamins and minerals, which is why a colourful diet is great).

Next comes starches. A polymeric carbohydrate: a food group consisting of potatoes, rice, barley, maize, wheat and so on. It is also present in other vegetables, but these starch-rich foods represent a great foundation of a healthy diet.

Fruits are great for us too. Especially as snacks. But it is important to eat them in their natural form. If they are dried, juiced or put in smoothies, the fibre is destroyed and the high level of fructose becomes a problem. It has two negative effects.

The metabolizing of fructose can only happen in the liver, which has a few negative effects. About a quarter of the energy is immediately stored as fat, which in itself is a problem, but also causing fatty liver disease for some people. Also, it stimulates the pancreas to release insulin. Insulin causes us to store fat and reduces leptin's stimulation on the brain. Leptin is a hormone that sends a signal to the brain that we are full. If you eat sugar, the brain does not hear about it.

You remain hungry. Over time your brain can become leptin resistant and you are constantly hungry. Your body is overfed, while your brain is starving. As a result, it does not want to move and you end in a vicious cycle.

The average insulin secretion is 2-4 times what it was 40 years ago in average adults. Sugar and ready meals.

The other effect is just as damaging. Fibre holds on to parts of the calories in your food, leaving them for the bacteria in your lower intestines to feed on. These bacteria are essential for your gut health and your digestion. Recent research suggests that restoring the bacteria in your intestines will lead to weight loss, although it is too early to determine the causality between the two with certainty.

There is one food that is worse. Trans fats. This is found in foods with eternal shelf life. It has a molecule that bacteria cannot break down. This includes the bacteria in your body. It gets stuck in your arteries. Eventually, it will kill you.

The third food group I advise people to cut down on is dairy. The growth hormone in milk takes a calf to about ten times its weight in two years. I am especially worried about the plausible links between breast cancer and dairy, as a number of friends of mine have suffered from this horrible disease. There is nothing we need in dairy; we get enough calcium from plants, to such an extent that countries where dairy is not a part of the diet have lower levels of hip fractures.

An important thing I have learned in my studies of nutrition is that the presence of a nutrient in a food does not mean that we absorb it. Spinach is high in iron, but we cannot access it, as an example.

Another important thing I have learned is that medicine's constant search for the *one nutrient* to bind them all is bound to fail. Vitamin pills will shorten your life span according to study after study. Olive oil is not the reason the Mediterranean diet is healthy, it is the high level of plant foods in general. The body has really complex biochemical operations no one fully understands. To believe one nutrient is all-important is counterintuitive, but good for business.

For this reason, I advise against concentrated food in general. Sugar, oil, vitamin pills. You name it. Eat real food, with fibre, and you will be fine.

Now, I am personally a vegan. I am convinced that animal proteins are not only unnecessary, but corrosive for our bodies. I get plenty of protein from my whole food plant-based diet; and I work out 10-14 hours a week. I do occasionally take SunWarrior protein in water shakes, mixed with spinach, broccoli, berries, cucumber and courgette.

There is one essential nutrient I miss out on as a vegan. B12 – this bacteria that used to be in the soil and the water. Was there ever enough to sustain humans? Probably not. People always ate a small amount of meat, dairy or eggs. But today B12 is not in the soil anyway. It is routinely injected into livestock. I take the pill rather than *eating the middleman*.

I am not evangelical about veganism. The evidence that high consumption of animal products is bad for our health, bad for the planet and bad for the economy is mounting. The knowledge of

what actually happens to animals in meat and dairy production is available everywhere and a lot of people, like me, find that it injures their compassion for the world around them to be a part of unnecessary brutality.

Veganism is sharply on the rise. In the UK, the increase from 2006-2016 was 360%.

But what I am talking about here is nutrition. I am a chess coach, not a life coach. What I got from a whole food plant-based diet was the following:

Almost endless energy. At 43 I managed to lecture for many hours each day on just over half the usual sleep for a full month of jumping across time-zones on the Asian tour. I was tired from Day 1, but performed at full force on Day 26 on the last night in Tehran.

I have been ill only once since switching. When I returned from the tour, I went running in a light breeze with my daughter and caught a cold. Only when my immune system was down did I need to take a day off from work.

My recovery time from exercise is ridiculously quick. This is common among strength athletes as well (I am not one!). Where two days plus is the usual recovery time, many testify to being back to full force the next day on a vegan diet. My average resting heart rate is 53 at the moment, with 50 being the lowest. Or 43 in a single moment. Look it up on the Internet to see where that puts me. I am not (yet) amazingly fit. I cannot outrun a healthy 21-year-old, as I discovered to my eternal disgrace in Ahmadabad. At least not yet (Fenil, my brother, I am coming for you!).

My obsession with food has disappeared. It is very weird. Even when I was *almost* a vegan I would think about food all the time. After I went all out vegan, I lost interest. It is an immense relief. I have been asked what I miss most and the honest answer is nothing. I enjoy eating tremendously – it satisfies hunger. My taste buds are in top order. But what I eat is not so important. I still hate olives though...

The most important thing is that I am happy. Constantly. I suffer big disappointments regularly. Like everyone else. Both with myself and with others. I am lazy. I am jealous. I am rude. I am inconsiderate. I misunderstand people. In short, I am human. But I am happy. All the time.

Towards the end of the trip around Asia, Amruta Mokal said I was *the most authentic person she had ever met*. I feel the freedom to pursue the kindness and caring I always had inside of me, as well as the showmanship, the overacting, the humour, the competitiveness, the musicality and the, let's call it what it is, love and respect for other people, even those I have never met – it came from all of the above. Could I have achieved this without a plant-based diet? Certainly. But I am sure it helped.

Oh yeah, and I am slowly but surely closing in on winning the bet with Sam (see page 62). Soon I will be at a weight I have not been since 1988, when I was 15 years old. I do not miss being overweight!

This is a common scenario for people who turn plant-based. But having said this, it may come as a surprise that I do *not* necessarily recommend that you give up animal products altogether. Include more whole plants into your diet. Base your meals around vegetables and starches, containing glucose, the energy of life. If you one day find that you want to take the leap, I think your health will benefit from it. But it will not matter for your chess.

Appendix 2

Advanced Engine Management

By Nikolaos Ntirlis



Like many grandmasters, I spend a lot of my time working with computers, but know as little about how they work as the next guy. I wanted to include something in this book about using computers in chess training for those with an interest in the subject, so I asked Nikos Ntirlis to write an appendix on the subject.

This chapter is in two parts. Part I explains how engines work, giving some basic theory and laying the foundations for Part II. I shall describe some issues that many people wouldn't think of as problems, but understanding what is really going on is essential for understanding the techniques presented in Part II. This is where I will give some practical tips, as used by many strong analysts and correspondence players, to solve the problems presented in Part I.

PART I: Understanding how chess engines work: some basic theory

A popular but wrong opinion

In *Dynamic Decision Making in Chess* Boris Gelfand expresses the opinion that modern chess engines are so much stronger than those of 10 years ago because they run on much faster hardware.

This opinion, popular among modern GMs, is not wholly without merit. In the mid-1970s Gordon Moore, one of the co-founders of Intel, observed that the computers of the time were doubling their speed every year, and predicted that this would continue for the next decade. This became widely known as Moore's Law [1].

Today, Moore's Law still applies, albeit at a slower pace. A decade ago, computers were doubling their speed every 18 months, while today the rate is about every 28 months (improvements in transistor technology have slowed down considerably). In the past, computer scientists kept up with Moore's prediction by putting more and faster transistors in the integrated circuits that comprise our computers; today they put more (and more refined) processors into the same unit.

Taking into consideration the difference in the number and technology of transistors and the advances in computer architecture from an 80286 processor (around 30 years ago) to a typical modern four-core laptop [2], Gelfand jokingly expressed his willingness to play a match against a machine more than 50,000 times slower than today's!

No matter how logical Gelfand's opinion seems, it is faulty. Today's chess engines have improved a lot. Yes, they can certainly take advantage of modern hardware and architecture, but they are so different from the engines of 10 years ago that it is like comparing Philidor's chess understanding (in the second half of the 18th century) with that of a modern IM or even GM.

This was confirmed in a match played between the best engine of 10 years ago (Deep Shredder 10) running on a modern four-core PC, against Komodo 8, running on a smartphone (50 times slower than the modern laptop, corresponding to a laptop roughly 12-15 years older). Komodo smashed Shredder 5–1, with two draws and four wins [3].

Modern chess engines have become so strong because of research in scientific fields such as data structures, data mining, algorithm theory, scientific computation, linear algebra, parallel processing and automatic tuning. That's why it has become difficult to observe the progress of modern engines if you are not an expert in computer science. It is quite understandable that even people who make their living by using chess engines for analysis don't really understand how these complex creatures work, and this sometimes leads to them relying merely on experience and thus not using these tools to their full potential.

Furthermore, what experience tells us is often not correct. For example, engines are no longer "bad" in closed positions (see the Kasparov – Fritz X3D game below) or when evaluating different material distributions or endgames. Newer versions of the same engine can be quite different

from each other. At the time of writing, the Komodo engine is at version 10.3, about 180 Elo stronger than Komodo 8 [4], meaning an expected score of more than 70% in favour of the new version [5]. One wonders whether Shredder 10 would manage a single draw in the above experiment today.

But engines are not perfect. They can mislead the best analysts in the world quite badly if not used correctly. The best advice is not to overestimate them, but also don't underestimate what the engines have to offer!

One of the most important parts of an engine is its “evaluation function”. During the early development of engines, programmers tried to make a complex evaluation function that had a lot of “human knowledge”. They soon discovered that it was not easy to transform this knowledge into something that engines could understand, and in this complex evaluation every small change had a huge impact on everything else in the engine, meaning that the whole thing had to be redesigned from the start.

To understand this, imagine the following situation. You tell the engine that the piece values are knight = bishop = 3 pawns, rook = 5 pawns, and queen = 9 pawns. You would also like the engine to understand that rooks are better on open files, so you give a slight bonus to the evaluation function whenever it puts a rook on an open file. To your horror, you soon discover that now the engine doesn't actually think that the rook is worth five pawns, but much more. Consequently, the engine doesn't have a problem exchanging its queen for the opponent's rook!

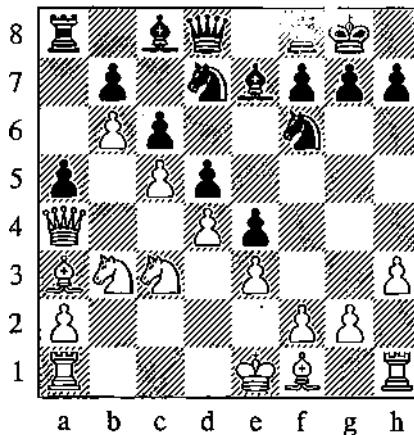
Quite soon, engine programmers realized that simple evaluation functions are better. They make the engines much quicker and they prevent programmers from making mistakes. This is the main reason why, in some positions, engines of the past seemed really clueless. One

of these areas was (and to some extent it still is) closed positions. The following game is one of the most famous examples.

Garry Kasparov – Fritz X3D

New York (3) 2003

1. $\mathbb{Q}f3$ $\mathbb{Q}f6$ 2. c4 e6 3. $\mathbb{Q}c3$ d5 4. d4 c6 5. e3 a6 6. c5 $\mathbb{Q}bd7$ 7. b4 a5 8. $\mathbb{R}c1$ e5 9. $\mathbb{W}a4$ $\mathbb{W}c7$ 10. $\mathbb{Q}a3$ e4 11. $\mathbb{Q}d2$ $\mathbb{Q}e7$ 12. b6 $\mathbb{W}d8$ 13. h3 0–1 14. $\mathbb{Q}b3$



Kasparov's huge experience in playing matches against computer engines often allowed him to reach positions where humans are indeed better than the stupid boxes. This is one of them.

White cannot take on a5 because of the ... $\mathbb{Q}xb6$ tactic, with a deadly pin on the a-file, but at some point he will be ready to capture the pawn, so Black has to create counterplay on the side of the board where it is stronger. Here Fritz was clueless.

14... $\mathbb{Q}d6$

Fritz's evaluation function told it that the bishop has more scope on d6 than on e7, so the bishop is better there if it cannot be taken. In general terms this is correct, but in this

position it is completely useless. This position has been shown to many players, asking them: "What would you play here? Please formulate a plan." Players of about 2000-2100 level find the correct continuation in a couple of seconds. Players around 1600 find it within a minute. The best engines of today never find it, no matter how long you let them work on the position!

The correct move is:

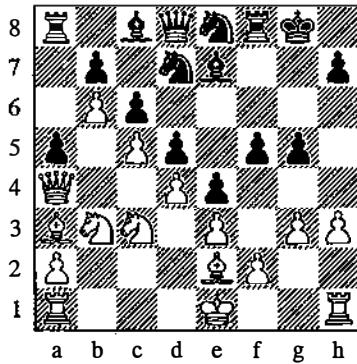
14... $\mathbb{Q}e8!$

With the idea of playing ...f5-f4. The knight is placed less well on e8 than on f6, and for Fritz's evaluation function (as with any modern engine evaluation function) this is a huge obstacle to overcome. The second obstacle comes after:

15. $\mathbb{Q}e2$ f5 16.g3

Human players laugh at this move and immediately suggest:

16...g5!?



The ...f4 break cannot be stopped for long and Black's last move also gives the e8-knight a path to the nice e6-square (via g7), from where it supports Black's counterplay very well. However, most engines aren't so ready to advance the pawns in front of their king. They get a "negative bonus" when they do that. In this case though, a human player understands that there is no fear of facing a huge attack, as the centre is closed and the cluster of white

pieces is far away from the black king.

Modern engines suggest 16...g5 immediately, while the oldest edition of Fritz I have on my PC (Fritz 11 – a much better one than Kasparov faced) doesn't suggest this at all. Today's engines are not that clueless and come very close to suggesting a good course of action – maybe not the best, but still a good one. This is because modern evaluation functions have become better. They are much more complex, but they are well programmed, so that dozens of parameters work together without producing strange situations, such as the engine over-evaluating a rook as in the simplified example above. For example, here is what three of the best modern engines suggest.

14... $\mathbb{Q}h5!$? is one of the top two choices of Houdini 5. After 15. $\mathbb{Q}e2$ g6 Black has the plan of ... $\mathbb{Q}g7$ and ...f5. Houdini actually gets it wrong here, suggesting that White should allow this plan by playing something irrelevant, like 16. $\mathbb{Q}c1$. The critical position arises after 16. $\mathbb{Q}xh5$ gxh5±, where Black has a messy structure. Most engines don't think that Black is that much worse, as they see counterplay after ... $\mathbb{Q}h8$ and ... $\mathbb{E}g8$.

Houdini's other top choice, 14... $\mathbb{W}e8!$?, is also quite reasonable, preparing the ...f5 break. Next comes ... $\mathbb{Q}h5$, and if $\mathbb{Q}e2$ Black defends the knight with ...f5. The question is how Houdini wants to play after 15. $\mathbb{Q}e2$, which stops Black's plan. It comes up with 15... $\mathbb{Q}h8$, planning ... $\mathbb{Q}g8$ and ...f5. One may wonder why ... $\mathbb{Q}h8$ was not suggested by Houdini initially. The answer is that Houdini in most cases suggests the move ... $\mathbb{Q}d8$ at some point. It thinks that ... $\mathbb{W}e8$ gives the bishop a bit more scope – something that again doesn't seem that relevant in this position.

Komodo's suggestions are also reasonable, but

far from optimal. Depending on how long the engine thinks, it comes up with two plans as its top choices: 14... $\mathbb{E}e8?$, continuing with ... $\mathbb{Q}f8-g6-h4$, and 14... $g5!$, planning ... $\mathbb{Q}h8$ and ... $\mathbb{E}g8$ and having in mind an eventual ... $g4$. Black has counterplay in both positions, but White remains comfortably better.

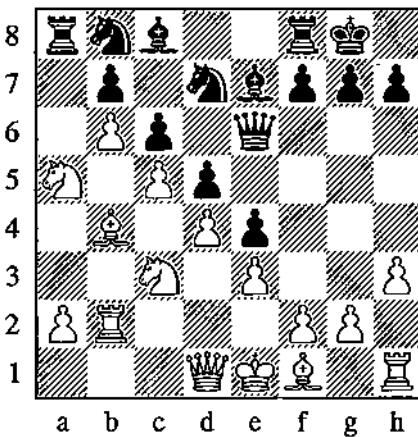
Stockfish comes much closer to the optimal solution. It suggests 14... $h6!$ planning ... $\mathbb{Q}h7$ and ... $f5$. Let's see what happened in the game.

15. $\mathbb{E}b1$

Now the a5-pawn is ready to be taken.

If 15.cxd6?? $\mathbb{Q}xb6$ and the queen is trapped.

15... $\mathbb{Q}e7$ 16. $\mathbb{Q}xa5$ $\mathbb{Q}b8$ 17. $\mathbb{Q}b4$ $\mathbb{W}d7$ 18. $\mathbb{E}b2$ $\mathbb{W}e6$ 19. $\mathbb{W}d1$ $\mathbb{Q}fd7$



Black has shuffled its pieces a little more, putting them on better squares. Objectively its position is close to lost, but at least if it plays ... $f5$ next it might get some counterplay.

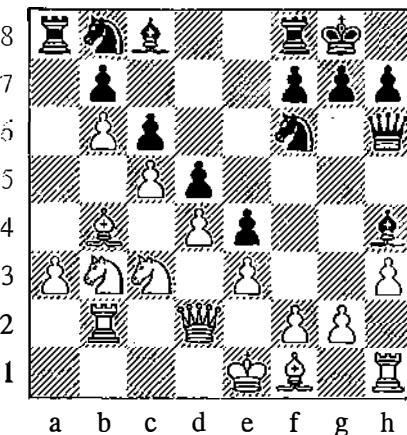
20.a3 $\mathbb{W}h6?$

No! 20... $f5$ is the best practical chance. Modern engines do have 20... $f5$ among their top choices if given some time to think.

21. $\mathbb{Q}b3$ $\mathbb{Q}h4$

Cheap tactical tricks by the computer. Kasparov wouldn't let 22... $\mathbb{W}xe3$ happen even if he was drunk.

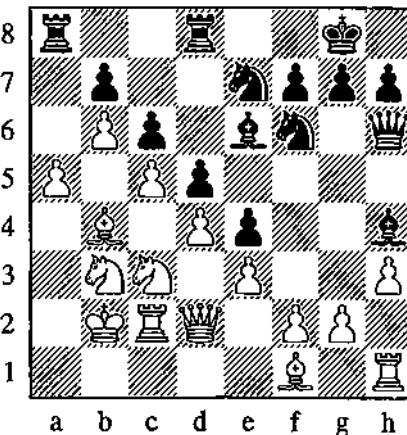
22. $\mathbb{W}d2!$ $\mathbb{Q}f6$



23. $\mathbb{Q}d1!!$

Another move which educated chess players who have studied their Nimzowitsch, Botvinnik and Petrosian would find in seconds. The king walks to the safe zone on the queenside. Modern engines don't suggest this move, although once again they give good enough advice to White.

23... $\mathbb{Q}e6$ 24. $\mathbb{Q}c1$ $\mathbb{Q}d8$ 25. $\mathbb{Q}c2$ $\mathbb{Q}bd7$ 26. $\mathbb{Q}b2$ $\mathbb{Q}f8$ 27. $a4$ $\mathbb{Q}g6$ 28. $a5$ $\mathbb{Q}e7$



29.a6!

A nice positional pawn sacrifice which makes the task of converting the advantage rather simple. The rest is self-explanatory.

29...bxa6 30.♕a5 ♜db8 31.g3 ♔g5 32.♔g2 ♜g6 33.♔a1 ♔h8 34.♔a2 ♔d7 35.♔c3 ♔e8
 36.♔b4 ♔g8 37.♔b1 ♔c8 38.♔a2 ♔h6 39.♔f1 ♜e6 40.♔d1 ♔f6 41.♔a4 ♔b7 42.♔xb7
 ♜xb7 43.♔xa6 ♜d7 44.♔c2 ♔h8 45.♔b3

1–0

As we saw, modern engines are much better, even in those positions that are objectively quite hard for them to play based on the way they have been programmed. They are not clueless and can offer a wide range of logical plans.

The parts of a chess engine

A modern chess engine is composed of the following parts.

The board representation

This is a very interesting subject for computer scientists, but completely irrelevant for our study. Nevertheless, today's engines have taken full advantage of several advances in this area over the last 10 years. An engine with a modern board representation can be 10-20% faster compared with older engines from this factor alone [6].

This part of the engine contains something called the “move generation function” (or simply a “move generator”) which returns every legal move that can be played in a given position in the form of a tree (so called because a diagram showing all the possibilities looks like a tree). Chess players usually define a “move” as being when one player plays and the other responds. For example, we say that “1.e4 e5” is the first move of the game: White's first and Black's first.

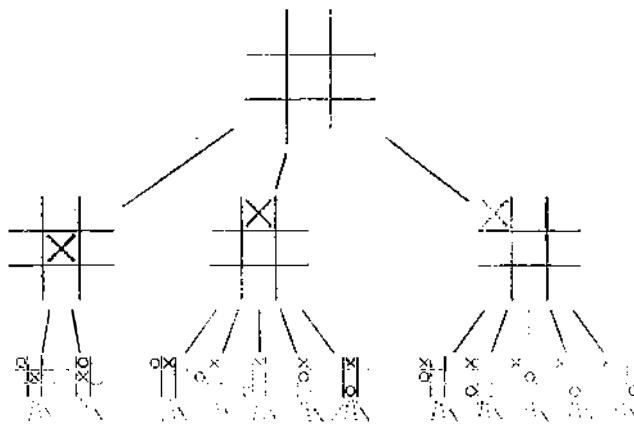
However, for a move generator 1.e4 is a move and 1...e5 is also a move. So 1.e4 e5 is actually two moves. In order not to get confused by this, we call each “move” produced by the move generator a *ply* (which actually means *half a move*).

Thus, when someone says to you that “this engine gives this move at depth 20”, it means that the engine has gone 20 plies deep, which means 10 moves deep. Some engines also show how deeply they have gone in certain variations, the so-called *extensions*. For example, if you see this in your engine analysis window:

Depth=21/35

It means that the principal variation (we'll soon see what that is!) is 21 plies deep, but some other variations (usually lines which contain lots of forced moves, like checks and captures) have been examined up to 35 plies deep.

From the starting position in chess, White has a choice of 20 plies (16 pawn moves and four knight moves) and for each one of those plies, Black has the same 20 different plies available. To represent the first two plies graphically would mean drawing a tree with 400 nodes, which would take a lot of space. To understand the concept, let's use the simpler game of Tic-Tac-Toe (or Noughts and Crosses) [7]:



The above graphic might seem incomplete to a newcomer to game theory, as at the first ply the X-player can choose among nine different cells, and not just the three shown in the diagram. This is how humans understand things, but an engine that plays Tic-Tac-Toe can make things easier for itself and understand that the first ply can only be an "X" in the centre, the edge or the corner, and can generate the rest of the moves through rotations and reflections (operations which are very easy for a computer). With that in mind, the second ply can also be simplified (when X is at the centre, O can either be at the edge or the corner etc.) and from a large game tree for the first two plies we can produce the above much simpler one.

Similar techniques are used in the trees made for chess, although even these simplified trees are extremely large. But this is where the responsibilities of this part of the engine end. It is the responsibility of the other parts to create order from the chaos of different possibilities.

The evaluation function

I have already touched on this subject while discussing the first annotated game.

Modern engines have a much-refined evaluation function which has responsibility for putting a single value to each of the nodes (positions) of the game tree generated by the search function. Let's see, for example, how the best engine of our time, Stockfish evaluates the position.



```

Value v = evaluate<true>(pos);
v = pos.side_to_move() == WHITE ? v : -v; // White's point of view

std::stringstream ss;
ss << std::showpoint << std::noshowpos << std::fixed << std::setprecision(1)
<< "      Eval term |   White           Black           Total   \n"
<< "      |   MG   EG   MG   BB   |   MG   EG   \n"
<< "-----+-----+-----\n"
<< "      Material | " << Term(MATERIAL)
<< "      Imbalance | " << Term(IMBALANCE)
<< "      Pawns   | " << Term(PAWN)
<< "      Knights | " << Term(KNIGHT)
<< "      Bishop  | " << Term(BISHOP)
<< "      Rooks   | " << Term(ROOK)
<< "      Queens  | " << Term(QUEEN)
<< "      Mobility | " << Term(MOBILITY)
<< "      King safety | " << Term(KING)
<< "      Threats  | " << Term(THREAT)
<< "      Passed pawns | " << Term(PASSED)
<< "      Space   | " << Term(SPACE)
<< "-----+-----+-----\n"
<< "      Total | " << Term(TOTAL);

ss << "\nTotal Evaluation: " << to_cp(v) << " (white side)\n";

return ss.str();
}

```

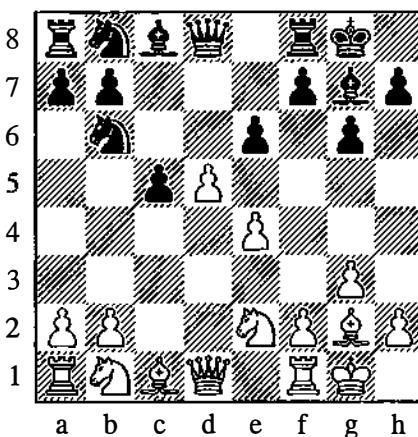
This diagram shows the part of the C++ code (C++ is pronounced ‘cee plus plus’ and is the programming language that the Stockfish developers use) that refers to the evaluation components that form the evaluation function. We see that Stockfish uses several things that a human player also uses to evaluate chess positions, such as material, pawn features (like doubled or passed pawns for example), king safety and piece activity. Also, note that each of the above terms contributes differently if we are in the middlegame (MG) or the endgame (EG). All modern engines use refined techniques to change the evaluation terms slightly depending on how close we are to an endgame, so these terms change dynamically and don’t have fixed values (one for middlegame and one for the endgame). That’s why Stockfish, for example, does *not* have a fixed value for the pieces (such as bishop = 3, rook = 5). The tools used to measure the values for each term (for example “mobility”) are provided by the board representation part of the engine (such as arrays that represent the squares that a rook attacks).

Every term above is based on many parameters that must have fixed values. Ten to fifteen years ago, the values of these parameters were chosen “by hand”, mainly based on the experience of the programmer. Advances in the field of automated tuning of parameters allows modern engines to tune these values accurately, resulting in very stable and accurate evaluation functions [8]. As these are complex creations, every time that something changes, another tuning is required, even if the gain each time is measured in a very slight increase of only a couple of Elo points. This allows the same engine to “understand” the position much better from version to version. See the following example.

Komodo 1333 – Stockfish 141214**TCEC Season 7 Super Final (40) 2014**

The engines Komodo and Stockfish crossed swords in the Super Final of the 7th season of TCEC in September 2014. This tournament is regarded by most chess-engine fans as the World Engine Championship. Komodo won the Super Final with a score of 3½–30½. The engines were playing selected opening positions with both colours. This is one of the positions in which Komodo showed much better understanding of a particular evaluation term: the passed pawn.

1.d4 $\mathbb{Q}f6$ 2.c4 g6 3.g3 $\mathbb{Q}g7$ 4. $\mathbb{Q}g2$ d5 5.cxd5 $\mathbb{Q}xd5$ 6.e4 $\mathbb{Q}b6$ 7. $\mathbb{Q}e2$ c5 8.d5 e6 9.0–0 0–0



10. $\mathbb{Q}bc3$

Modern theory prefers 10. $\mathbb{Q}ec3$, while even today's versions of both engines evaluate this move significantly lower than 10. $\mathbb{Q}bc3$. This is logical, as in the opening phase of the game the position is so complex that any engine evaluation, regardless of how powerful the hardware it uses and how much time it is given to think, shouldn't be taken too seriously. For example, after 10...exd5 11.exd5 $\mathbb{Q}e8$, with the knights on e2 and c3 Black equalizes easily, but with the knights on b1 and c3 White

is better after 12. $\mathbb{Q}d2$ $\mathbb{Q}f5$ 13. $\mathbb{Q}de4$ $\mathbb{Q}a6$ 14. $\mathbb{Q}g5$!, as in Evans – Bienkowski, email 2011.

10...exd5!

10... $\mathbb{Q}a6$! is considered the most flexible way to meet both 10. $\mathbb{Q}ec3$ and 10. $\mathbb{Q}bc3$, but specifically after 10. $\mathbb{Q}bc3$ the pawn exchange seems to lead to quite straightforward equality for Black.

11.exd5

The main feature of this position is White's passed pawn on d5. Experts in computer chess and analysts who have burned hundreds of hours using Stockfish and Komodo to analyse chess positions knew that at that time Komodo was much better at evaluating this kind of position with passed pawns on the board, or islands of connected passed pawns on different parts of the board (see the next example).

11... $\mathbb{Q}f5$?

Stockfish generally underestimates White's position, thinking that nothing is wrong for Black, so it develops casually, while Komodo evaluates the potential danger that the d-pawn can cause and thus finds a concrete way to deal with the position.

11... $\mathbb{Q}e8$!

This is the equalizing move, which Komodo preferred in the first game of the mini-match in this position.

12. $\mathbb{Q}e4$

After 12. $\mathbb{Q}e3$ then 12... $\mathbb{Q}a6$! is still given by Stockfish today as best, which might transpose to the game after 13.b3!, but today's Komodo (and we assume the version that played in that Super Final) prefers 12... $\mathbb{Q}g4$!, which is better and doesn't allow White to take advantage of the passed pawn.

12... $\mathbb{Q}g4$! 13.f3 $\mathbb{Q}f5$ 14. $\mathbb{Q}2c3$ $\mathbb{Q}xe4$! 15.fxe4 $\mathbb{Q}8d7$

Now the pawns at d5 and e4 can be blockaded.

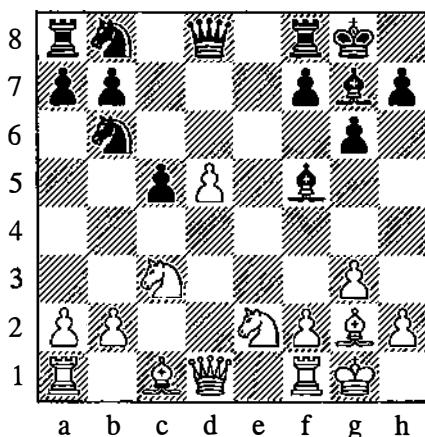
16.♕f4

After 16.♕e2 ♕e7 17.♕b1 ♔d4† 18.♔h1 ♕ad8 19.♕c2 ♔c8 the players agreed a draw a few moves later in Ballow – Koesebay, email 2010.

16...♔e5 17.♕c1 c4 18.♔h1 ♔d3 19.♕c2 a6 20.♕d2 ♔b4 21.♕cc1 ♔d3 22.♕c2 ♔b4 23.♕cc1 ♔d3 24.♕c2

½–½

This was Stockfish – Komodo in Game 39 of the match.



12.b3!±

The passed pawn cannot now be blockaded by the manoeuvre ...♔c4-d6, as was played for example in a very similar situation in the same opening in the Kasparov – Karpov match in Seville 2009. Chess engines obviously don't think by using patterns like that, but instead they calculate their positions thoroughly.

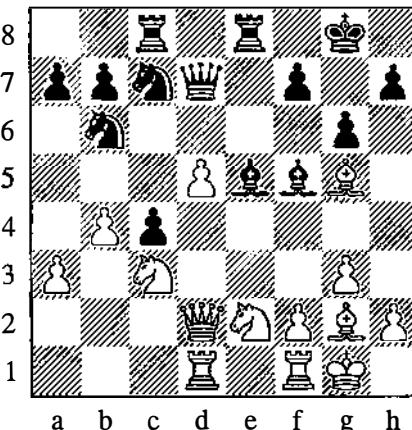
12...♕e8 13.♕e3 ♔a6 14.♕d2 ♕d7 15.♕ad1

White is simply better, as it has more space and a dangerous pawn on d5.

This has also been confirmed in a practical game between two human beings, which continued 15.♕fd1 ♕ac8 16.a3, and although the two players didn't show engine-like

accuracy, White managed to win in Sachdev – Djingarova, Dresden (ol) 2008.

15...♕ad8 16.♕h6 ♕e5 17.♕g5 ♕c8 18.a3 c4 19.b4 ♔c7



The version of Stockfish that played this game evaluated the position as 0.00, while Komodo was showing a slight preference for White. Today's edition of Stockfish agrees, and also gives White a slight edge.

At the webpage <http://abrok.eu/stockfish/> anyone can see the small changes that developers make to Stockfish every few days. Over the last two years there have been at least three major changes regarding the evaluation term "PASSED" in Stockfish's evaluation function, and I am sure there will be more small ones as all the terms have been retuned a couple more times. It is obvious that Stockfish now evaluates passed pawns much better than it did in 2014. The rest of the game is of no particular interest for our subject. Komodo uses the power of the pawn (which reached d6) to win an exchange and the game.

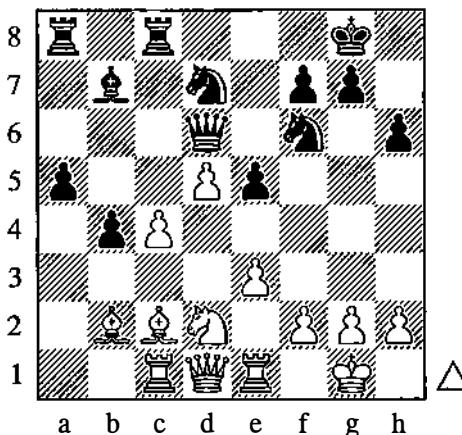
20.♕f1 ♕g4 21.d6 ♔b5 22.f3 ♔xc3 23.♔xc3 ♕f5 24.♔e7 ♕g7 25.f4 ♕g4 26.♔c1 ♕e6 27.♔e2 ♕g4 28.♔e3 h6 29.♔ce1 ♕e6 30.♕d1 ♕g4 31.♕c1 ♕d4 32.♕d2 ♕g7 33.h4 ♕e6 34.♕c1 ♕h3 35.♔h1 ♕g4 36.♔h2 h5

37.♕g2 ♕f5 38.b5 ♜c5 39.♕f6 ♜cc8 40.♕e5
 f6 41.♕d4 ♜ed8 42.♕xb6 axb6 43.♗d5
 ♜xd6 44.♗e7† ♔h7 45.♗xc3 ♜xc8 46.♗e7
 ♜c7 47.♗xc7 ♜xc7 48.♗f1 ♜c5 49.♗e3
 ♜xb5 50.♗d4 ♔f8 51.♗xf6 ♔xa3 52.♗f7†
 ♔h6 53.♗xc4 ♜xc4 54.♗xc4 ♔c5 55.♗e6
 ♔d3 56.♗c8 ♔a6 57.♗e5 ♔g7 58.♗e6
 ♔b5 59.♗d5 ♔f6 60.♗xb7 ♔f1 61.♗c8
 ♔c4 62.♗d7 ♔a3 63.♗b5 ♔f7 64.♗d3 ♔c5
 65.♗g2 ♔e7 66.♗f2 ♔d6 67.♗g5 ♔c5†
 68.♗g2 ♔e8 69.♗e5 ♔f7 70.♗el ♔a2 71.♗e4
 ♔c4 72.♗c6 ♔d6 73.♗d1 ♔c5 74.♗d5
 ♔e2 75.♗e1 ♔b5 76.♗a1 ♔d7 77.♗a7
 ♔e8 78.♗h7 ♔d4 79.♗b7 ♔c5 80.♗f3
 ♔g1 81.♗b8 ♔e7 82.♗c8 ♔c5 83.♗e4 ♔f7
 84.♗c6 ♔e8 85.♗xg6 ♔xg6 86.♗xg6 b5
 87.♗xh5 ♔b4 88.♗g6 ♔f8 89.h5 ♔g8
 1–0

An example with passed pawns

Komodo – Stockfish [D31]

2017



This is one of the novelties that are analysed every day in the Quality Chess office. It comes from the Noteboom variation of the Queen's Gambit. Here, the difference between the evaluation functions of Komodo and Stockfish is clear. As I said, Stockfish has improved its

handling of passed pawns, but those positions are still understood better by its rival. Komodo places a high priority on making the white passed pawns move forward, so in this kind of position it places its pieces in such a way that the break with f2-f4 is possible. Stockfish is usually blind to this possibility and so underestimates the danger.

20.f4!

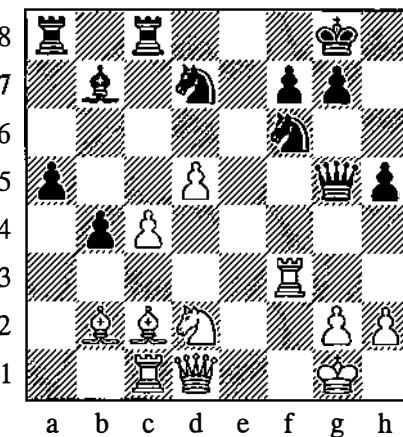
Here this break comes in the form of a pawn sacrifice and is Komodo's first choice if left to think for more than 10 minutes on a relatively fast four-core laptop.

20...exf4 21.exf4 ♜xf4 22.♗f1 ♜g5 23.♗f3!±

This is the key move. Komodo here says +0.65 at depth 36.

23...b5

This is the move proposed by Stockfish, also after a relatively long think. But now even Stockfish finds the killer.



24.♗f5!

And everything falls apart. Here Stockfish's relative strengths compared to Komodo come into play, as it finds faster and more accurate ways to finish Black off. For example:

24...♜h6 25.♕xd7 ♜xd7 26.♗e4!

The central passed pawns are moving forwards (the next move is c4-c5) and Black is almost completely lost.

Experience teaches us which kinds of position are evaluated better by each engine, but we always have to keep in mind that modern engines get better and better almost every month, so this is not a static environment but a dynamic one.

Later in this chapter I will propose a set of practical techniques such as “tournament matches” and “carouseling” which will help us to identify these strengths or weaknesses.

The search function

Claude Shannon, the father of information theory and one of history's most influential scientists, published in 1950 an article of huge historical importance for computer chess, called *Programming a Computer for Playing Chess* [9]. In that article, he categorized chess engines into two types:

Engine Type A: Take the generated game tree and examine all the nodes one by one.

Engine Type B: Make a smart selection among the nodes of the above tree and analyse (or better, let the evaluation function put a value to) only the ones that matter.

It is obvious that humans play chess using the Type B thinking mode. This was also the way that both Shannon and the pioneer of computer chess at its birth, Mikhail Botvinnik, wanted chess engines to think. Both believed that it was not possible to make Type A engines for technological reasons. The amount of memory and the processing power needed would be enormous and would never be available, no matter what advances were made in the future technology. Needless to say, both men were wrong!

Today, the best chess engines are of Type A.

But there are so many algorithms, tricks and techniques that reduce the number of nodes that an engine evaluates (something that in the terminology of computer chess is called “pruning” [10]) that calling modern engines hybrids of both types wouldn't be far wrong.

Where to find that knowledge?

Programmers of the past who wanted to write a chess engine had to download open source engines and try to understand the code that someone else had written (software engineers can confirm that this is not that easy!) or try to find relevant information in some specialized forums – again not that easy if the forum is disorganized and you have to look at everything until you find something useful.

Today, though, things are much easier, as an excellent chess programming wiki exists that contains all the knowledge in an organized way. For those interested, some of the techniques that are being used to create the search functions of modern chess engines are gathered together at the link in the following footnote [11].

The deeper the better!

The first thing we notice when we start a chess engine is that it displays the depth in plies that it has reached in its analysis, and given more time this number becomes bigger. Also, the engine changes its main suggestions quite a lot, until at a certain point it reaches a depth at which the suggestions become more or less stable. This depth is mainly influenced by the specific position being analysed. If the position is complex, with every new ply the engine discovers countless new possibilities that can change everything, while if the position is simple, every new ply analysed doesn't change much.

The relative stability of the engine suggestions also depends on the engine itself. For Stockfish, a depth of 25-26 plies is usually very shallow

and its suggested moves and evaluations are likely to change considerably, while for Komodo or Houdini this is a respectable depth most of the time.

Every engine also comes with a set of parameters that can be changed. The most important one for modern engines is the option of using six-piece endgame tablebases. Different engines offer different options. For example, Houdini offers an option called “Tactical Mode” which can be very helpful in some special types of positions. A useful Komodo option is called “Use LMR” which, if chosen, forces Komodo to prune far fewer lines while searching the game tree; thus there is less danger of the engine missing something important, but at the cost of being much slower.

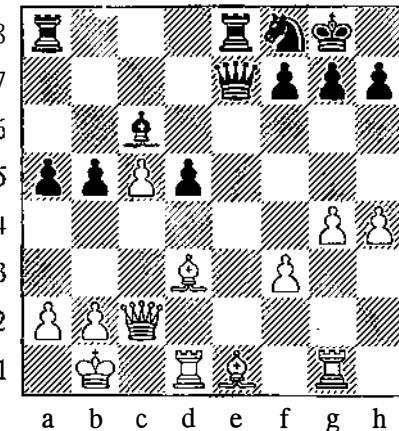
So, the next time someone tells you: “The computer says here that the best move is X” then the correct reply is: “Which engine? At what depth? With which options?”

Can we trust the principal variation?

Imagine this. You have a powerful modern engine, and you have left it to analyse a position for a long time, given as many resources as possible, many cores to use, a large amount of memory and, of course, endgame tablebases for endgames with six pieces or less. This engine offers an evaluation. This must be the truth about the position, right?

The engine’s evaluation is based on one and only one variation: the one that it thinks is best for both sides – the so-called “Principal Variation” (PV) [12]. What I am going to say now is something that most chess players will find amazing. The PV of a chess engine, no matter how powerful the engine is, no matter how many resources and how long it takes to analyse a position, is almost certainly wrong. And this means that the engine evaluation in any given position is also wrong and cannot be trusted!

See the next example.



This is Game 3 between Stockfish and Houdini from the 9th season TCEC Super Final, which ended on December 1st 2016 (Stockfish won 54½–45½).

Both engines were running on a 44-core processor, using 32 Gbytes of RAM, and had access to six-piece endgame tablebases – top-notch conditions for the engines.

At this point it is Black’s move and after six minutes of thought it had reached depth 30 and had 229 tablebase hits (which means that at 229 nodes in the game tree there appeared positions with six or fewer pieces on the board – quite impressive when you see the above position!). It played 21...d4, with the start of the PV being d4 f4 ♕e3 ♖d2 ♘h3... (evaluation: 0.19).

As Houdini had reached that depth we could expect this PV to be quite stable and reliable.

Stockfish played 22.f4, as Houdini expected.

Houdini thought for 2½ minutes, reaching depth 29 with 924 tablebase hits and replied 22...♘e6, giving the PV: ♘e6 ♖f2 g6 ♗g1 ♘f8 ♘e4... (evaluation: +0.12).

The game continued: 23.♖f2 g6 24.♗g1 ♘f8 (at this point Houdini changed its PV, expecting 25.a4 as best) 25.a4 and now came a series of forced moves that both engines had

anticipated: 25...bxa4 26.f5 ♖xc5 27.♖xe8 ♕xe8

The position has become simplified, with both engines anticipating a coming queen exchange, so we could expect a very stable PV. Let's revisit Houdini's PV at this time: ♕xe8 ♕xd4 ♖xd3 ♕xd3 ♕d6 ♕c3 ♕xd3† ♕xd3 ♕b8 ♕c2 gx5... (evaluation: +0.10)

The game continued: 28.♕xd4 ♖xd3 29.♕xd3 ♕d6 (at this point Houdini changes its PV again, thinking that after the exchange of queens best is ♕c6, and not ♕b8 as above) 30.♕c3 ♕xd3† 31.♕xd3 h5!

Once more Houdini changes its opinion, and now evaluates the position as 0.00 with 338,081 tablebase hits!

The above is quite typical and most players will have observed it many times. What we need to understand is that the original evaluation of +0.19, despite proving to be a correct educated guess that the position is equal, was based on a variation that the engine itself thought was not optimal after only one ply! This is the kind of position in which we shouldn't really expect a surprising move that would change the original evaluation completely, and the engines have a way of knowing that, in order to give more time to positions where a single move might indeed change everything.

The heart of the search: MiniMax

Chess engines choose their favourite move and principal variation by implementing a MiniMax function. That means that they have to choose moves that maximize the score given by their evaluation function and also minimize the score of their opponent.

The way to do this is simple. If a branch of the tree has a score of +5, while another branch of the tree leads to a score of -10, there is no point in analysing the -10 branch further, so the search function prunes it. This is quite risky though, as the -10 value might have come about because the last move of our opponent was to take our queen, but at our next move we might have a checkmate! In order not to fall into such situations, when the decision is taken to prune this particular branch the search is extended a few more plies to check the forcing moves (checks and captures, for example). If the forcing moves stop, then we stop. If the evaluation still hasn't changed, the branch gets pruned.

Some more refined engines try a last trick. They allow the opponent to play two moves in a row. If the evaluation still doesn't change significantly, then the decision is final: the branch gets pruned. This is what chess programmers call the "null move heuristic" [13].

The problem of pruning and the horizon effect

The above analysis of how to prune useless branches of the game tree seems logical. What can go wrong then? Let's see some examples and try to explain them in order to understand the following:

In which cases does *pruning* fail?

What is the *horizon effect* and how can it be avoided?

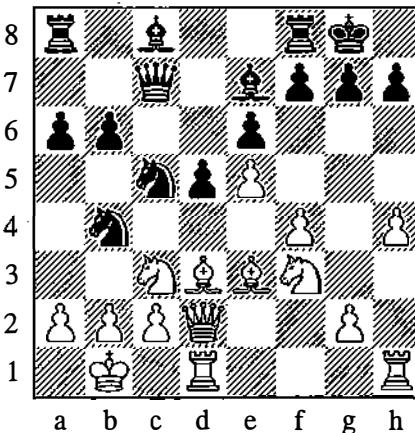
How to help an engine realize that it has an advantage when it seems *unable to do so*?

What is a *tunnel variation*? How can we spot the tunnels and use them to our advantage? What is *fortress detection* and how does it work?

Dadi Oern Jonsson – Volker Leupold

email 2012

1.e4 e6 2.d4 d5 3.Qc3 Qf6 4.e5 Qfd7 5.f4 c5 6.Qf3 Qc6 7.Qe3 Qe7 8.Wd2 0-0 9.dxc5 Qxc5 10.0-0-0 Wc7 11.Qb1 a6 12.h4 b6 13.Qd3 Qb4

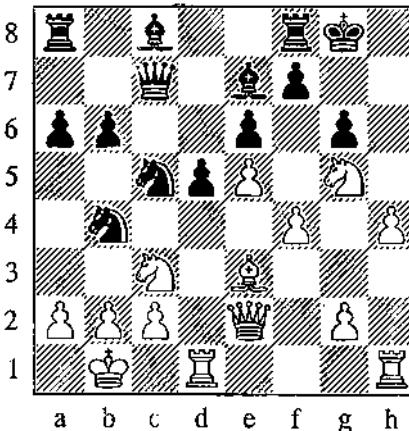


14.Qxh7†!!

Black in this game is a correspondence IM, and such players are normally very strong and experienced in analysing using chess engines. It is amazing that he allowed this possibility. It's likely that he was aware of it but thought that it didn't lead to anything tangible for White, as his engine was saying so. But what we have here is a classic case of faulty pruning.

On putting this position into Stockfish, Komodo and Houdini, none of them suggested the correct continuation. Every one of them thought the sacrifice was good only when they were shown it played, and the only engine that suggested that it was winning was Houdini with its Tactical Mode option turned on.

14...Qxh7 15.Qg5† Qg8 16.We2 g6

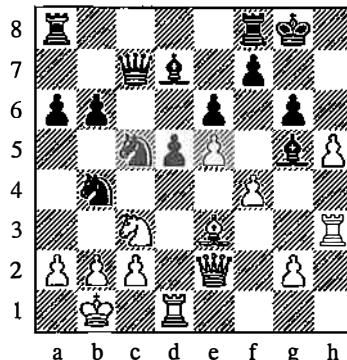


17.Qh3!!

This is the move that wins.

17...Qd7 18.h5

In the game Black played 18...Qa4 and hung on for a while, but lost in the end. The critical line is 18...Qxg5, when White's idea is revealed:



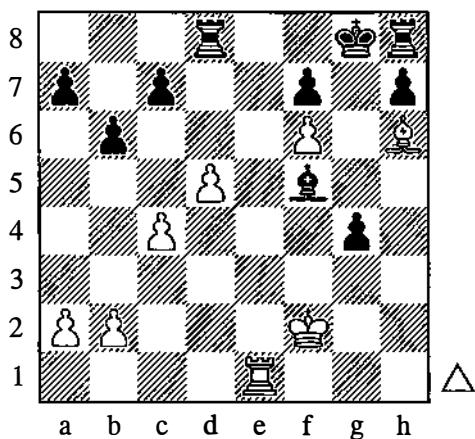
19.Qdh1!!

This is exactly the move that most engines don't see when first analysing 14.Qxh7†. It comes 11 plies after the start of the sacrifice, and just before the killer blow there are three "calm" plies (17.Qh3, 17...Qd7 and 18.h5) which don't involve a capture or a check. It is logical that an algorithm implementing MiniMax pruned this branch.

Tactical Mode in Houdini makes the engine much weaker in general, but it is designed

precisely to extend the branches of the tree much further in order not to lose these kinds of “deep” tactical possibilities. To make the engine fast, the programmer (Robert Houdart) sacrificed the search function in order to cut (or not extend) lines involving positional features instead. Human players, though, work in patterns in their head, and the pattern of the classical bishop sacrifice in the French is one of the best known. It should obviously be checked carefully, despite the engines dismissing it at first.

Prison and pawn breaks



This is a position which can be found on a couple of chess computer forums. It shows quite well the problems that engines face in some particular types of position.

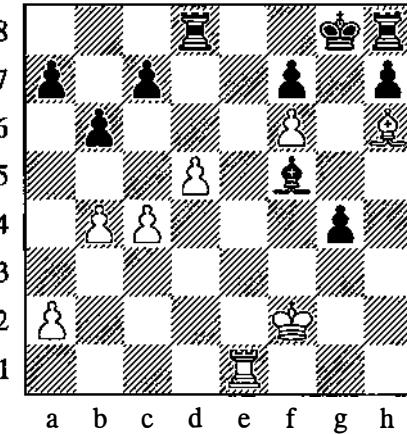
Old engines consider this position much better for Black. This is because they are often blind to imprisoned pieces like the h8-rook. It is clear to a human that this rook will never see the light of day, but somehow for older engines it is not clear. Modern engines also tend to give Black the advantage, but only for a few seconds on a relatively quick four-core laptop, when they change their evaluation to drawn. Although the problem of the “prison” is still relevant, chess programmers have managed to

limit its appearance significantly.

Here the second problem comes in. Sometimes engines are blind to winning pawn breaks. This is most often seen in situations where one side has a large advantage. Evaluation functions get maximized when the pieces look good, have a purpose and have limited the scope of the opponent’s pieces. In this respect, some pawn breaks might temporarily show a lower score in the evaluation, despite showing progress in the position for the favourite side. We don’t really care about maximizing our evaluation functions though: we want to win the game! In these cases, the engines go round and round, and if we are lucky they hit on the winning pawn break when the 50-move draw rule comes close to their horizon.

The position above is not much different, but it is much rarer. Here the winning pawn break is:

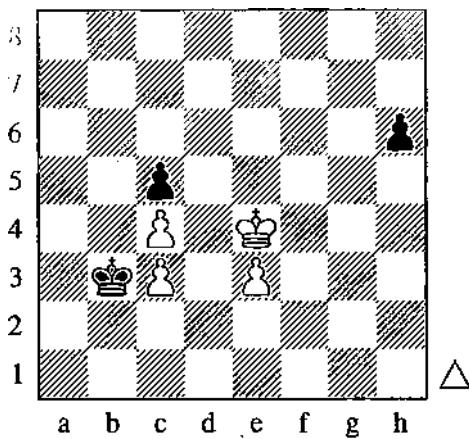
1.b4!



Black can do nothing against the plan of c4-c5 and d5-d6, when the rook, the only defender of the back rank, will soon get distracted from its defence. Instead of this, most engines recommend attacking the bishop with $\mathbb{E}e5$, or attacking along the seventh rank with $\mathbb{E}e7$, or going after the g4-pawn with $\mathbb{B}g3-f4$, because these moves maximize the mobility of

their pieces while a pawn move doesn't, so the relevant branch gets pruned. Only when the engines are forced to analyse b2-b4 do they at some point analyse the "forcing" move c4-c5, which is when they realize that Black will soon get mated.

Horizon effect



This is a good example of what is called the "horizon effect" in chess programs (found in <https://chessdailynews.com/difficult-stuff/>)

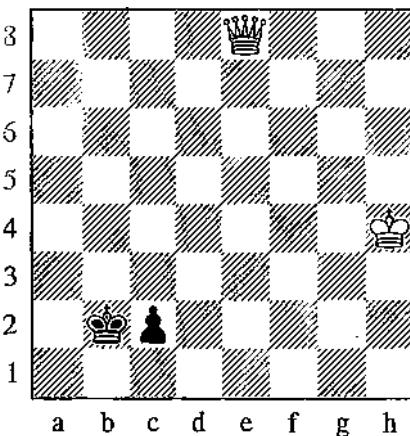
1. ♔f5

Older programs, such as Rybka 3 and Fritz 11, evaluate this as winning for White, but to my great surprise, modern ones like Stockfish 8 and Komodo commit the same crime! Only Houdini sees "equality" (it gives about +0.15, which makes no sense, but at least it doesn't think that White is winning). Of course, when modern engines are given some time (about a couple of minutes) they solve this. Also, if the engines use the six-piece tablebases they instantly evaluate this as a draw.

What kind of problem is kicking in here?

Let's follow the main line:

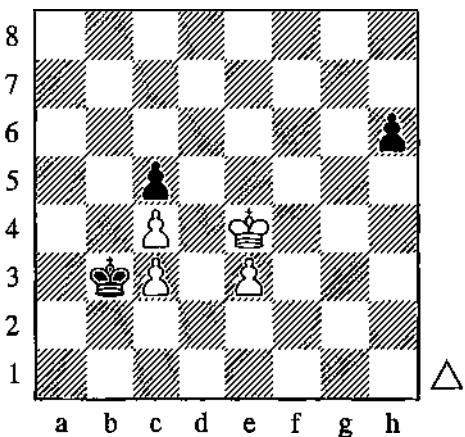
1...h5 2.e4 ♔xc4 3.♔g5 ♔xc3 4.e5 h4
5.♔xh4 ♔b2 6.e6 c4 7.e7 c3 8.e8=♕ c2



Most engines have pre-programmed this position in their evaluation function as a draw, so they don't have a problem evaluating this as equal (with the exception of some older programs – we'll come to that).

But here is when the horizon effect problem comes in...

Horizon effect II



1. ♔f5 h5 2.e4 ♔xc4 3.♔g5 ♔xc3 4.e5 h4

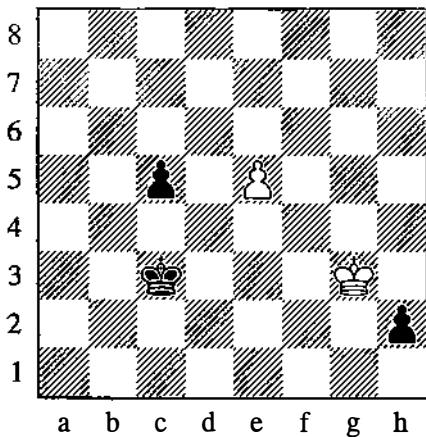
The problem comes when engines try to avoid the inevitable by *not* capturing the pawn with the king.

5. ♔f4

In this case, the pawn remains on the board,

so the pre-programmed evaluation of king and c-pawn on the seventh vs. king and queen as being a draw (when the attacking king is outside the winning zone) is kept beyond the engine's horizon. It simply doesn't see it, as the search function prunes the branches that show equality and keeps searching on the branches where the evaluation is favourable.

5...h3 6.Qg3 h2



Only now do the engines see that they are forced to capture the pawn, and they change their opinion to the position being equal.

7.Qg2 h1=Q† 8.Qxh1 c4 9.e6 Qb2 10.e7 c3 11.e8=Q

Older engines like Fritz 11 still evaluate this as +7. If the engine hasn't pre-programmed this position into its evaluation function (modern engines have) it might be possible with brute force to solve this as a draw. Once again, the horizon effect comes in. It will understand that many of those positions are draws, but it will be pruning those all the time, keeping the evaluation favourable until the 50-move rule appears on the horizon. This is a different discussion though, which we will cover in the relevant section about fortress detection.

Tunnelling

Kristjan Johann Jonsson – Nikolaos Ntirlis

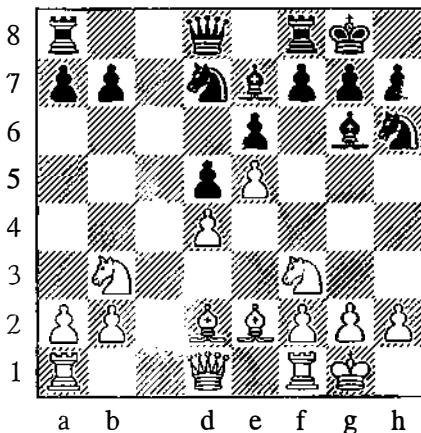
email 2013

In this game, we are going to discuss the problem of the "tunnel variation".

Imagine this situation. On starting to analyse a particular position, from the jungle of possibilities one variation is actually forced and all the others more or less lose or make no sense. The engine might spot this line and even have it as its PV (the most common case), but as it has to analyse other variations as well it doesn't have the right evaluation of the position. This might be a problem of the horizon effect, but mostly it happens because the PV hasn't been analysed well enough, as the engine also has to analyse a zillion other possibilities – which are irrelevant, but the engine doesn't know that yet. If we spot this single forced line we have to give the engine the chance to analyse it to the end of the variation. As this line is forced for a reason (there is a series of captures, or there is an ongoing attack), it might actually be winning or losing (depending which side the user is interested in) – something that it was not possible for the engine to see if it had to analyse other irrelevant lines. If we use the evaluation at the start of the tunnel we might get misled, and if we enter the tunnel based on a faulty evaluation there is sadly no going back.

A famous case of a tunnel was seen in the Marshall Attack line during the Kramnik – Leko World Championship match. A not-so-famous example is analysed here.

1.e4 c6 2.d4 d5 3.e5 Qf5 4.Qf3 e6 5.Qe2 Qd7 6.0–0 Qg6 7.Qbd2 Qh6 8.c4 Qe7 9.cxd5 cxd5 10.Qb3 0–0 11.Qd2



As this system with ... $\mathbb{Q}g6$ and ... $\mathbb{Q}h6$ was the latest fashion in the Advance Caro-Kann, I decided to give it a try. But already at this point I was feeling uncomfortable. The best engine of the time though was Houdini 3 and it said “equal”, so who was I to challenge the engine’s evaluation? I went straight into what it proposed as best.

11...a5!?

This might be objectively a good move after all. It is directed against the mobility of the b3-knight. If White is allowed to play $\mathbb{E}c1$ and $\mathbb{Q}a5$, for example, Black might get into trouble.

11...f6 was the main line at that time, but it seems that White can get an edge with the idea: 12. $\mathbb{Q}xh6!$? (12.exf6 was seen in Volokitin – Pogorelov, Istanbul 2003, and White won the game, but Black has improvements) 12...gxh6 13. $\mathbb{Q}b5!$ And then take advantage of the weak squares at c5 and e5 with the knights.

11... $\mathbb{E}c8$ 12. $\mathbb{E}c1$ $\mathbb{E}xc1$ 13. $\mathbb{W}xc1$ $\mathbb{Q}f5$ 14.g4 $\mathbb{Q}h4$ 15. $\mathbb{Q}xh4$ $\mathbb{Q}xh4$ 16.f4 was also worse for Black in Solodovnichenko – Song, Creon 2011.

12.a4 $\mathbb{W}b6!$

The knight is none too stable on b3, and the b2-pawn and b4-square are not well protected.

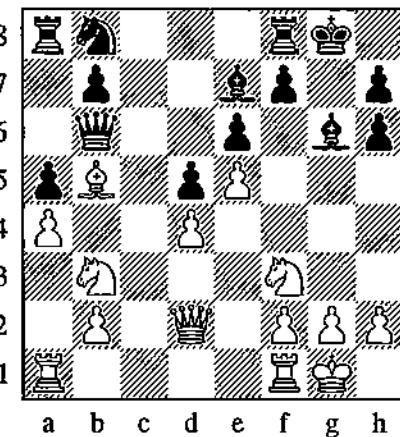
13. $\mathbb{Q}b5$ $\mathbb{Q}b8$

The knight goes to c6 and Black may take advantage of the b4-square.

14. $\mathbb{Q}xh6$

I thought that this was not best, as my idea was to play ... $\mathbb{Q}h8$ anyway next (maybe after ... $\mathbb{Q}c6$ and ... $\mathbb{E}fc8$ first) in order to play ... $\mathbb{Q}g8$ and later ... $\mathbb{Q}ge7$. White, though, has a specific idea in mind and most probably had set a trap based on what he saw that the engines were proposing.

14...gxh6 15. $\mathbb{W}d2$



15... $\mathbb{Q}c6?$

A very bad move and very bad analysis by me, as I fall straight into my opponent’s trap and get tunneled!

15... $\mathbb{Q}g7$ was the move Black wanted to play and it seems fine: 16. $\mathbb{Q}c5$ (16. $\mathbb{E}ac1$ $\mathbb{Q}c6$ 17. $\mathbb{Q}xc6$ $\mathbb{W}xb3!=$) 16... $\mathbb{E}c8$ 17. $\mathbb{E}ac1$ $\mathbb{Q}c6$ 18. $\mathbb{Q}d7$ $\mathbb{W}d8$ 19. $\mathbb{Q}f6$ $\mathbb{Q}xf6$ 20.exf6† $\mathbb{W}xf6$ 21. $\mathbb{Q}xc6$ $\mathbb{E}xc6$ 22. $\mathbb{E}xc6$ $bxc6$ 23. $\mathbb{E}c1$ $\mathbb{E}b8!$ Black’s counterplay is enough for a draw.

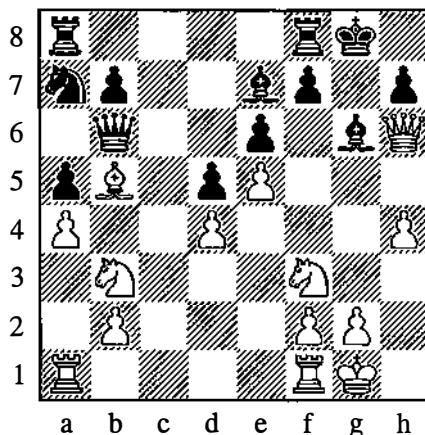
16. $\mathbb{W}xh6$ $\mathbb{Q}a7$

Forced according to the engines, as other choices get a much higher score for White.

17.h4!

Of course! Houdini was giving this as its second choice with a score of 0.00, and even today's engines don't get panicked at first (but if given a bit of time here, they do!).

The computer's first choice was 17.♕c5 ♕xb5 18.♕d7 ♖d8 19.♕f6† ♖xf6 20.exf6 ♖xf6 21.axb5 ♖g7 22.♖e3 ♖e4 23.♕g5, and now I wanted to play 23...f5, a line which I had actually analysed further.



17...♕xb5

Entering the tunnel. The main characteristic of this kind of situation is that all the alternatives lose, with the exception of one variation.

17...♔h8, for example, loses after 18.h5, although even here engines take a while to understand that Black is completely helpless. This is a horizon effect situation, although they tend to give quite a big advantage at the start of the line anyway.

18.axb5 ♖xb5

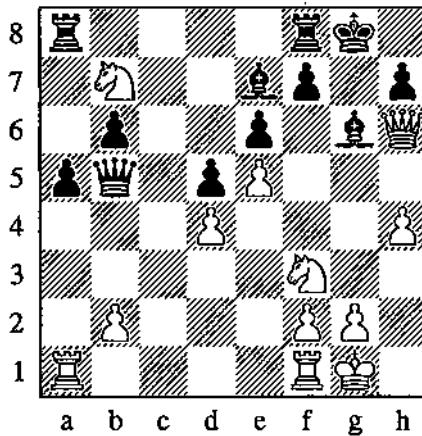
Again the only move – the others are getting high scores for White.

19.♕c5 b6

The only choice again.

20.♕b7

And here we have it! Houdini was evaluating this as 0.00, based on the line starting with 20...♖xb2 after a whole night of analysis! This was the choice of an inexperienced analyst. I should have spotted the forced line and tried to analyse it to the end. When I came back to this variation to verify that I was OK, I actually played the move 20...♖xb2, and after helping the engine by feeding it with its own top choices, I discovered to my horror that the position was lost. To be fair to Houdini, version 5 of the engine sees the correct continuation after five seconds, running on better hardware.



20...f6

I was lucky that I was not completely lost here, and that I still have this move, which is forced and good, although every engine now agrees that White is much better.

20...♖xb2 21.♕d6! a4 (21...♗xd6 22.exd6 f6 23.♗ac1 and 21...♗ac8 22.h5 ♔d3 23.♗f4 are also losing for Black) 22.h5 This is the end of the tunnel. Black has no hope. 22...♗d3 (or 22...♗c2 23.♗ac1 a3 24.♕g5+–)

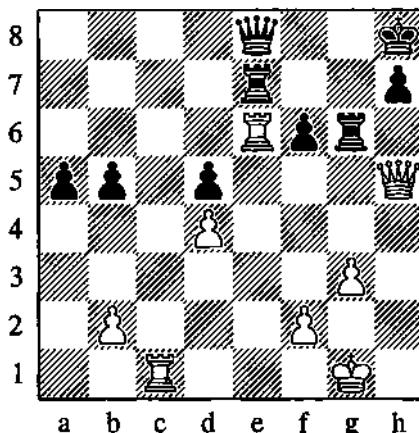


23. $\mathbb{E}ad1!$ $\mathbb{W}b3$ 24. $\mathbb{Q}g5+$ –

21. $\mathbb{Q}d6$ $\mathbb{Q}xd6$ 22. $\mathbb{exd}6$ $\mathbb{W}b4$ 23. $\mathbb{E}a3$ $\mathbb{E}f7$
 24. $h5$ $\mathbb{Q}f5$ 25. $\mathbb{E}c1$ $\mathbb{W}xd6$ 26. $\mathbb{Q}h4$ $\mathbb{E}e8$
 27. $\mathbb{E}g3\#$ $\mathbb{Q}h8$ 28. $\mathbb{E}gc3$

White is dominating here, and can try many different plans to cause trouble. I just tried to hang on by eliminating the choices where I was losing immediately.

28... $\mathbb{W}b8$ 29. $\mathbb{E}c6$ $\mathbb{E}g8$ 30. $g3$ $b5$ 31. $\mathbb{Q}g6\#$
 $\mathbb{E}xg6$ 32. $hxg6$ $\mathbb{E}e7$ 33. $\mathbb{W}h5$ $\mathbb{W}e8$ 34. $\mathbb{E}xe6$
 $\mathbb{E}xg6$



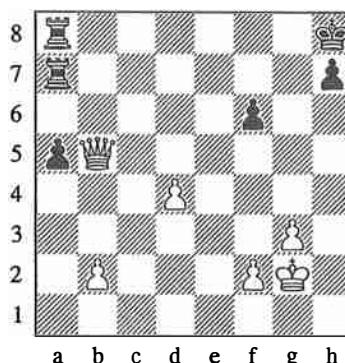
There were many options along the way, but now I was analysing carefully and deeply, and had some ideas everywhere. At this point, I had already analysed two endgames that might result. In one I was very confident that I had a draw, but I was not sure about the other one.

My opponent again went for the endgame I feared the most, setting another trap along the way.

35. $\mathbb{E}c7!$

This move was not the first choice of my engine, as it thought once again that a winning continuation was 0.00. But I had learned my lesson this time.

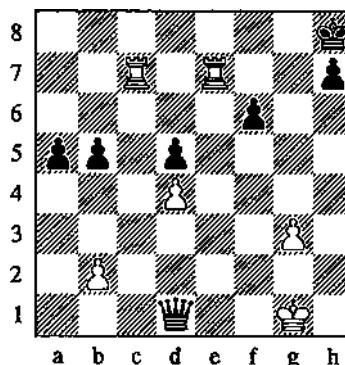
35. $\mathbb{E}c8$ leads to an unpleasant endgame, but one that after deep analysis I was confident that I could hold: 35... $\mathbb{E}xe6$ 36. $\mathbb{E}xe8\#$ $\mathbb{E}xe8$
 37. $\mathbb{W}xd5$ $\mathbb{E}g7$ 38. $\mathbb{W}xb5$ $\mathbb{E}a8$ 39. $\mathbb{Q}g2$ $\mathbb{E}ga7$



This must be a draw. A sample line is: 40. $d5$ $\mathbb{E}g7$ 41. $b3$ $\mathbb{E}d8$ 42. $\mathbb{Q}f3$ $\mathbb{E}dd7=$

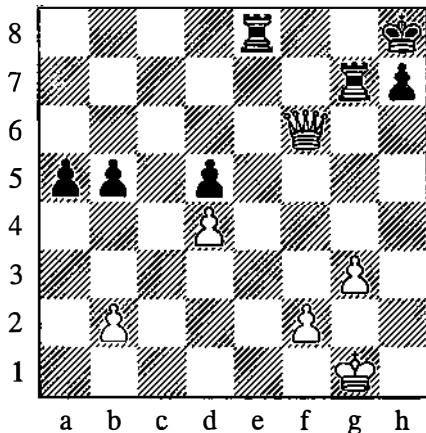
35... $\mathbb{E}g8!$

35... $\mathbb{E}xg3\#?$ 36. $fxg3$ $\mathbb{W}xh5$ 37. $\mathbb{E}xe7$ $\mathbb{W}d1\#$ is another tunnel! Black can hang on against any king move but one:



38.♕f2!! The engine had this move as its third choice and only after I played it did it start to like it, until it evaluated the position as completely winning for White. 38...♛xd4† 39.♕e1+– It seems that White has a way to avoid all the checks and hide on a6. And when this happens, Black will have to give up his queen to avoid checkmate.

36.♗h4 ♜xc7 37.♗xf6† ♜cg7 38.♗xe8 ♜xe8



It seems that this endgame is indeed a draw, despite the fact that engines evaluate this as around +2. Black's best bet is to identify the possible fortresses in the position and go for them. I managed to do exactly that.

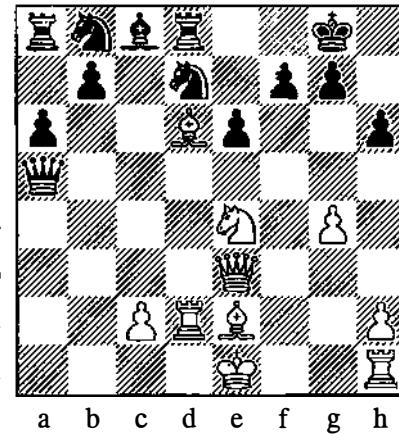
...½-½

In Part II I will propose ways to detect fortresses – another one of the big problems in computer chess analysis. But before we get there, let's see a more cunning position where detecting fortresses is the key to analysing the whole line.

Nikolaos Ntirlis – Jan Rogos

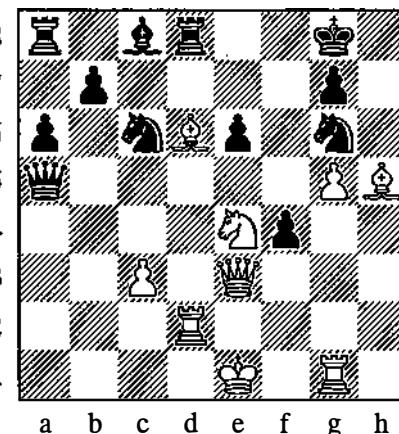
email 2015

1.e4 c5 2.♘f3 d6 3.d4 cxd4 4.♘xd4 ♘f6
5.♘c3 a6 6.♗g5 e6 7.f4 ♗b6 8.♗d2 ♗xb2
9.♗b1 ♗a3 10.e5 dxe5 11.fxe5 12.♘fd7 12.♘e4
♗xa2 13.♗d1 h6 14.♗h4 ♗d5 15.♗e3 ♗xe5
16.♗e2 ♗c5 17.♗g3 ♗xd4 18.♗xd4 ♗a5†
19.♗d2 0–0 20.♗d6 ♗d8 21.g4!



Negi's great idea, which was first seen in his game against Huschenbeth in Chotowa 2010. It is amazing that Black permitted this line, which I considered to be very dangerous.

21...♘c6 22.g5 hxg5 23.♗g1 f6 24.h4 ♘de5
25.c3 ♘g6 26.hxg5 f5 27.♗h5 f4



28. $\mathbb{Q}f6\#!$

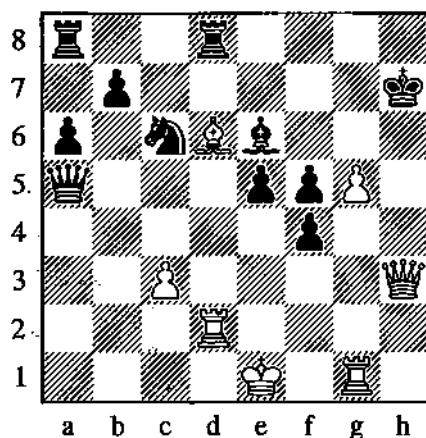
Still following Negi's proposal.

28. $\mathbb{Q}xf4$ $\mathbb{Q}xd2$ 29. $\mathbb{Q}xg6$ $\mathbb{Q}e7$ 30. $\mathbb{Q}h7\#$ ½–½
Malashenkov – Noeth, email 2014.

28... $gxf6$ 29. $\mathbb{W}h3$

Suddenly the engines change their mind here and evaluate this line as better for White. It is extremely difficult to play Black's position in a practical game, and as you go deeper and deeper, the engines increase their evaluation in White's favour. For Negi this was enough, and he had to stop analysing at some point. Unluckily for me as White, at the position where Negi stopped analysing, Black is saved by a series of fortresses which are incredibly difficult to foresee.

29... $e5!$ 30. $\mathbb{W}d3$ $f5$ 31. $\mathbb{Q}xg6$ $\mathbb{Q}e6$ 32. $\mathbb{Q}h7\#$
 $\mathbb{Q}xh7$ 33. $\mathbb{W}h3\#$



The engine evaluation has climbed to +1.50 and Negi stopped his analysis, claiming a much better position for White. In fact, this is the start of a tunnel that ends in a drawn position.

33... $\mathbb{Q}g8$ 34. $\mathbb{Q}h1$ $\mathbb{W}a1\#$ 35. $\mathbb{Q}d1$ $\mathbb{W}xd1\#!$
36. $\mathbb{Q}xd1$ $\mathbb{Q}xd6\#$ 37. $\mathbb{Q}e1$ $\mathbb{Q}f8$ 38. $\mathbb{W}h6\#$ $\mathbb{Q}e7$
39. $\mathbb{W}f6\#$ $\mathbb{Q}d7$ 40. $\mathbb{Q}h7\#$ $\mathbb{Q}c8$ 41. $\mathbb{Q}h8\#$ $\mathbb{Q}c7$
42. $\mathbb{Q}xa8$

Everything up to here was forced. Black plays a few active moves and the evaluation changes.

42... $e4!$ 43. $\mathbb{g}6$

43. $\mathbb{Q}e8$ $\mathbb{Q}d7$ 44. $\mathbb{W}f7$ $\mathbb{Q}d8$ was another option leading to a similar set of fortresses.

43... $\mathbb{Q}d7$ 44. $\mathbb{W}g7$ $f3!$ 45. $\mathbb{Q}f8$ $e3$ 46. $\mathbb{Q}xf5$ $f2\#$
47. $\mathbb{Q}e2$ $\mathbb{Q}e6$

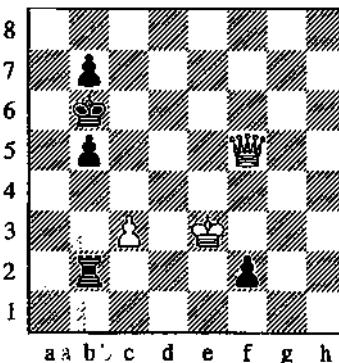


I was still hoping that there would be a way to circumvent the engines and find a win.

48. $\mathbb{Q}c5$

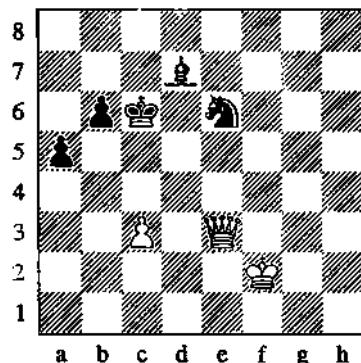
The alternatives are no better.

48. $\mathbb{W}h7$ $\mathbb{Q}e7$ 49. $g7$ $\mathbb{Q}xf5$ 50. $g8=\mathbb{W}$ $\mathbb{Q}d6$
51. $\mathbb{W}c4\#$ $\mathbb{Q}b6$ 52. $\mathbb{W}b4\#$ $\mathbb{Q}b5\#$ 53. $\mathbb{W}xb5\#$ $axb5$
54. $\mathbb{W}xf5$ $\mathbb{Q}d2\#$ 55. $\mathbb{Q}xe3$ $\mathbb{Q}b2$



This is a fortress.

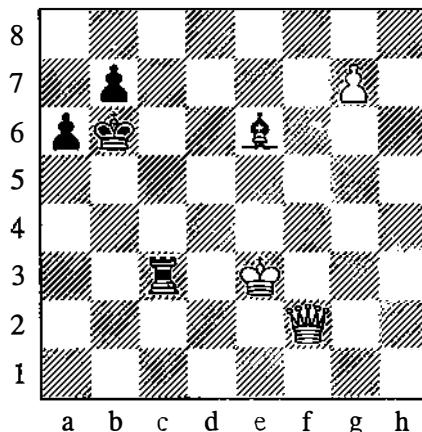
48... $\mathbb{Q}f4$ $\mathbb{Q}e5$ 49. $\mathbb{B}e4$ $\mathbb{Q}xg6$ 50. $\mathbb{B}xe6$ $\mathbb{Q}f4\uparrow$
 51. $\mathbb{Q}f1$ $\mathbb{Q}xe6$ 52. $\mathbb{W}e5\uparrow$ $\mathbb{Q}c6$ 53. $\mathbb{W}xe3$ b6!
 54. $\mathbb{Q}xf2$ a5



Another amazing fortress, with two minor pieces holding their own against the mighty queen.

48... $\mathbb{B}d6$ 49. $\mathbb{W}f7$ $\mathbb{Q}b6$ 50.g7
 50. $\mathbb{B}xc6\uparrow$ $\mathbb{Q}xc6$ 51.g7 $\mathbb{Q}e6$ 52. $\mathbb{W}e8\uparrow$ $\mathbb{Q}c7$
 53. $\mathbb{W}xe6$ $\mathbb{B}xe6$ 54.g8= \mathbb{W} is yet another fortress.

50... $\mathbb{Q}g4\uparrow$ 51. $\mathbb{Q}xe3$ $\mathbb{Q}e6$ 52. $\mathbb{B}xc6\uparrow$ $\mathbb{B}xc6$
 53. $\mathbb{W}xf2$ $\mathbb{B}xc3\uparrow$



Whenever the g-pawn queens, the black bishop will take it and we have a theoretical draw, as the tablebases confirm. Of course, due to the horizon effect, the engines give a big advantage to White by postponing winning the bishop. But otherwise there is no progress, so...

½–½



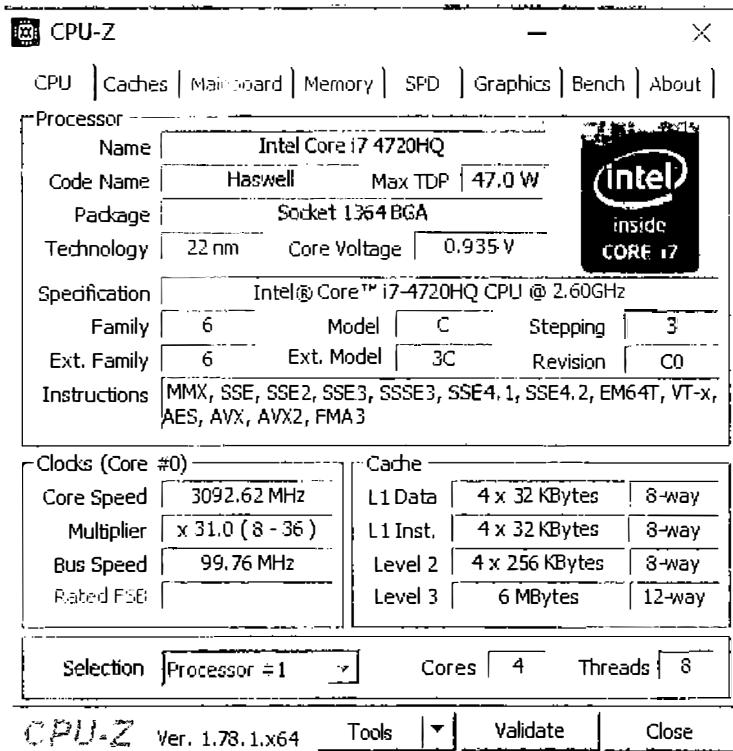
PART II: How to use engines – practical tips

Getting to know your own hardware

Before we move on to specific techniques, I need to make sure that you have the best possible set-up on your machine.

Before you install a modern chess engine you must be sure which version of the engine you need to use and what further options you have regarding your software.

There are many applications out there that can give you an overview of your hardware, but one of the best is CPU-Z [14].



This is what CPU-Z tells us about a typical processor. It is interesting to know that its power consumption is 47 watts, but what mainly interests us is the CPU generation and the number of physical cores. As you can see from the picture, this CPU has four physical cores (eight threads) and a fourth-generation CPU. This is easy to figure out: it comes from the name of the processor, which in this case is 4720. The first digit, 4, is the generation number.

This is highly relevant when choosing which version of the engine to install. If we go to the link at the following note [15], where we can find the latest version of the open source engine Stockfish, we see these options:

!! latest version !!

[Windows x64 for Haswell CPUs](#)

[Windows x64 for modern computers](#)

[Windows x64](#)

[Windows 32](#)

[Linux x64 for Haswell CPUs](#)

[Linux x64 for modern computers](#)

[Linux x64](#)

As we have a multi-core PC we go to the x64 versions, and as we have a fourth-generation processor we choose the Haswell version. If we have a fifth or later generation processor we again choose the Haswell version unless a newer option appears in the future. If we have a third-generation CPU or lower, we choose the “modern computers” option, which should be the default option for 90% of readers. If you have a computer which was made before 2006-07, then choose between the x64 or x32 versions.

Similar considerations apply when choosing the version of Houdini. If you have a Haswell PC, you can choose the “pext” version, for example. Obviously, it helps a lot in all these cases if you read carefully the user’s manual of the engine you want to use. Both Houdini and Komodo have excellent manuals.

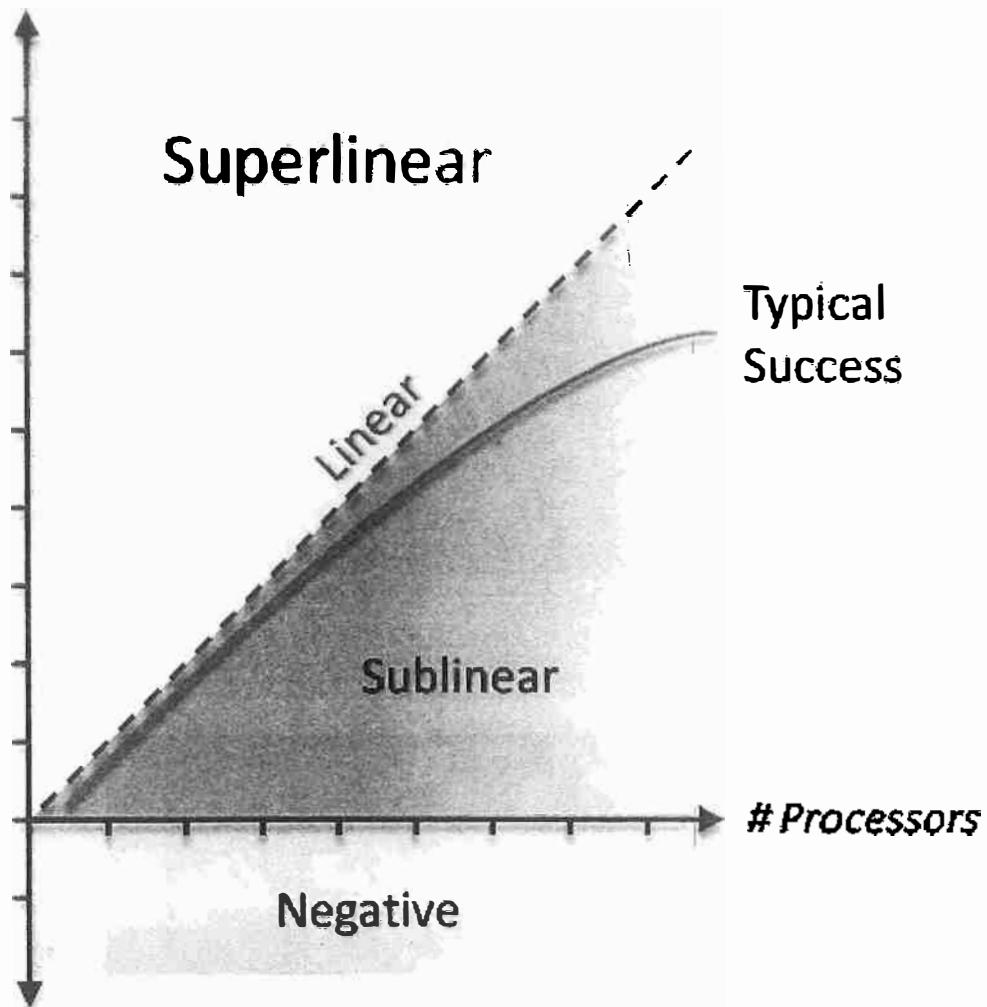
If you want to learn more and understand why there is more than one option here, go ahead and Google “Bit Manipulation Instruction Sets” and read the technical information.

Using multi-core computers

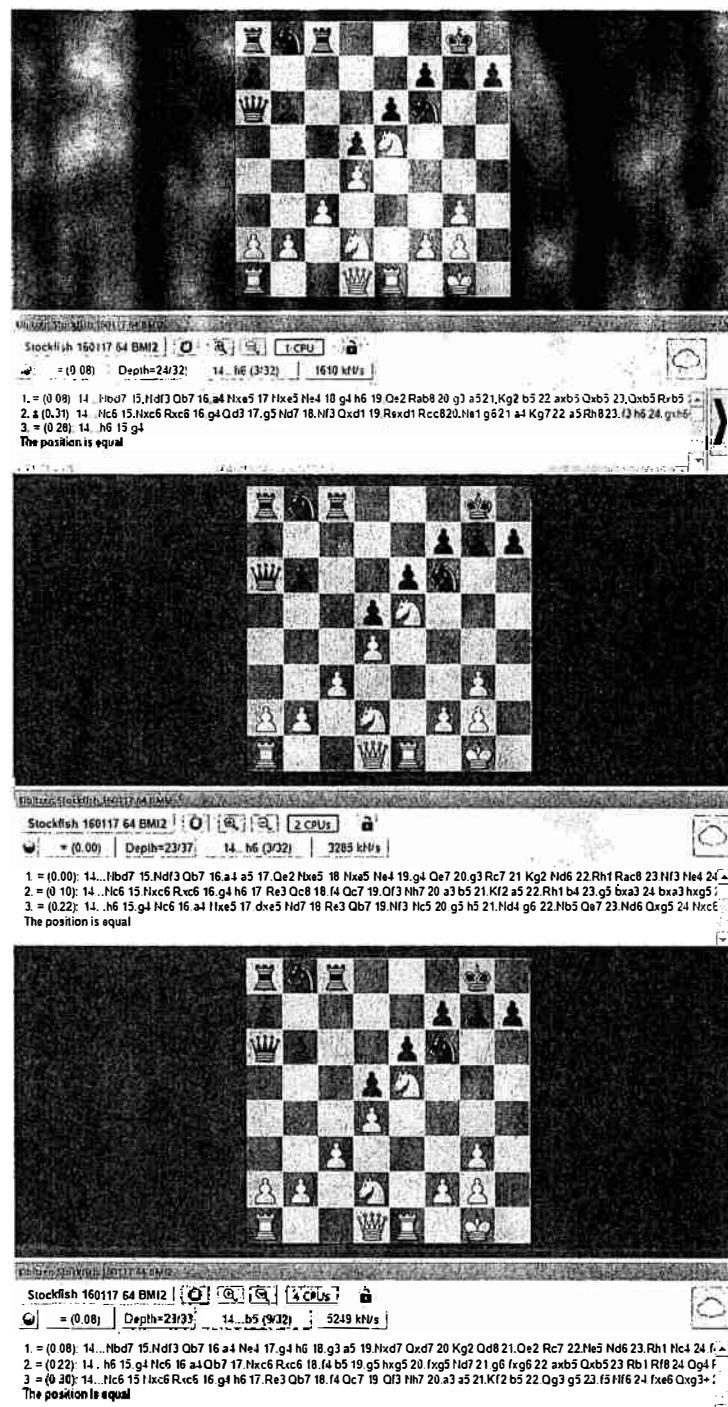
The second thing is to choose the number of cores you should use for your analysis. In our example we have four physical cores in our system. This should be the maximum number of cores that we allow the engine to use. We could use up to eight, but once again, if you want to learn what “Hyper-Threading” is and how it works, Google it! The good thing about using four cores instead of eight is that we will have the fastest possible engine and can also use our computer to send emails or write a chapter of our new book without problems.

At this point I should point out the following. The more cores an engine uses, the faster it becomes, but the more resources get wasted! Big advances have been made in the field of parallel processing, and chess programmers have come up with excellent solutions, but no matter how smart they are, computer science theory says that the more processors one uses, the less optimally each one works. This is called “Amdahl’s Law” [16] and is expressed by the following graphic (found in <http://www.drdobbs.com/parallel/super-linearity-and-the-bigger-machine/206903306> and also in <https://chessprogramming.wikispaces.com/Parallel+Search>).

*Parallel
Speedup*



The next three pictures show this phenomenon quite clearly.



By using Stockfish on one core, we get about 1,600 kNodes/second analysed, and by using two cores this figure is clearly doubled (to about 3,200 kNodes/second). But when we move to four cores, instead of the 6,400 kNodes/second that we might expect, we get “only” 5,200. This is quite a good speedup, but it’s not optimal. When we move on to eight cores, the speedup is even less than the theoretically expected X8 from the single core speed.

So, a good way to use our system resources is not to distribute all the cores to one engine, but to share them with a second engine! For those who have systems with eight cores, giving four cores to one engine and the other four to a second engine is a close to optimal way to use these resources.

Practical analysis tips

In the first part, I clearly showed that:

You shouldn’t underestimate the suggestions and evaluations of modern chess engines. There have been a lot of advances in the last 10 years, and the modern engines are really, really powerful.

You shouldn’t overestimate the suggestions and evaluations of modern (and more so older!) engines. Their evaluations are based on unreliable PVs; they are blind to typical positional or tactical patterns; they cannot detect fortresses; they can prune important stuff no matter how smartly they have been programmed; and they don’t really care about winning the game, but are more interested in achieving a higher score in their evaluation functions (and this has disadvantages). Also, chess is far too complicated for them to work out everything.

In the following sections I will suggest ways to overcome these problems in order to enjoy the benefits of engines. But note that by understanding the roots of each problem, it will be easier for you to find your own methods. Of course, my proposed solutions are not universal or necessarily the “best” ones.

Analysing from back to front

This is an excellent technique used to detect fortresses and tunnels and help the engine discover more options that it wouldn’t have found initially.

Modern engines use so-called “transposition tables” [17]. As they encounter the same positions with different move orders, they store the previously-analysed results so that they don’t have to do the analysis again from the start. If you analyse a certain line by letting the engine think for some reasonable amount of time and then play the first choice, and then play again until you reach a position which you think is reasonably well evaluated, the transposition tables will be filled with possibilities.

Going back to the start of the variation slowly, you’ll notice that most of the time the evaluation remains stable, as the engine doesn’t change its mind for the PV. But often, using its already acquired knowledge, a few steps back it finds a continuation which is better than the previous PV,

which would not have popped up if the transposition table had not been filled with the “correct” information as to how this position could reasonably unfold.

The correct technique is then to investigate the new variation at reasonable length and then come back again to the root, doing the same thing again and again as many times as needed, until on returning to the root you get the same evaluation as you had at the end of each one of the sub-variations you investigated. Of course, as you come back (or at the start of the search) you can and should investigate your own ideas, such as possible pawn breaks, typical sacrifices or positional manoeuvres. Investigating a database with human games, or even using them as a basis for analysis (which is what the best analysts do anyway) is always a good start.

For this technique to be effective, you need a lot of memory, especially if the position is complicated. If you have an endgame, usually 4 or 8 Gbytes of memory is enough. If you have a complicated middlegame position, engines will often “forget” the results they had found in older sub-variations as they run short of memory.

When using six-piece endgame tablebases, the transposition tables can be filled with exact results like “draw” or “win”. A fortress is detected by the engine when the 50-move rule appears in the evaluation. If you force a line deep enough (close to 100 plies from the root) and you find that it is evaluated 0.00 with many tablebase hits you can be sure that this is a fortress. If you go back to this variation, you’ll occasionally find moves that are evaluated at more than 0.00. You should examine them as well until your evaluation becomes “win” or “draw”. When this painful and time-consuming process ends by returning to the root, you’ll be sure (or as sure as possible) as to whether or not the position is a fortress. Once again, transposition tables work excellently together with the six-piece tablebases.

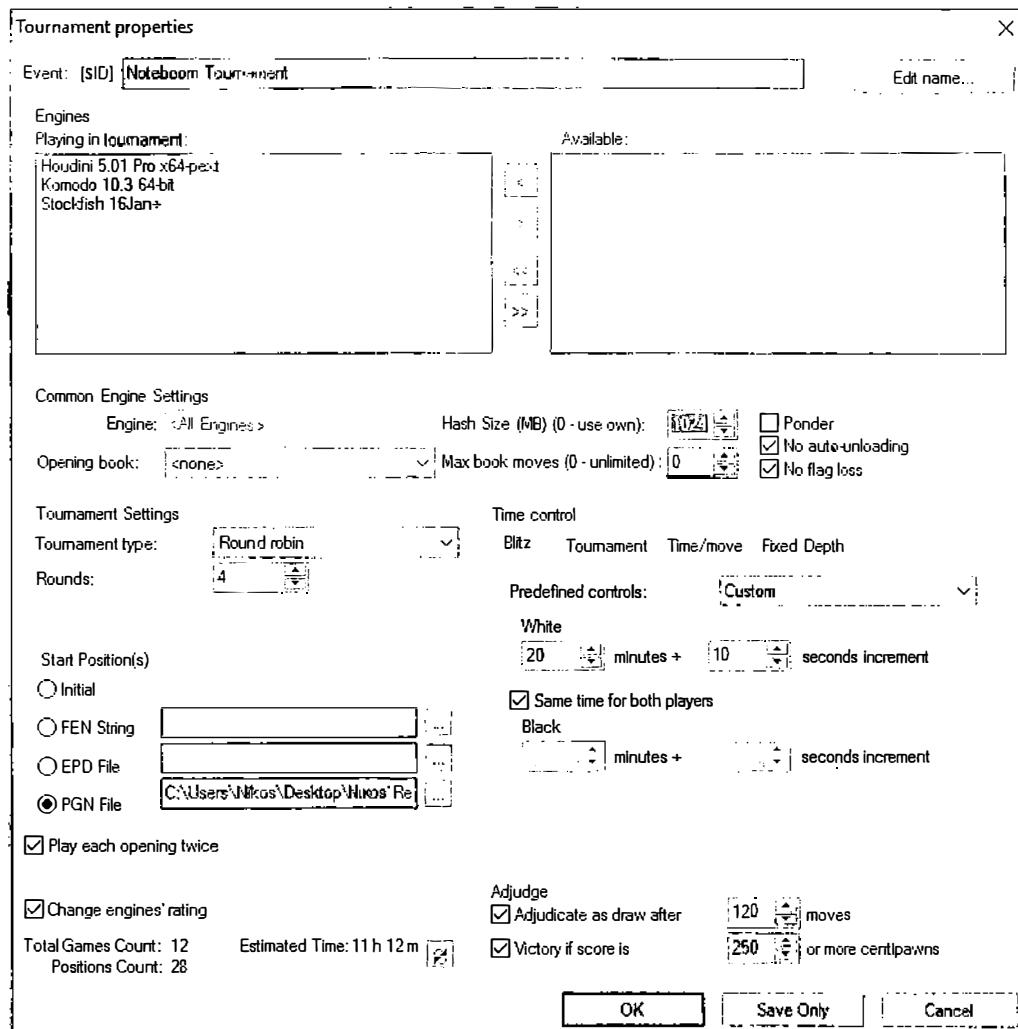
Trying to refute the PV using other engines – the technique of “carouseling”

When you have constructed a reasonable analysis tree with your engine of choice, the next step could be to try to prove this analysis wrong by using another engine. Typically, the top engines won’t give the same first choices and evaluations in all positions. You can use this to refine the analysis by finding areas where one engine might be wrong because of faulty (or simply unlucky) pruning, or an evaluation flaw.

If you do this by using a series of engines, with each one trying to refute the results of the previous ones, this is called “carouseling”. This works well if you have many cores and can distribute them between different engines. In each case, one engine is the *main* engine and the others are those that would like to become the main engine by proving it wrong.

Choosing the main engine can be done in many ways.. The simplest one is to choose the main engine in terms of higher rating. You can go to the following link [18] to find which engine has the higher rating and use that one. An engine having the best rating means that it is “generally” better in a wide range of positions. As I said, there might be particular situations in which one engine is better, even if its overall rating is lower. Experience can be helpful as well. For example, Houdini is great at analysing the black side of the King’s Indian, and Komodo the Spanish, while the sharp Sicilians are usually the area of expertise of Stockfish. But these things can change from version to version.

Another way to determine the main engine is to set up an engine tournament. You identify four or five starting positions which are actually the start of main lines in the sub-variation of the opening you want to examine, and let three or four engines play a tournament with both colours using the starting positions that you have chosen. Programs are available in which you can create these kinds of tournaments very easily. One such is Aquarium.



Above is an example of an engine tournament that has been set up in Aquarium. I have used a PGN file with 12 critical positions from my chosen opening, and I have chosen three engines and set the time for each game. The software also estimates the time that the tournament will take to be completed (in this case about 11 hours), which is very useful if you plan to let the tournament run overnight and want to have the results when you wake up! If you want to shorten the completion time, you can set different parameters.

The results of engine tournaments can offer us (besides the choice of the main engine) many ideas and patterns and new plans for us to investigate, and will help us to spot critical lines which need to be analysed further.

Of course, we shouldn't forget that while analysing engine games is good, we must always take into consideration games played by humans from the relevant position, if there are any.

The Monte Carlo method

By playing multiple engine games or tournaments, we could say that we are using a Monte Carlo method for analysis.

If the engine tournament shows that a particular continuation gives better results for a particular colour, this might be the best continuation regardless of the original evaluation of the engine. The more games played, the greater the probability that this is indeed the right choice based simply on statistics, unless of course there is a special case (let's say a miscalculation by the engines and a particular forced line, for example, gives equality).

If you want to use the Monte Carlo method, then a lot of games must be played and they must have a short time limit. The Fritz interface offers the possibility of doing Monte Carlo analysis using the Rybka engine, by forcing it to play against itself choosing a move in less than 1 second (at very low depths).

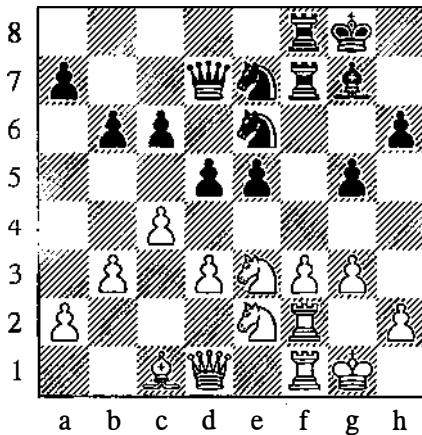
The following is an example of the type of position in which the Monte Carlo method can work.

Christian Krause – Nikolaos Ntirlis

email 2016

1.c4 e5 2.g3 ♕c6 3.♕c3 g6 4.♗g2 ♗g5 5.e4 d6 6.♗ge2 ♗ge7 7.d3 0-0 8.0-0 f5 9.♗d5 ♘b8

10.♗b3 ♔h8 11.♗g5 h6 12.♗d2 g5 13.exf5 ♘xf5 14.♗e3 ♔h7 15.♗e4 ♖d7 16.♗ad1 ♘f7 17.♗3 ♘bf8 18.♗c2 b6 19.♗f2 ♗d8 20.♗df1 ♗e6 21.♗xh7 ♔xh7 22.♗e3 ♗g8 23.♗c1 c6 24.♗d1 d5 25.b3



In this position, after some analysis, many engines like the push 25...d4 very much. However, the position becomes relatively closed, and despite the high evaluation in favour of Black we might have a case where the engines like the space and the pieces, but cannot find a winning plan. The other choices are more fluid moves such as 25...a5 and 25...♗d8. Monte Carlo analysis of 35,000 games indicated that 25...a5 gives almost double the winning chances compared with 25...d4, something which is not reflected in the original evaluation. This is a good indication that 25...d4 might not be the correct choice here.

Analysing in multi-PV mode

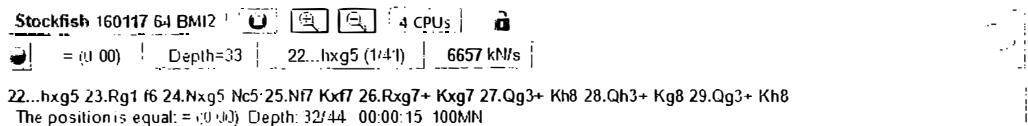
Many players have noticed that analysing with the engine offering a single line is quite different from when it shows many lines. The most obvious thing that you see is that with a single line the engine works faster. What is better? To be faster, or to allow the engine to show more ideas?

Forcing the engine to show more moves (or, as we know by now, more PVs) is not only good for showing us more ideas but it also helps the engine by forcing it to examine more lines and thus give it less chance to prune something important.

In general, there are three choices regarding single or multi-PV analysis.

Single PV

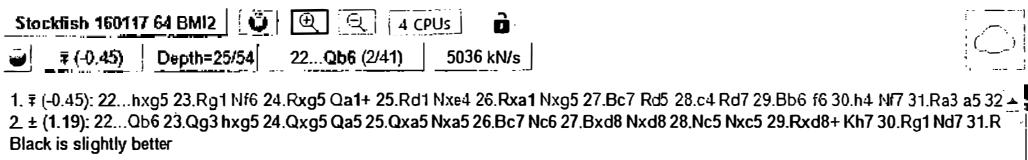
This choice has the obvious advantage that it is the fastest approach. It is also the recommended choice when using the “fortress detection” technique I proposed above.



Here we see that in a particular position, after 15 seconds of analysis, Stockfish has managed to get to depth 33 at a pace of more than 6,500 kNodes/second.

Two PVs

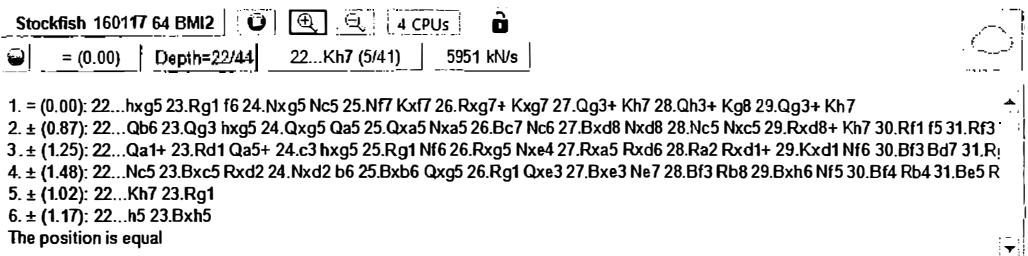
This choice is good (and also the fastest!) when we want to search for tunnels and in general when we want to determine whether a line is forced or not. If it is, the second line will have a huge difference in evaluation from the top choice.



We see in this figure that after the same 15 seconds in the same position, Stockfish has managed to go only to depth 25 at a much slower pace and it clearly shows that the top choice is forced.

More PVs (how many?)

When we choose more PVs we have to take into consideration that the more lines we add, the slower the engine gets. But in very complicated positions we can force the engine to analyse different possibilities and thus help it overcome problems connected with wrong pruning.



The same position after 15 seconds of analysis. The engine has only gone to depth 22!

The choice of how many lines we choose in PV mode is connected to the specific position and the hardware we have. The stronger the hardware, the more beneficial it is to have more lines in the PV analysis mode, although more than five lines hardly ever gives anything extra and burns a lot of processing time.

Conclusion

In this chapter I have explained that chess engines have great strengths and weaknesses, so I hope you will forgive the deliberate contradictions in my conclusions!

In the opening

Engines are excellent opening players. It is no coincidence that the best analysts in the world use them to find opening novelties. The engines are programmed to put their pieces on the best possible squares, where they have a function and a purpose, but also are not dogmatic and can propose a specific course of action if this is the best in the given position. The engines are as good at finding small positional operations (like causing damage to the opponent's pawn structure) as quickly as they calculate checkmates.

Engines are terrible at openings. They can be given all the time in the world to think, but they will never discover ideas which form the basics of modern chess theory, as these have come after trial and error through thousands of human games. The positions in the opening are so complicated that an engine is lost. It is much better to study the opening using a database filled with high-level human games and only use the engines at a later part of the game, or use it only to answer questions like "What would have happened if...?"

In the middlegame

Engines are good universal players. Despite what is generally thought, even in closed positions they can always come up with good suggestions. In open positions, of course they excel.

Engines are terrible in the middlegame. Of course, when there are tactics in the position they offer good advice, but this doesn't have to be taken for granted (see for example the $\mathbb{Q}xh7\#$ sacrifice that engines don't see in the example earlier in the chapter). The "exceptions" where the engines are bad are so many: deep positional sacrifices, messy and complex positions where they may prune the best continuation, positions where a certain piece is imprisoned and will never play, weaknesses that cannot be attacked now but will be in the future, with this falling outside their horizon etc. In technical positions they can offer no help, as they tend to give most of the continuations as equal, without taking into consideration the practical problems that a given move can cause.

In the endgame

This is where the engines are at their best! They can calculate 25, 30, 35 moves ahead (70 plies!) and accurately evaluate the resulting positions. Not to mention of course the endgame tablebases, where the evaluation changes from centipawns to a definite answer: “win” or “draw”!

If there is one part of the game in which engines cannot be trusted, it is the endgame. Engines evaluate positions based on king safety, piece mobility etc., which in the endgame don’t matter. Some well-known theoretical positions are often miscalculated. Also, engines seem to fall into fortresses like bees in honey! They get attracted to them and advise us to go there, all the time having no clue how to win!

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Appendix 3

Cheat Sheet



1. Simple but Difficult

Chess is a difficult game. You cannot un-see the best move, so when your engine shows you the move and implies that chess is simple, it is not an evaluation of your abilities.

2. The Psychology of Chess Improvement

Focus on the game, not the result. You cannot will your way to good results. Good results come from good moves. Good moves come from confidence and skill. Confidence comes from skill as well.

It is important to have a *growth mindset* – to always want to learn.

Use your self-discipline to set up a habit of training regularly. Consistency will get you there faster than anything else. Use triggers to further the habits you want to develop.

Learning something new can be frustrating. This feeling of frustration should trigger a sense of happiness and optimism. It is how it feels to be in the process of improvement.

Focus on developing the skills you want to develop as much as solving exercises correctly.

Develop a pre-game ritual. Then go prove who you are, make a good move and then another one. No psychological strategy other than focusing on the chess will give you better results. Don't base your happiness on results. As we say in Denmark, *win and lose in the same state of mind* (although we do at times debate how hard it is to cry when you lose).

Analyse your games! Hear what your opponent was thinking. This is the *growth mindset* in action.

Consider revising the section on doing something difficult if you get stuck. Think about the improvement circle.

3. Who Are You?

There are four types of players:

1. Logical and technical
2. Logical and dynamic
3. Intuitive and technical
4. Intuitive and dynamic

Knowing who you are will help you understand the origin of a lot of the mistakes you repeatedly make and help you in developing your weak areas. It can also help you in your opening choices.

4. Decision Making

We all have an emotional need for certainty. But all you need to know is that you have done the best you can under the circumstances in terms of deciding what to play on the next move. That's your certainty. Decide on a move, using all your tools, then play it.

5. Four Types of Decisions

1. Automatic moves. This should trigger the question: is this really the only move?
2. Simple decisions. Few variations. Other moves are OK too. Should be made without spending too much time.
3. Critical moments. The difference between the best move and the others is high. You need to be accurate. It is like algebra; only calculation will be able to solve these problems correctly.
4. Strategic decisions. Complex positions where you should use everything in your toolbox and look further than your opponent.

The difference between positional and strategic decisions can be defined in many ways; for example, that a strategic decision is long-term and not necessarily positionally sound on a short-term basis.

6. Simple Decisions

A quick look at the three questions, which are described at length in *Grandmaster Preparation – Positional Play* and further elaborated on in *Grandmaster Preparation – Strategic Play*.

1. Where are the weaknesses?
2. What is your opponent's idea?
3. Which is the worst placed piece?

7. What is Calculation?

The process of finding what you do not see automatically! How is this done? Slow down the flow of variations running through your head and look for alternatives.

8. The Calculation Process

The purpose of calculation is to aid decision making, not to see everything. Do not overcalculate; you risk playing too forcing chess, not allowing the opponent to make his own mistakes.

It is important to get control over your impulses and to respect your opponent. Do not be naive. Even if he has played poorly so far, he might still have an idea behind his latest move.

Use falsification to check if your sharp lines work and be wary of going too fast.

End your lines with a look at the position, not with an emotional evaluation.

Resistance should trigger slowing down; just like so many other tactical obstacles.

Great calculation skills require a stubbornness and a level of unbroken concentration which is difficult to develop. Difficult is OK; you have greatness within.

9. Abstract Thinking

Strategic thinking is important to win against strong opponents. The positionally-justified move, seen from one angle, may have problems seen from another. Be careful. Some decisions in chess can be made on abstract grounds, based on your beliefs around how the game works. Having a key strategic idea can be the path to a positional masterpiece.

10. Strategic Concepts

Forget about rules; like traffic lights in India, they are only suggestions you can adhere to if it seems sensible. Understanding repeated strategic patterns and concepts in chess has always been a part of the game. Understanding them intelligently can provide great shortcuts for you in your decision making.

11. Dynamic Strategic Concepts

The basics of attacking chess are described in *Attacking Manual 1* and *Grandmaster Preparation – Attack & Defence* at length. Here is a summary:

1. Include all the pieces in the attack
2. Keep the momentum; you need to play your attack with a sense of urgency.
3. Attacks tend to happen on one colour of squares.
4. Quantity beats quality; give up material to have your pieces of lower denomination control squares where it counts.
5. Attack the weakest square; this is where your opponent's defence is weakest. Please understand where the weaknesses are (see Chapter 6 as well).
6. Attacking the strongest square can at times be a strategy that makes your opponent's position collapse in a surprising fashion.
7. Evolution/Revolution – Build up your position before attacking; then build it up again.
8. The killzone – do not check your opponent's king away!

12. Openings

Work with a second if you can. Even if it is just your best friend.

Memorization requires an investment in time.

With openings being easier to learn, the element of surprise has increased in value.

Develop your own systems – and if you write a book about them, stop playing them!

Even if you do not know the theory, play the opening with conviction. But if you play very sharp lines, you need to really know your stuff inside out. Especially with Black.

Do not be deceived by a devastating blow to the line you believe in. Repair it.

13. Analyse Your Own Games

Take your time. Test your presumptions. Do not rush to finish the task; as with everything else you do, make it the most important thing in the world right now.

Give your machine time to think; use it intelligently. You are the master after all, not the servant.

And for the love of Caissa, analyse as many games as you can. Learn the game; it is very difficult, but has the power to enrich your life.

14. Training Methods

There are many ways to improve your chess. Use the ones that work for you; as many of them as you can. Here are 10 methods you can consider (OK, let's add a bonus option because you have been a good boy!).

1. Solve exercises and studies
2. Analyse games
3. Play out training positions
4. Work on your openings
5. Memorization
6. Read books
7. Work on your blindfold abilities
8. Play training games
9. Follow games online
10. Work with other people
11. Play strong tournaments

Appendix 1 – Nutrition

This is not the main way to improve your chess, but it can help. I have done a lot of research and experimented with various approaches. Finally, I have landed on a purely plant-based diet, with the following outcomes:

Weight loss. I was always struggling with weight. Now I weigh less than I did at the end of my teenage years, even if I am getting quite muscular.

Increased energy. Beyond belief.

Faster recovery from physical exercise. Goodbye injuries.

Better health. I have not been ill since I went plant-based. Certainly it will happen at some point, but so far so good.

Clear head.

No food cravings. Everyone tells me I must be very strong to resist a lot of food that I have no desire for anymore. You will not miss anything. Especially not feeling sluggish and tired, being overweight, injured and ill.

No deficits. Do not believe that you need calcium from milk (hip fractures are more frequent

in countries with high dairy consumption) or protein from meat. Do not eat the middleman (but do eat B12 capsules if you go vegan).

The nutrition advice promoted by drug companies and fast-food chains is not a recipe for health. Government advice is always based on “balance”. Tell me what a balanced heroin consumption is and we can take it from there...

Food close to its original state is simply healthier; concentrated food less so.

Transition should be all about adding exciting plant foods, until you feel ready for the switch. Very few people switch back and almost always for psychological and social reasons.

Appendix 2 – Advanced Engine Management

Nikos is the man!

Appendix 3 – Cheat Sheet

Elvis has left the building...



Grandmaster Jacob Aagaard won the British Championship at his first and only attempt. He is the only author to have won the Boleslavsky Medal as well as the ACP, Guardian, ECF and ChessCafe Book of the Year awards. He trains grandmasters from four continents and has helped players win school tournaments, national titles, as well as international opens, the US Championship, the World Cup, the Candidates and two Olympiad gold medals.

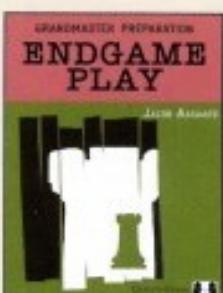
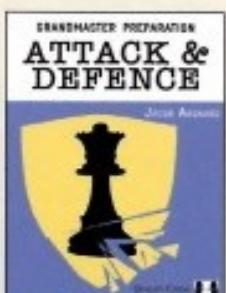
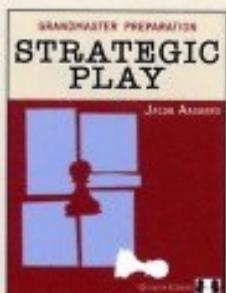
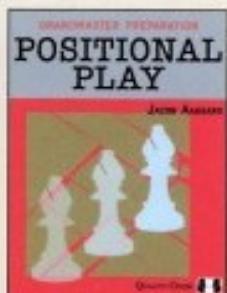
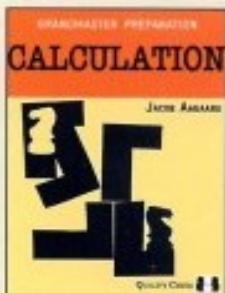


In **Thinking Inside the Box** Jacob Aagaard describes his chess improvement philosophy, developed over more than twenty years of thinking about one question: *How do we make better decisions at the chess board?*

As the final volume in the award-winning *Grandmaster Preparation* series, this book unifies the concepts of the previous five books and delves into such topics as:

- Chess psychology
- The four types of decisions we take at the board
- How to play simple positions
- What is calculation?
- How to analyse your games
- And many more

Thinking Inside the Box is the ultimate self-improvement guide, written for amateurs as well as world-class players.



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ISBN 978-1-907982-35-4



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