Endgame Play

By

Jacob Aagaard
Contents

Key to symbols used & Bibliography 4
Foreword by GM Dr Karsten Müller 5
Introduction 7
Acknowledgements 18

1 Pawn Endings 19
2 Simple Minor Piece Endings 37
3 Simple Rook Endings 51
4 Opposite-Coloured Bishops 79
5 Challenging Rook Endings 111
6 Endings with Queens 151
7 Complex Minor Piece Endings 171
8 Complex Rook Endings 199
9 Rook and Bishop Endings 235
10 Tactical Endings 261
11 Fortresses 285
12 Strategic Endings 323

Name Index 369
Key to symbols used

±  White is slightly better
⁺⁻  Black is slightly better
⁺  White is better
⁻  Black is better
+-  White has a decisive advantage
⁻⁺  Black has a decisive advantage
=  equality
=œ  with compensation
œ  with counterplay
œ°  unclear

?  a weak move
??  a blunder
!  a good move
!!  an excellent move
!?  a move worth considering
?!  a move of doubtful value
#  mate

œ    the side to move can hold a draw or avoid an immediate loss

Bibliography

The following is not an exhaustive list, but more like a summary of the sources I relied on the most while researching this project.

De la Villa: 100 Endgames You Must Know, New In Chess 2008
Hawkins: Amateur to IM, Mongoose Press 2012
Müller & Lamprecht: Fundamental Chess Endings, Gambit 2001
Müller & Lamprecht: Secrets of Pawn Endings, Gambit 2008

Periodicals

Chess Informant
Chess Monthly
Chess Today
New In Chess Magazine
The Week In Chess
Foreword

Solve your endgame problems with Endgame Play!

Every chess player faces the problem of how to study the endgame. Three possible approaches are to ignore the endgame completely, or to read a theoretical manual like Dvoretsky’s *Endgame Manual*, or to watch videos or DVDs. In my opinion the first option is completely out of the question, as studying the endgame will repay high dividends because your understanding of the whole game and the capabilities of every single piece will improve dramatically. The knowledge gained will remain valid forever and will not become outdated like opening analysis. I recommend the other two options of course. But they are not the complete answer. They are only the first step.

It is not enough to have read a solution in a book or seen it in a video clip. You can only do it, when you can do it. For example, to mate with bishop and knight against a lone king, you must be able to master it over the board with the clock ticking, and not by guessing moves while watching a video clip.

Solving exercises is the second step on the road to endgame mastery and this is Aagaard’s approach in his excellent *Endgame Play*. The third step is to play endgames well over the board under tournament conditions. Only then are you really mastering the endgame.

So I strongly believe in training by solving exercises and Jacob Aagaard is a real master here. I often train my own students using the books from his *Grandmaster Preparation* series, and they really help on the way to becoming an International Master or hopefully even a Grandmaster.

Sometimes I challenge my students to a solving competition but one other method I use is for me to play on the weak side of the exercises, so that my students not only have to find the right solution but can also beat me afterwards, just like in a real tournament game. Again, the best way to train is to work under tournament conditions. If you do not have a grandmaster on hand, you can of course play on the winning side against a computer program – that is, if you really want to train the hard way.

Aagaard always selects many fresh and challenging examples, and in *Endgame Play* he also manages to present fascinating positions which I had not seen before – and I have seen many endgames as this has been my main occupation for years.

Endgame study has two faces – theoretical endings sorted by material, and strategical endgames sorted by motifs. Jacob Aagaard deals with both in great depth and focuses on the practical
questions. He uses pawn endings to train the calculation of long variations and visualization. He investigates minor piece endings to illustrate the capabilities of the bishop and knight and their limitations, which is very important for every phase of the royal game.

Aagaard’s treatment of opposite-coloured bishop endings, which have a very special nature almost like a new game within chess, is very deep and he also looks at positions with more pieces, where the guideline from the middlegame comes to the forefront – opposite-coloured bishops favour the attacker and, unlike pure opposite-coloured bishop endings, have no strong drawish tendencies.

Then come rook endings, endings with queens, and endings with rook and bishop to complete the discussion of theoretical endings. I want to stress the presence of many endings with rook and bishop against rook and bishop. They are very important for the practical player, but are generally underrepresented in the literature.

Regarding strategical endings, Aagaard divides the material into the following categories: schematic thinking, weaknesses, domination, do not hurry, passed pawns, pawns in the endgame, freaky aspects including zugzwang, stalemate, fortresses and attack on the king.

Here Aagaard gives a good overview and again the proof of the pudding is in the eating: you should try really hard to solve the exercises. Only in this way will you gain a deeper understanding of the real meaning of the principles and guidelines and their exceptions. The real art of the royal game is not to know the guidelines by heart and repeat them every morning three times in front of the mirror. The real art is to develop an intuitive feeling for the exceptions and to be able to calculate and visualize variations well.

Especially impressive is Aagaard’s deep insight into the nature of fortresses and the way he deals with the very important rook endgames, where it is always difficult not to be too dry and technical but also not too complicated. He strikes this balance just right and also looks at all aspects of the endgame which are relevant for the practical player. No sophisticated studies – just the sort of questions you will have to deal with over the board.

With Endgame Play Jacob Aagaard has again proved convincingly that he is indeed one of the best chess authors of modern times.

GM Dr Karsten Müller
Hamburg, March 2014
Introduction

Take one point of view:

Unlike most other theory, the theory of endings can seem static to most. And in some ways it is. Obviously our understanding of chess endings is expanding. The last few years there have been astonishing discoveries in rook endgames with three pawns on the kingside and an a- or b-pawn. But for the practical player this only makes a theoretical difference. If you get this position maybe once or twice in your lifetime, and remember the complex new findings accurately, and find the correct moves when your opponent deviates – only then can you prosper from this knowledge.

Take another:

Studying and understanding theoretical endgames is not only useful for the times you get them in practical games. You cannot know in advance which endings you will get in your games, but with only limited time left when you reach the endgame (and typically a 30-seconds-per-move time control), knowing the limited amount of important theoretical endgames will significantly improve your results.

On top of this, you will significantly improve your understanding of chess by studying this limited pool of standard positions. There is really no reason not to do this.

While the first viewpoint is both pervasive and persuasive, I personally feel more drawn to the second. However, a more important point is that this book does not take a stand in either direction. Instead, it is built on the common ground which both of the above camps can agree on.

Real endgame knowledge

It can be a huge competitive advantage to have an intimate knowledge of the position you are playing. Fifty years ago, the endgame was something you understood, or something for which you had a great intuition. While there is obviously a lot of power connected to the concept of intuition, it is rather vague, as well as entirely useless if you have no plan for developing it. Then it becomes a magical entity, rather like talent: a bogus word that fails to describe anything at all, but sounds really insightful and can be used by commentators who do not fully understand what is going on (and we have all bluffed it like that at some point in our careers).

The modern approach to the endgame was to some extent founded in the following game:
Having struggled all the game and at times been in serious trouble, Fischer managed to escape to this bishop ending. Taimanov was initially optimistic, but his hopes were quickly crushed, as Fischer quickly and easily secured a draw.

76...\texttt{d6} 77.\texttt{d5} \texttt{c7} 78.\texttt{d4} \texttt{b4} 79.\texttt{c4} \texttt{a5} 80.\texttt{c3} \texttt{d8} 81.\texttt{b4} \texttt{f4} 82.\texttt{b5} \texttt{e4} 83.\texttt{d4} \texttt{c7} 84.\texttt{c5} \texttt{d3} 85.\texttt{c6} \texttt{c4} 86.\texttt{b6} \texttt{f4} 87.\texttt{a7} \texttt{c7} \frac{1}{2}\text{-}\frac{1}{2}

After the game Fischer told his opponent that the endgame had been recently analysed in a Russian periodical, and that he was astounded that Taimanov did not know this.

Back then this was a showcase for Fischer's genius and compulsive study of the game. Today we have hundreds of GMs that know these things by heart. One of them is Colin McNab, sitting next to me in the office. I have personally tried to find refuge in a difficult-to-win ending against Colin in a rapid game, only to get the sensation of playing against someone with access to tablebases.

Obviously there is a huge advantage in committing the most important endgames to memory. It is the professional thing to do; and the professional tool with which to do it is Mark Dvoretsky's masterpiece \textit{Dvoretsky's Endgame Manual}, where you will find the roughly 220 most important positions to remember, according to Mark.

For me the starting point of learning theoretical endgames is Mark's book (or for those wanting a slightly lighter approach, there is Jesus de la Villa's \textit{100 Endgames You Must Know}). I have created my own little ChessBase file with these positions for endless repetition. I use the training function and say the move aloud before it comes on the screen, in this way making a decision and not allowing my mind to pretend that it remembered something that seems much more familiar after it pops up on the board.

\textbf{Playing well in the endgame requires a lot of calculation!}

Endgame books are full of theoretical positions that you can learn and recurring themes that you can understand. This probably gives a slightly misleading picture. In reality, endgames will at some point become entirely concrete, just as middlegames usually do. At this point both theoretical knowledge and general understanding will help a lot, but they will not calculate the necessary variations for you. Just like with every other type of chess position, there are moves that "should not work" that do, and moves that "are obviously right" that aren't.

I am convinced that there is a deep underlying logic to chess, and I do believe that we are able to comprehend quite big chunks of it. However, I do not believe that we are by any means close enough to be able to navigate through complicated positions on general principles.
Endgames have the same tendency as the other phases of the game, in that they oscillate between manoeuvring and tactical confrontation. There are exceptions at both ends of the spectrum: games where the tactics never seem to stop and games where they are waiting in the wings, ready to go on stage, but are never called.

The following game could have been one of the latter ones, but Black at some point decided that his position was winning and calculated a line that won by force. Though it is not the most tactical game in the book, I really wanted to include it, as it is both interesting and highly instructive. There are some concrete moments where there is only one good move, and all the alternatives change the evaluation from drawn to lost or from winning to drawn.

Francisco Vallejo Pons – Magnus Carlsen
Bilbao 2012


This is a good moment for us to take a quick look at how things have developed. In my opinion the opening has been a total success for Black. The world number one has not only managed to equalize, but has also obtained the kind of position in which he excels. White's advantage of having two bishops does not count for a lot. What is more important is that Black has good squares for all his pieces, while also enjoying a slight lead in development.

11.Qb5 Qhd8 12.Qd2 h6 13.Qh4 g5 14.Qg3 a6

This is typical Carlsen. Like Karpov and Kramnik before him, he has certainly noticed that positions with opposite-coloured bishops are hard to play, which tends to magnify the difference in strength between the players. For this reason he provokes his opponent to take on d7. If Vallejo took on d7 to increase his drawing chances, he was to be gravely disappointed.

15.Qxd7

15.Qe2 to avoid ...Qh5 looks logical, but after 15...d5 Black is at least equal anyway. When the knight later lands on f4, White will be overjoyed to be able to take it.

15...Qxd7 16.f3

Also after 16.h4 Qh5! White has not managed to solve all of his problems. He would have to play 17.Qf1 g4 18.Qe3, but Black is in no rush and grabs space on the queenside with 18...b5. Certainly White is not much worse, but his practical problems are very real.

16...Qc8 17.Qb1 Qh5 18.Qf1 f5

Black opens up the position in order to create a target on c2.

19.exf5 Qxf5 20.Qe3 Qg6 21.Qd2 Qe6 22.b3

White has to get out of the pin, but this creates further weaknesses on the dark squares.

22...b5 23.Qb2 d5 24.Qe1 Qxg3! 25.hxg3 h5
Preventing g3-g4 and preparing to fix the kingside later on with ...h4.

26.c3

Up to this point Carlsen has played in his trademark style, improving his pieces gradually. It is clear that his manoeuvring has been superior to his opponent and that his position is preferable. At the same time, White has managed to set up a reasonable defensive position. It was of course possible for Black to further strengthen his position and manoeuvre around a bit, trying to get his opponent to make some concessions. But instead Carlsen decided that this was the moment when his advantage would be the greatest, and that the time was ripe to change from manoeuvring to tactics.

26...d4!!

I am not sure what Carlsen believed the objective evaluation of this move was – or if he even cared. I am sure that he believed that it was the natural way to play, now that it was not so easy to improve his position by other means.

27.cxd4 exd4 28.c2† d5 30.b4† d6

All of these moves were forced. Black is now threatening ...a5 and ...c2†. White has serious problems to answer.

31.c1?

A very natural-looking move, but unfortunately it does not offer a lot of resistance. The real question is if it is even possible for White to hold the position at this point! We will return to this in a moment, but if you feel ready to start your endgame training already now, this position is a good place to start.

31...xc1! 32.xc1 h4!

It is clear that Carlsen had calculated what comes to perfection, and for this reason chose the forced approach. Had this not been the case, he would surely have played 32...a5 33.c2 d5 when White would have been unable to hold the game as well.

33.xh4

33.d2 hgx3 34.xa6 loses immediately to 34...g4! when g2 falls.

33...xh4 34.xa6

Forced, as all pawn endings are hopeless, now that a super highway has been built from d6 to g3.
This is another clear indication that Carlsen had worked out a forced win, with no doubt in his mind that it worked. Otherwise he would have spent a minute or so working out that 34...\textit{e}5, with a direct attack, on the g2-pawn would have won easily.

35.\textit{b}4

The only defensive try. I do not believe that Vallejo believed he would make the draw at this point. However, if I was White, with my limited abilities, I would have failed to see how Black was winning at this point.

35...\textit{f}1 36.\textit{d}2 \textit{xg}2 37.\textit{e}2

The key move. The black bishop would have been immobile after 37...h3? 38.\textit{f}2, when the h-pawn loses all of its potential. White plays a2-a4 and draws easily.

38.a4 \textit{f}5 39.axb5 d3 40.\textit{e}3 h3 41.\textit{xd}3 \textit{xd}3 0–1

31.\textit{d}1! was subsequently suggested as the way for White to play. Indeed, it presents Black with a lot of obstacles.

34...\textit{d}3

a) The main idea is seen after:

31...a5 32.\textit{xd}4\dagger \textit{e}5

White has a surprising escape with a thunderous stroke:

33.\textit{d}8!!

This seems to work, though the drawing margin is probably smaller than most commentators believed:
33...\(\text{Exd8}\) 34.\(\text{Qc6}\)† \(\text{Qd5}\)!

The most challenging.

35.\(\text{Qxd8}\) h4

White seems to be out of luck. If 36.gxh4 gxh4 37.\(\text{Qc3}\) Black wins on the spot with 37...\(\text{h5}\)!, not only winning his pawn back, but also claiming the g2-pawn.

36.\(\text{Qc3}\)!

Luckily White has a pawn to spare, which is returned immediately in order to make it to the kingside with the king.

36...hxg3 37.\(\text{Qd2}\)

I would not be surprised if Black had a win in this position, but it was not for me to find it. The main line I have looked at draws by a fortress after:

37...\(\text{a4}\) 38.bxa4 bxa4 39.a3 \(\text{Qc4}\) 40.\(\text{Qe6}\) \(\text{Qb3}\) 41.\(\text{Qe3}\) \(\text{Qxa3}\)

42.\(\text{Qc5}\) \(\text{Qb4}\) 43.\(\text{Qxa4}\) \(\text{Qxa4}\) 44.\(\text{Qf4}\) g4 45.\(\text{Qd4}\) \(\text{Qb5}\) 46.\(\text{Qe5}\) \(\text{Qd3}\) 47.\(\text{f5}\) \(\text{Qc6}\) 48.\(\text{Qf4}\) \(\text{Qe2}\) 49.\(\text{Qxg3}\) \(\text{Qd6}\) 50.\(\text{Qf4}\) \(\text{Qe7}\) 51.\(\text{Qg5}\)

b) More challenging is therefore:

31...\(\text{Qe5}\)!

32.\(\text{Qc1}\)!!

This is the really surprising resource to me. You cannot feel your way to it being an advantage to push the opponent’s king closer before you exchange rooks and leave your own king on the back rank. But if you view the game horizontally instead of vertically, you will see that the black king in reality has been pushed away from the queenside and that it matters far less that it is now placed on the 5th rank than the 6th.

It looks tempting to flick in a check to push the black king backwards, but after 32.\(\text{Qe1}\)†? \(\text{Qf6}\) White is in trouble. Giving another check on d5 would leave c2 dangerously unprotected and get the knight into trouble.
Introduction

It feels as though Black is winning, as after 33...e2 a5 34...d5† f7 White is in grave danger:

Black would love to be able to play ...d3 and ...c6-e5-d4-e3, so White has to try 35.e7† f8 36.c7. However, Black wins after 36...e8† with decisive penetration on the second rank.

32...xc1 33.xc1 d6!

The only move that creates problems for White.

34.xa6!

White needs to grab the pawn while he can. Not because he needs material leverage, but because it brings him one step closer to eliminating all the pawns on the queenside. 34.d2? is too passive. Black wins with accurate play: 34...a5 35.d3 f5 (The pawn ending after 35...xd3? is only a draw.) 36.e2 a4!

If White does nothing, say with 37.d2, he will face a rapid deterioration of his position: 37...h4 38.gxh4 gxh4 39.b4 g6 40.e2 a3! and White cannot in the long run defend against the threats of ...b1 and ...d6-e5-f4-g3xg2.

And after 37.bxa4 bxa4 38.a3 d5 39.d2 White is hanging on by a thread. Careful manoeuvring shows that White is unable to set up a fortress: 39.g6 40.f4 g4 41.e2 e4 42.b2 xg2 43.xa4 f3† 44.f2 e4 45.b2 f5 46.e2 c8 47.f2 a6 48.a4 b5 49.b2 e4 50.a4 a6 51.d1 f5 52.b2 h4 53.gxh4 xf4 Black wins.

34...d3 35.b4 f1 36.c2

If White does nothing, say with 37.d2, he will face a rapid deterioration of his position: 37...h4 38.gxh4 gxh4 39.b4 g6 40.e2 a3! and White cannot in the long run defend against the threats of ...b1 and ...d6-e5-f4-g3xg2.

And after 37.bxa4 bxa4 38.a3 d5 39.d2 White is hanging on by a thread. Careful manoeuvring shows that White is unable to set up a fortress: 39.g6 40.f4 g4 41.e2 e4 42.b2 xg2 43.xa4 f3† 44.f2 e4 45.b2 f5 46.e2 c8 47.f2 a6 48.a4 b5 49.b2 e4 50.a4 a6 51.d1 f5 52.b2 h4 53.gxh4 xf4 Black wins.

34...d3 35.b4 f1 36.c2
38. \( \text{d2}! \)

A recurring theme in this ending. White cannot afford to open the e5-g3 route for the black king.

After 38.\( \text{gxh4? gxh4 39.\text{d2 b4 40.\text{c2 c5 41.e1 b6}} \) White has no defence against \( \text{xg2}. \)

38...\( \text{c6}! \)

38...\( \text{b4 39.\text{d3!}} \) is also an immediate draw.

39.\( \text{gxh4! gxh4 40.\text{d3 xg2 41.e2}} \)

White draws. Not by a great margin, but half a point is half a point.

**This is what this book is about**

We do not need two versions of *Dvoretsky's Endgame Manual* and *100 Endgames You Must Know*. These books have been written and if endgame theory moves, these books can move with it. So far Dvoretsky has published three editions of his book and I am sure a fourth will be available as soon as stock of the third edition runs out.

What I wanted to do with this book was to offer training material for those wanting to train their endgame ability and calculation at the same time. Our feeling for the mechanics and geometry of endgames can always be expanded and working through the exercises in this book will help anyone to do just that.

**The structure of this book**

The main purpose in structuring the book the way I have done has not been to be scientific but educational. For this reason you will see that some concepts have been stretched a bit. You will find endings with rook vs. bishop in both the chapters on rook endings and bishop endings; the deciding factor being which piece is excelling. You will also find a rook ending in the chapter on queens; simply because five exercises are taken from the analysis of one game and only four of them include queens. This is not an encyclopaedia where the reader needs to be able to find specific games, but a training book designed to be read from cover to cover. I appreciate that not everyone will find everything a perfect fit to where they are right now on their journey towards immortality. For this reason the chapters are increasing in difficulty, starting off with some simpler positions, while ending in material relevant to strong grandmasters. As this book is as dense as the others in this series, it could be argued that there are actually two books hidden on these pages; one for what I like to call ambitious amateurs, because it hopefully sounds as respectful as I want it to, and one for professionals.

**Forced and less forced solutions**

As this is an endgame book, it does not make sense to follow the constraints of a classical puzzle book with move-move-move-wins and nothing left to chance. There are plenty of positions that do follow this pattern, but I have also included a number of exercises that are less like studies and more like positions you would get in a game. You will find a few positions with two solutions; you will find positions where the winning idea can be delayed for a while; and you will find positions with one immaculate solution and one that barely scrapes by. Finally, there will be positions that require you to
understand a longer-term goal that must be achieved, rather than the exact moves to get there.

Often when you see books with such 'flawed' solutions, you will think that the author was lazy. I hope you will take my word for this not being the case in this instance. I have put more work into this book than any other I have ever written; and I have tried hard to make the explanations of the solutions as clear as possible. Endgames are different from the middlegame in many ways; not least because the pawn structure to a great extent has been clarified (it is rare to see an endgame where you do not know if the position will be open or closed; we tend to think of such positions as queenless middlegames) and the pieces can roam the board for a long time without changing the properties of the position.

One small point about doing and being

There is one observation I noticed about the endgame almost twenty years ago. It was how some players found it almost painful to do nothing in inferior positions. Already then, I knew that if I had an advantage in an endgame, but did not know how to make progress, I could simply shuffle my pieces around for a few moves and put the psychological pressure on my opponent. If he was inexperienced with this scenario, it was possible that he would try to force matters. Quite often this attempt to get out of his unpleasantness would be a leap from the frying pan into the fire. Obviously this mainly happens with younger opponents who have not yet learned patience the way you do when you lose most of your energy reserves. It is therefore not a surprise when you see other experienced players putting their young opponents under this form of pressure — nor is it surprising when you see them crack!

49...f5??
This is definitely a "doing" move. Black is driving the white king up the park.

50.\texttt{e}5 \texttt{e}3+ 51.\texttt{f}6
Already mate is threatened.

51...\texttt{g}8
51...\texttt{e}8 was maybe what Wang Hao was planning, but this loses to 52.\texttt{e}7+ and 53.\texttt{d}5.
This displays another advantage of the "being" defensive strategy. It excludes calculation at the point in the day where you have lost the ability to calculate.

52.\texttt{g}7+
A step in the wrong direction.

52.\texttt{c}8†! \texttt{h}7 53.\texttt{f}7† would show the power of the white king. His rook will now manoeuvre in the direction of the h-file, forcing Black
to give up his pawns to delay his defeat. For example: 53...\texttt{E}e2 54.\texttt{E}c3 \texttt{E}h2 55.\texttt{E}xe6 and the d-pawn wins the game.

52...\texttt{E}f8 53.\texttt{E}h7 \texttt{G}g8

54.\texttt{E}h1?  
There was still time to repeat the position and win the game as on the previous move.

54.\texttt{E}e7? \texttt{E}e4 with a quick draw is wrong.

But White could have played; 54.\texttt{E}g7†! with the intention of repeating if the king went to \texttt{f}8 and to win like the game after 54...\texttt{E}h8 55.\texttt{E}g1 \texttt{E}h7 56.\texttt{E}f7.

54...\texttt{E}e4 55.\texttt{E}d1 \texttt{E}h7??

Ironically, having saved the game again, Wang Hao decides to 'learn from his mistake' and do nothing, only to walk straight into a mate in three.

55...\texttt{E}xf4 drew easily, and 55...\texttt{E}f8 was also fine.

Only two days ago, something quite similar happened in an important game in the Candidates tournament. Karjakin had to win the game as well as outscore Anand in the last round to steal the first place and World Championship match away from him. He managed to get a slight technical advantage and played reasonably well until this point.

\textbf{Sergey Karjakin – Viswanathan Anand}

\begin{center}
\textit{Khanty-Mansiysk 2014}
\end{center}
It is dubious whether White can win this position with best play from both sides. My feeling is that Black probably should hold, but it is certainly close. If both players had three connected pawns from the f- to h-file, it would be a draw, but here the e5-pawn is potentially weak.

However, Karjakin thought he was winning after the next move and lost all of his advantage:

48.g4?

Anand was surprised to see this move and at first thought that he was lost, but quickly found out that he was not in danger and simply had gained a passed pawn at no cost. The next few moves followed Karjakin’s main line, but then he realized the problem.

48...h4 49.g1 c5 50.d2 c2 51.e2 a2 52.h3 g6

The game ended in a draw on move 91, where White was never close to causing Black problems.

The main point of all of this is the following line 53.xg5 xd2 54.xd2 xg5 55.e3

Karjakin had only looked at 55...h3?? 56.f2 h4 57.g1 and White wins.

Instead after something modest like 55...f6! White cannot make progress, and a draw can be agreed immediately.
Acknowledgements

I would like to thank Karsten Müller for offering to write the foreword for this book. He was top of my list, so the joy was almost boundless when he volunteered without having to be asked. Karsten has been very supportive of my work over the years and is one of the leading endgame theoreticians of our age. His book on pawn endings is one of my all-time favourites and I recommend it to everyone who is at all interested in this subject, just as I would recommend all of Karsten’s other books and DVDs warmly, as well as his masterpiece Fundamental Chess Endings.

Karsten also volunteered to check this book and did so with typical dedication. He found a lot of nice details in many positions, as well as convincing me that a few exercises did not work. If any mistakes remain, obviously it is the fault of the proofreader blessed with a first view, and not the hard-working, self-sacrificing author. However, should you find a flaw somewhere, I would be happy if you told me about it all the same.

I would also like to thank John Shaw. Today we have been business partners for exactly ten years. It is quite fitting that I send what I consider to be my finest work thus far to the printer today, while being able to put in these words. Tomorrow we will open the champagne for another decade of Quality Chess.

I hope that, after having parted with your hard-earned cash, you will enjoy this book and find it useful. As always with my books, paying for it is a little part of the challenge. Improvement in chess only comes through persistent effort. My job is to point the right way; you need to walk it.

Jacob Aagaard
Glasgow, March 31st 2014
We know that in pawn endings, outside passed pawns are good and doubled pawns are bad. But the active king is a powerful piece that can help Black hold the draw with accurate play.
I do not want to pretend that I can add anything significant to your understanding of pawn endings. If you want to know more about pawn endings there is a fantastic book you should read, Frank Lamprecht and Karsten Müller’s *Secrets of Pawn Endings*, which is one of my all-time favourite chess books.

My only observation is that a great number of pawn endings are misplayed if they get slightly complicated — even by grandmasters. It is not obvious what the reason for this is, but it could be because pawn endings are primarily about calculation. Most of us find calculation impossible even at the best of times, many grandmasters included.

*Ray Robson – Alexander Ivanov*

Saint Louis 2011

1.e4 e5 2.d4 c6 3.b5 a6 4.h3 f6 5.d4 d5 6.g5 a5 7.xe7 b5 8.xc6 dxc6 9.dxe5 fxe5 10.d5 c6 11.c3 c3 0–0 12.d3 e7 13.h4 h5 14.f4 c5 15.f2 c4 16.c xh5 c3 17.e2 g6 18.f4 c4 19.xd1 c3 20.xd8 xh5 21.a3 b4 22.f4 xh4 23.f3 xg5 24.xg6 xg6

The pawn ending with an extra pawn on the kingside is obviously favourable for White. But as the black king comes to d5, it is not at all clear that White should win.

25...xd3 26.cxd3 g6 27.f4 f5 28.e2 e6 29.e3 d5 30.d4 g6 31.e3 d3?

31.b4! would have won as in the game, while 30...a5! should draw as in the lines below.

```
1.e4 e5 2.d4 c6 3.b5 a6 4.h3 f6 5.d4 d5 6.g5 a5 7.xe7 b5 8.xc6 dxc6 9.dxe5 fxe5 10.d5 c6 11.c3 0–0 12.d3 e7 13.h4 h5 14.f4 c5 15.f2 c4 16.c xh5 c3 17.e2 g6 18.f4 c4 19.xd1 c3 20.xd8 xh5 21.a3 b4 22.f4 xh4 23.f3 xg5 24.xg6 xg6
```

White is now ready to move his pawns, but he has wasted a tempo, giving Black the chance to draw with an only move.

31...h5?

This is the final error. Black needs the ...g5 punch.

31...a5! was the best move, preventing the b2-b4 move which squeezes the black queenside.

```
1.e4 e5 2.d4 c6 3.b5 a6 4.h3 f6 5.d4 d5 6.g5 a5 7.xe7 b5 8.xc6 dxc6 9.dxe5 fxe5 10.d5 c6 11.c3 0–0 12.d3 e7 13.h4 h5 14.f4 c5 15.f2 c4 16.c xh5 c3 17.e2 g6 18.f4 c4 19.xd1 c3 20.xd8 xh5 21.a3 b4 22.f4 xh4 23.f3 xg5 24.xg6 xg6
```

25.e3!
There are two natural continuations to consider at this point.

a) 32.g4 c5! 33.dxc5 g5!? I really like this move, but I should say that it also looks as if 33...xdc5 draws.

34.c6! b6 35.e3 a4 36.f3 White has established a nice trap, but Black can hold with stunning accuracy.

36...b5!

Black should avoid: 36...d4? 37.g3 e4 38.fxg5 hxg5 White wins by creating a distant passed pawn with 39.e6! fxe6 40.h4! and the g-pawn will win the game.

37.a3 White has different tries here, but the key point stays more or less the same. Black creates a passed pawn on the queenside and saves the game.

37...xc6 38.fxg5 hxg5 39.e4 c5 40.f5 d5 41.xg5 c5 42.e6 fxe6 43.f4

43...b4 44.g5 c4 45.g6 c3! Black draws after further complications.

b) 32.b3!

This appears to be the most testing, but Black just makes it once again:

32...c5 33.dxc5 exc5 34.e4 c6

35.f5 The most critical.

In the event of 35.g4 e7 36.f5 g5 37.d5 c6† 38.e5 c7 White cannot break through.

35...fxg5† 36.xf5 d5 37.g4 b5 38.h4 c5 39.h5 c4 40.g5 c3 41.gxh6 c2 42.h7 c1= 43.h8= 44.f1= 44.g5 e4!

White still has chances in this ending, but my feeling is that it should be a draw with accurate play. For example:

45.a8† xe5 46.e8† d6 47.e3 b4 48.h6 g2† 49.h4 c2±
32.g4

This looks natural, and is good enough to win. However, there is an even more convincing continuation:

32.b4! b6

32...a6 33.g4 hxg4 34.hxg4 e6 35.e4 e7 (35...d7 36.f5 is even worse) 36.f5 g5 37.a3!

A strong waiting move, forcing Black to make a weakness. 37...b6 38.d5! White wins.

33.g4 hxg4 34.hxg4

Black is in zugzwang.

34...c5 35.dxc5 bxc5 36.bxc5 xc5 37.e4 c6 38.f5 d7 39.d5

White is obviously winning.

32...hxg4 33.hxg4 a5 34.f5 g5

34...gx5 35.gxf5 c5 was the toughest defence. The key idea is that 36.e6 fxe6 37.f6 c4† sidetracks the white king.

35.b3!
This is the most flexible, but White is also winning after 35.a4? b6 36.b3! c5 37.e6 fxe6 38.f6 d6 39.dxc5† bxc5 40.e4 c6 41.f7 e7 42.e5 xf7 43.d6 and so on.

35...b6 36.a3!
Again, the most flexible.

36...c5
36...b5 37.e6 fxe6 38.f6 d6 39.e4 White wins.

37.e6! fxе6 38.f6 d6 39.dxc5† bxc5 40.e4 d7
40...c6 loses to 41.a4 c4 42.bxc4 c5 43.f7 e7 44.e5 xf7 45.d6 and White wins.

41.e5
1–0

Actually, this endgame was a bit out of character from those I had looked at while preparing this chapter. Most of them were simpler, but still surprisingly easy to get wrong. The main reason is, of course, that we rarely have a lot of time left when we get to the stage where all the pieces have left the board. Here, we have two grandmasters in combat in the Spanish league.

Alexis Cabrera – David Anton Guijarro
Torana 2011

At this point, Black had the chance to win the game by simple means. 70...e7 (or to e8; chess is funny like that) and White cannot promote his pawn. He therefore has to go back to f4 and collect the black pawn before it queens. After this, there is no way for him to prevent Black from taking the b5-pawn, then the e5-pawn and finally the h5-pawn, before queening his own h-pawn. There are no variations to speak of, no problems to mention. Yet Black had probably not looked much at pawn endings in the months/years prior to this game, and was not prepared to make this sort of decision with little time on the clock.

Black played 70...f3? and had absolutely no advantage in the resulting queen ending. It was drawn on move 103, when only the kings remained on the board.

Our favourite pawn endgame

The following pawn endgame is surprisingly important for the fortress section, so we will just have a quick look here. White wins easily.
Here is one example of a fortress breaking in this way.

1.\textit{d}5 \textit{e}7 2.\textit{e}5 \textit{f}7 3.\textit{d}6 \textit{f}8 4.\textit{e}6 \textit{g}7 5.\textit{e}7 \textit{g}8 6.\textit{f}6 \textit{h}7 7.\textit{f}7 \textit{h}8 8.\textit{x}g6 \textit{g}8 9.\textit{h}6 \textit{h}8 10.g6 \textit{g}8 11.g7 \textit{f}7 12.\textit{h}7 and White wins.

The short collection of exercises I have gathered for you here are, in most cases, not too difficult, though strong players got a lot of them wrong. I hope you will fare better, especially when you are surprised by a pawn ending in a tournament...
Chapter 1 – Pawn Endings

**Millward – Quinn, London 2010**

1. White to move.

**Vallejo Pons – Guliyev, Germany 2008**

4. Black to move.

**Zhou Jianchao – Lu Shanglei, Xinghua 2012**

2. White to move.

**Salgado Lopez – Inarkiev, Khanty-M. 2011**

5. Black to move.

**Kazhgaleyev – Ghaem Maghami, Jakarta 2011**

3. White to move.

**Delchev – Frois, Cappelle la Grande 2011**

6. Black to move.

A simple trap, which White fell for. 43.gxf4 e4!! 44.fxe4 ♕xe4 45.♕c2 ♕f5 and White resigned, unable to deal with the two black passed pawns. 0–1

The draw is simple after 43.e4!! ♕c5 44.gxf4 exf4 45.♕c2 when neither player can improve his position.

2. Zhou Jianchao – Lu Shanglei, Xinghua 2012

96...♕f5! Black is keeping the opposition. 97.♕g7 97.f3 ♕f4 and White will have to make the draw. 97...♕g5 98.♕h7 ♕h5! 99.♕g8 99.f4 is stalemate. 99...♕g6! Once again, keeping the opposition. 100.♕f8 ♕f6 101.♕e8 ♕e6 102.♕f8 ♕f6 103.♕g8 ♕g6 104.♕h8 ♕h6 ½–½


A question of opposition. White has to move the f-pawn forward by the right number of squares. 44.f3? leads to a draw after 44...♕e8 45.f4 ♕f6 46.f5 ♕xf5 47.gxf5 ♕g8 48.♕e7 ♕g7. It is White who must be careful and not advance the f-pawn.

44.f4! ♕g8 45.♕e7 ♕g7 46.f5 ♕xf5 47.gxf5 Black is in zugzwang. 47...f6 47...♕g8 48.f6 and White wins. 48.♕e6 ♕g8 49.♕xf6 1–0

4. Francisco Vallejo Pons – Namig Guliyev, Germany 2008

In pawn endings, it is important to control the opponent’s king. White misplayed this winning position, but could have won with: 41.g4! ♕g5 42.♕g3 a4 43.a3 ♕f6 44.♕f4 and White wins easily.

Instead the game was drawn after: 41.♕f3? ♕g5 42.♕e4 ♕g4 43.♕xd4 ♕xg3 White won the a-pawn in the ensuing queen ending but it was not enough. The game was drawn on move 60. ½–½

5. Ivan Salgado Lopez – Ernesto Inarkiev, Khanty-Mansiysk (1.2) 2011

Comparison is often a very useful tool when we are struggling to calculate variations to the end. After all, the aim is not to break any records but to make a good decision about the next move. 86...♕xc6? After this, White ends up with the wrong passed pawn. 86...♕e4 87.♕b6 f4 88.c6 ♕f3 89.c7 ♕f2 90.c8=♕ ♕f1=♕ 91.♕xa6 ♕f8 Black draws this one. 92.b5 ♕d6 93.♕a7 ♕c7 94.♕a8 ♕d8 95.b7 ♕d7 96.b6 ♕d6 97.a7 ♕c7 98.b7 ♕a5 99.♕a6 ♕c7 100.♕a8 ♕d8 101.♕b7 ♕d7 ½–½

86...♕xa6! ♕e3 87.b5 was the winning line. The c-pawn was clearly more attractive than the b-pawn in the game. 87...f4 88.bxc6 ♕f3 89.c7 ♕f2 90.c8=♕ ♕f1=♕ 91.♕a7 There is little Black can do. For example 91...♕xd4 92.c6 and White wins quite quickly due to the blocking check on b6. 92...♕c4 93.♕a6 ♕c3 94.♕b7 is one line which illustrates this.

6. Aleksander Delchev – Antonio Frois, Cappelle la Grande 2011

Standard opposition. Black will have to take on g5 sooner or later, but he needs to be correctly positioned when doing so. 66...hxg5 67.♕xg5 Zugzwang. 67...♕h7 68.♕f6 ♕h6 69.♕xf7 ♕xh5 70.♕e6 ♕g6 71.♕d6 ♕f7 72.♕c5 1–0

66...♕h7! would have held the game. After 67.♕f6 hxg5 68.♕xg5 ♕g7 it is White who is in zugzwang. Black wins a vital tempo. 69.♕f5 ♕h6 70.♕f6 ♕xh5 71.♕xf7 ♕g4 and Black reaches the b2-pawn in time.
Chapter 1 – Pawn Endings

Kiewra – Khachiyan, Los Angeles 2011

Mamedyarov – Inarkiev, Rogaska Slatina 2011

Berbatov – Chatterjee, Khanty-Mansiysk 2010

Berry – Rendle, Bunratty 2012

Jaracz – Lokander, Pardubice 2011
39...h4?? Short on time, the grandmaster blunders. 40.\textit{\textbf{d}d3} \textit{\textbf{d}d5} 41.g5 Black resigned. 41...\textit{\textbf{e}c5} 42.f5! and White wins. 1–0
39...hxg4 40.hxg4 \textit{\textbf{d}d5} 41.\textit{\textbf{d}d3} \textit{\textbf{c}c5} draws by a tempo. 42.f5 gx\textit{\textbf{f}5} 43.\textit{\textbf{g}gf5} \textit{\textbf{d}d5} 44.\textit{\textbf{f}f6} \textit{\textbf{e}e6} 45.\textit{\textbf{x}x}d4 \textit{\textbf{x}xf6} 46.\textit{\textbf{c}c5} \textit{\textbf{e}e6} 47.\textit{\textbf{x}xb5} \textit{\textbf{d}d7} 48.\textit{\textbf{b}b6} \textit{\textbf{c}c8} and so on.

8. Kiprian Berbatov – Debaraj Chatterjee, Khanty-Mansiysk (ol) 2010
Black is a pawn up, but was probably disappointed that it would have minimal effect – after all, the pawn is doubled. However, his last move, 31...b6, was overambitious. After 31...a4 a draw would have been achieved. We often see this phenomenon in endgames, that the player who had the advantage loses all feeling of danger. 32.a4! After this brilliant move, opening the queenside, Black does not need his sense of danger anymore. The game is decided. 32...\textit{\textbf{b}xa4} Black is also toast after 32...\textit{\textbf{x}xb4} 33.\textit{\textbf{x}xb4} \textit{\textbf{e}e7} 36.\textit{\textbf{b}b5} \textit{\textbf{e}e6} 37.\textit{\textbf{x}xb6} \textit{\textbf{f}f5} 38.\textit{\textbf{c}c5} \textit{\textbf{e}e4} 39.\textit{\textbf{f}f3}! 33.\textit{\textbf{b}xa5} \textit{\textbf{b}xa5} 34.\textit{\textbf{b}b2} Black’s extra pawns are rather embarrassing! 34...\textit{\textbf{f}f8} 35.\textit{\textbf{a}a3} \textit{\textbf{c}c7} 36.\textit{\textbf{x}xa4} \textit{\textbf{d}d7} 37.\textit{\textbf{x}xa5} \textit{\textbf{c}c6} 38.\textit{\textbf{h}h4} \textit{\textbf{f}f6} 39.\textit{\textbf{g}g4} \textit{\textbf{g}g5} 40.\textit{\textbf{h}xg5} Black resigned. He will be in zugzwang very soon. 1–0

The amateur, playing Black, is close to making a draw with his much higher rated opponent – overcoming a difference of 531 points. Unfortunately for him, he falls on his face at the finish line. 56...\textit{\textbf{g}5} 57.hx\textit{\textbf{g}5} \textit{\textbf{f}xf5} 58.\textit{\textbf{e}e5} 1–0
56...\textit{\textbf{d}d6}? is the same story. 57.\textit{\textbf{d}d4} \textit{\textbf{e}e6} 58.\textit{\textbf{c}c5}! White wins. Either he gets to d5 with the king, or he wins after 58...\textit{\textbf{g}g5} 59.hx\textit{\textbf{g}5} \textit{\textbf{f}xf5} 60.\textit{\textbf{d}d5} and so on.
56...\textit{\textbf{c}c6}! 57.\textit{\textbf{d}d4} \textit{\textbf{d}d6} was the drawing method. The key idea is, of course, that it will be White who is in zugzwang after 58.\textit{\textbf{c}c5}! \textit{\textbf{c}c6}, when 59.\textit{\textbf{c}c4} \textit{\textbf{g}5}! is a draw on account of 60.hx\textit{\textbf{g}5} \textit{\textbf{f}xf5} 61.\textit{\textbf{d}d4} \textit{\textbf{h}4} 62.\textit{\textbf{e}e4} \textit{\textbf{g}4} 63.\textit{\textbf{f}f4} \textit{\textbf{h}3}.

10. Shakhriyar Mamedyarov – Ernesto Inarkiev, Rogaska Slatina 2011
White wins by simple opposition. 50.\textit{\textbf{b}b4} \textit{\textbf{e}e4} 50...\textit{\textbf{e}e3} does not change a single move that White will play. If 50...\textit{\textbf{e}e5} 51.\textit{\textbf{c}c5} and White wins. 51.\textit{\textbf{c}c4}! The key move, securing the opposition. 51.\textit{\textbf{c}c5} \textit{\textbf{d}d3} is an immediate draw. 51...\textit{\textbf{e}e3} 52.\textit{\textbf{b}b4} \textit{\textbf{d}d2} 53.\textit{\textbf{b}b6}! ax\textit{\textbf{b}b6} 54.\textit{\textbf{b}b5}! White wins easily. 1–0

47.\textit{\textbf{f}f5}! This temporary pawn sacrifice is quite logical. 47...\textit{\textbf{e}e4}?! \textit{\textbf{b}b2} 48.\textit{\textbf{e}e5} \textit{\textbf{x}xa3} 49.\textit{\textbf{f}f6} \textit{\textbf{xb}b4} 50.\textit{\textbf{x}x}g6 \textit{\textbf{a}a5} 51.\textit{\textbf{f}f5} \textit{\textbf{a}a4} 52.\textit{\textbf{f}f6} \textit{\textbf{a}a3} 53.\textit{\textbf{f}f7} \textit{\textbf{a}a2} 54.\textit{\textbf{f}f8}=\\textit{\textbf{a}a1}=\\textit{\textbf{a}a1} 55.\textit{\textbf{h}x}h5+ also gives White sensational winning chances, but would be wrong all the same. 47...\textit{\textbf{g}gf5} 48.\textit{\textbf{f}f4} \textit{\textbf{b}b3} 49.\textit{\textbf{f}f5}?! This is an unnecessary loss of tempo. Why not create a passed pawn immediately? 49.\textit{\textbf{g}g5}! would have won: 49...\textit{\textbf{a}a3} 50.\textit{\textbf{x}x}h5 \textit{\textbf{x}xb4} 51.\textit{\textbf{g}g5}! The h-pawn is first; White wins. 49...\textit{\textbf{a}a3} 50.\textit{\textbf{f}f4} \textit{\textbf{b}b4} 51.\textit{\textbf{g}g6} \textit{\textbf{a}a5} 52.\textit{\textbf{f}f5} \textit{\textbf{a}a4} 53.\textit{\textbf{f}f6} \textit{\textbf{a}a3} 54.\textit{\textbf{f}f7} \textit{\textbf{a}a2} 55.\textit{\textbf{f}f8}=\\textit{\textbf{a}a1}=\\textit{\textbf{a}a1} 56.\textit{\textbf{h}x}h5 \textit{\textbf{d}d1} \textit{\textbf{f}f} 1/2–1/2

White wins by creating a strong passed pawn on the h-file. 43. f5! g6 44. f6!! This is the most convincing. White has another win available with 44. fxg6 fxg6 45. f4! a5 46. h5!! gxh5 47. f5 b4 48. axb4 axb4 49. f6 b3 50. f7 b2 51. f8= w b1=w 52. wb6+ c4 53. c6, but to me it is more complicated and harder to evaluate. 44. f4 a5 45. fxg6 just transposes to this idea. 44... a5 45. xf7 gxf5 46. h5 b3 47. h6 b2 48. h7 b1=w 49. d6+ c4 50. c6, but to me it is more complicated and harder to evaluate. 44. f4 a5 45. xf7 gxf5 46. h5 b3 47. h6 b2 48. h7 b1=w 50. d6+ c4 52. d6+ g2 53. f7 b7+ 54. f6 b2+ 55. e6 White is ready to advance the c-pawn and claim the full point. 51. d6+ c4 52. e6+ White wins. 52... xe6 53. e6+ 1–0


61... h4! 61... xa4? 62. f5 h4 63. e4! gxf5+ 64. f3 and White wins. 62. e4 c4! 62... xa4? 63. f5 gxf5+ 64. f3! still wins. 63. f5 f6+ 64. e4 still wins. 63. f5 f6+ 64. e4 f6 65. f3 h3 After 65... gxf5+ 66. xh4 h3 67. g6 f6 68. g7+ h1= w 68... g8= w h5 69. h6 h4 70. g4 h3 71. h4 h1= w 50... b7= w f4 51. c6= w e5 52. e6+ White wins. 52... xe6 53. e6+ White wins. 52... xe6 53. e6+ 1–0


Giri impressively won for this pawn ending from a winning rook endgame. 46. f3! White keeps his options open and gains time to improve his king position. The game would have ended in a draw after 46. gxh5 e7, based on the following line: 47. e3 f8 48. d4 g7 49. xc4 e6 50. d5 xh5 51. e6 xh4 52. e7 g5 53. xc4 f3 54. f5 e3! 55. e6 White wins. 55... fxe6 56. f5 h5! Now it is the right time to win the pawn. 48... f5 h4 49. d2 f6 51. h5! Black is “zugged”. 1–0

15. Wang Yue – Liu Qingnan, Xinghua 2012

This example shows that even simple positions can sometimes hold great subtleties. 53... c5? This seemingly normal move is, in fact, a losing mistake. 54. f4 d6 The main reason why this loses is shown after 54... f6 55. g5! d6 (55... f5+ 56. xg5 d6 57. f6! and g7, winning.) 56. g6 hxg6 57. xg6 e6 58. g4! White wins. 58... e7 59. f5 or 58... f5 59. g5 f4 60. h6! 55. g5 e5 56. h5! This waiting move puts Black in zugzwang and wins the game. 56... e6 57. e7 xg4 is a draw, as 58. f6?? e5 59. g7 e6 loses in old-fashioned style. 56... f4 56... f6 57. h6 and wins. 57. f6! Black resigned. For example: 57... e5 58. g5 f5 59. h6 g4 60. xh7 xg5 61. f7 and wins. 1–0

The drawing method was 53... c6 54. f4 f6 in order to meet 55. g5 with 55... f7!! 56. g6 hxg6 57. fxe6 e8! 58. f5 e7! and Black has the opposition.


Black could have drawn with: 40... b5! 41. d5 White should avoid 41. d5? d8! where he loses; while 41. e7 c6 42. e6 c7! is a well-known repetition. 41... b6 42. h5 The only try. 42. e6 c7! is a repetition once again. 42... b4! 43. c4 a5 44. d5 b3!! The big point. 45. d6?! b6! 46. xb3 c6 47. c4 xd6 48. d4 With a draw. If nothing else, Black can hide in the corner.
Chapter 1 – Pawn Endings

Chatalbashev – Tratar, Sibenik 2011

Mareco – Mayorga, Asuncion 2011

Karpov – M. Muzychuk, Cap d’Agde 2013

Tan Zhongyi – Abrahamyan, Ningbo 2013
17. Boris Chatalbashev – Marko Tratar, Sibenik 2011

In defensive situations, it is paramount that we anticipate our opponent’s main ideas. This anticipation can help us position ourselves correctly. 53... e7? 54. g6 f8 55. g5! fxg5 55... hxg5 56. h6 gxh6 57. xf6 is the point of the exercise. White has the opposition here, and the king is trapped on the back rank. For example: 57... e8 58. g6 d7 59. xh6 c6 60. xg5 xb6 61. xf6 c5 62. xe5 b5 63. f4 d4 64. e5 b4 65. e6 b3 66. e7 b2 67. e8= w b1= w 68. w4+ and so on. 56. f5 f7 57. xe5 g6 58. xg6f+ xf6 59. d6 d7 60. e5 1–0

The correct defence was 53... f8! 54. g6 g8 This looks horribly passive, but works because of 55. g5! hxg5 56. h6 gxh6 57. xf6 h7! and Black hangs on to his distant passed pawn. After 58. xe5 h5 it is White who needs to be careful: 59. d6! 59. f5? h6 60. e5 h4 61. g4 g6 would even see Black on top. 59... h4 60. e5 h3 61. e6 h2 62. e7 h1= w 63. e8= w xf3 and the game is in many different ways.

18. Anatoly Karpov – Mariya Muzychuk, Cap d’Agde 2013

It is rare that the former World Champion is in action, but even though he is pushing 60 he still managed to win this rapid event in front of Ivanchuk and Bacrot. Here he messed up somewhat, making the game about 50 moves longer than it should have been. 47. b6? c5! 48. xa5 48. g5! still gave White some real winning chances. 48... xe5 49. g5? 49. b5!? gave some small practical chances. 49... c4!= Black has completely equalized but still lost on move 103. Chess is cruel. 1–0

47. g5!! was the solution. After 47... xe5 48. b6 c5 49. g6! f6 50. xa5 e5 51. b5 e4 52. c4 White wins. The other main lines is 47... xg5 48. b6 f4 49. xa5 xe5 50. b6 and White queens with time to spare.

19. Sandro Mareco – Nicolas Mayorga, Asuncion 2011

It is quite amazing how long it takes for the engine to calculate this position accurately. For a human, however, it should be possible. 65... g52 66. g7f+ f4 67. xg3 xg3 68. e5 fxe5 68... h4 69. exf6 h3 70. f7 h2 71. f8= w h1= w 72. e5! gives White a winning queen ending. There will still be practical challenges, of course, but why would we want to go there with Black? 69. e3! A beautiful idea. 69... h4 70. f6 h3 71. f7 h2 72. f8= w h1= w 73. g7f+ h3 74. h6f+ g2 75. g5f+ f1 76. g4f+ g2 77. g4f+ h2 78. f2 After all these years I still find this standard pattern utterly beautiful. 1–0

The drawing line was based on counterplay in the rook ending: 65... h6! 66. f7 h4! Not the only move, but the most obvious. 67. xf6f+ g7 68. a6 h3 White has no advantage. He does not have time to play e4-e5, as the rook has to stop the h-pawn. 69. a1 f6 and White will make no progress.


White wins by triangulation and domination. It is all about dominating the black king. The move order is not so important; the end point is. 57. d6? f5 58. g5 h5 Black has enough counterplay to make a draw. 59. e5 g4 60. g6 h5 61. f5 h6 62. e4 ½–½

57. e8! h6 58. f7 h7 59. g5 fxg5 60. fxg5 h8 61. e6 h7 62. f5!! The main point is domination. The a-pawn is not going anywhere. 62... g8 63. g6 f8 64. e6 e8 65. d6 d8 66. c6 Finally the black king is let out of his cage. 66... e7 67. b6 f6 68. xa5 xg6 69. b6 Black is much too late.
Chapter 1 – Pawn Endings

Anand – Kamsky, Sofia (var) 2006

Adhiban – Volkov, Bad Wiessee 2011

Cao – Zatonskih, Saint Louis 2011

Holt – Homa, Wheeling 2012

N. Pert – Thingstad, London 2011

Jobava – Suba, Brasov 2011

21 24

22 25

23 26

44...a5!! 44...f3? would be wrong. 45.c3 d5 46.cxf3 c4 47.g3! I love this move.
(Unfortunately, White can also draw with 47.e4 xc3 48.e5 b3 49.f6 xa3 50.xg5 xb4 51.h4.) 47...xc3 48.h4! (threatening h5) 48...gxh4† 49.xh4 b3 50.g5 xa3 51.xg6 xb4 and we will have a theoretically drawn endgame. 45.c4 45.bxa5 offers no chance as the king just marches over to take the pawn. 45...bxc4 45...axb4 46.axb4 46.axb4 47.xc4 e5 48.b5 e4 49.b6 f3 50.b7 f2 51.b8= 41=† 52.c5 c1†→ 46.xc4 axb4 47.axb4 e5! 47...d6 48.d4 c6 49.d4 would allow White to draw. 48.d3 d5 49.d3 e4 50.b5 d5 Black rounds up the b-pawn, returns to outmanoeuvre the white king and leads the f-pawn to fame and fortune.

22. Kevin Cao – Anna Zatonskih, Saint Louis 2011

43...f6? Black had to defend the a-pawn as her drawing chances were reliant on the power of the doubled pawns; which is that taking them uses up vital time. 44.a4 e7 45.c6 e6 46.b7 d7 47.xa7 c7 With pawns on the kingside, this is not a draw. 48.a5 Of course, without this waiting move it would be a draw. Now Black is in zugzwang. 48...c8 49.b6 b8 50.c6 a7 51.d6 c6 1–0

43...c7! 44.e5 c6! The counterplay is against f4, not the a-pawns. Eliminating double pawns costs time. 45.c5 d5 46.d6 g6 46.e5 e5 47.d5 d4 48.dxf7 xf7 49.e5 e5 50.d7 d4 and Black queens first. Once the white queen is on a8, there is no way it can shield the king – and the perpetual is unstoppable. 47...f3 48.f5 e4 49.f6 e5 50.xh5 e6 Despite having the distant passed pawn and an extra pawn on the queenside, White does not have any winning chances here. 51.g4 d7 52.e5 e5 53.f3 xh4 54.g6 g5 55.d7 d4 56.e5 e5 57.d5 d5 58.e5 e5 59.e5 60.d6! The standard method. 60.xa7 c7 A draw will arise either through stalemate, or after the black king makes it to the corner.


Nick won this long queen ending due to incorrect play by his opponent (which is always forgivable; nothing is as difficult as a queen ending). But he could have won the game much faster. 62.c3? f5 Black now has a fighting chance. 63.b4 xg5 64.a5 bxa5† 65.axa5 f5 66.b6 g5 67.axb7 g4 68.d5 g3 69.d6 e6? An incorrect intermediate move. 69...g2 70.d7 g1= 71.d8= 72.d8= 72.b6= 72.g4! is a draw; the king has to go for the opposite corner. 70.c6 g2 71.d7 g1= 72.d8= White wins in 47 moves according to the tablebase. In reality, Black resigned 46 moves later. Correlation not consequence! 1–0

White could have won with a nice triangle manoeuvre: 62.b4! d5 Forced. 62...f5 63.a5 is a tempo better than the game and thus clearly winning. 63.c3! White is heading back to c4. 63...e6 63...e4 loses to 64.c4 f5 65.d5! xg5 66.e6 and the d-pawn queens quickly.
64.d6 d5 65.d3 d5 66.e3 d6 67.e4 e6 68.d5 White will win the g-pawn and the game quite quickly thereafter.
Chapter 1 – Pawn Endings


Pawn endings should in principle be easy, but in reality they are very hard. This is a good argument for those who believe that chess is more about recognizing patterns than actual thinking (not a view I really support). 43...b4! 44.e5! c7 44...a5 45.exf6 gxf6 46.g5 a4 47.b4! White wins. 45.exf6 gxf6 46.b6 a5 47.g5! Maybe Volkov missed this move? 47...hxg5 48.hxg5 a4 49.gxf6 a3 50.f7 a2 51.f8=win a1=win This queen ending is very difficult to convert into a full point and Volkov managed to resist vigorously, saving a draw on move 110. The fastest win in this position was: 52.d6t! c8 53.f6 e7 54.g7 h4 55.f8t c7 56.g8! The start of a brilliant king walk. 56...b6 57.f7 c4 58.g7 a7 59.a1t b8 60.f6! The perfect square for the queen. We can easily imagine future checks being blocked by a counter-check. 60...g4t 61.h7 g5t 62.g7 g4t 63.h6! The king needs to get to d8. 63...h3t 64.g5 g3t 65.f4 h3t 66.f5 c3t 67.e6 c6t 68.e7 e4t 69.d7 a4t 70.d8 White has arrived. With the queen beautifully placed on f6, Black is soon running out of decent checks. 70...a5t 70...d1t 71.e7 e1t 72.d7 and Black is out of checks. 71.e7! c7t 72.e8! and White wins.

43...b4? loses quickly to 44.g5 (44.e5 also works) 44...hxg5 45.hxg5 a5 46.gxf6 gxf6 47.e5! and so on.

43...b5! would have saved the game. 44.e5 Less testing is 44.g5 hxg5 45.hxg5 fxg5 46.e5 g4! 47.f6 gxf6 48.exf6 g3 49.f7 g2 50.f8=win g1=win 51.a3t and it is White who makes a draw by perpetual. 44...fxe5 45.g5 hxg5 46.hxg5 b4 47.e4 e4!! This is the idea that Black had to see to save the game. He needs to make use of all his assets. 48.f6 gxf6 49.gxf6 a2 50.d3 b3 51.f7 b2 52.d2 c2 The endgame is a trivial draw, but Black can still enjoy the psychological comfort of having an extra pawn.


43.e4? Creating a passed pawn is important, and the best passed pawn is what we should look for. 43...h3 44.f4 44.f3 exf2 45.e4 h3 and ...g1 and the pawn promotes with check. 44...g4 45.f5 exh2 46.f6 g3 47.f7 g2 48.f8=win g1=win 49.f6t!! The computer comes up with a complex defensive idea here. White could have played 49.d3!, when after 49...d1t 50.c3 he is struggling, but it is by no means easy for Black to convert his advantage. 49...g3? Black could have forced his h-pawn forward if he had played 49...h1!! The winning line is long and complicated, as is usually the case in queen endings. 50.f5 h3 51.xc6t g2 52.g4 g1 53.e5 g5t 54.d6 h2 55.d1t g2 56.e2t h3 57.f1t g2 58.f5t g4 59.f1t g3 60.e1t g2 61.d2t h3 White runs out of checks. 62.d5 g3t 63.d7 h4 64.c6 h3 White’s checks run out, after which Black will win. White cannot survive with the queen stuck on h1. 50.f6? Active but misguided. Going the wrong way. The king needed to get out of the way with 50.d3!, when after 50...h3 51.xc6 g1 52.f6! White is ready to advance the c-pawn, or give a perpetual check after 52...h2 53.a1t g2 54.b2t f2 55.g7t and so on. 50...h3 51.e6 g2 52.xc6t f3 53.xf3t xf3 54.c6 h2 55.c7 h1=win 56.d7 h3t 57.d8 h8t The direct win was 57...h4t 58.d7 g4t 59.d8 g5t 60.d7 x5 61.c8=win f5t and so on. 58.d7 h7t 59.c8 See page 303 in ‘Fortresses’ for the continuation from here.

The solution was: 43.e5! h3 43...f3 44.d6 xf2 45.xc6 g4 46.b7 g3 47.hxg3 hxg3 48.c6 with a draw. 44.d6 hxh2 45.xc6 h3 46.b7 g2 47.c6 and White makes a draw.

In the game, Black played 45...g5? and lost after 46.fxg5 hxg5 47.\textit{e}5! 47.h4?! f4 48.gxf4 gxh4 49.f5 h3 50.f6 h2 51.f7 h1=\textit{\textregistered} 52.f8=\textit{\textregistered} \textit{e}4\dagger 53.\textit{c}3 \textit{c}4\dagger would even win for Black. 47...\textit{b}5 48.\textit{xd}5 \textit{xb}4 48...g4 49.h4 f4 50.\textit{e}4 also wins for White. 49.\textit{d}4! Shouldering.

49...\textit{b}5 50.h4 f4 51.hxg5 fxg5 52.\textit{e}3 1–0

The draw comes after: 45...\textit{b}5!! 46.\textit{xd}5 \textit{xb}4 Here White has a number of tries but none of them win against the best defence. 47.c6! The most ambitious move. 47.h4 \textit{b}5! and White cannot make any progress (47...h5? loses to a well-known theme: 48.c6 bxc6\dagger 49.\textit{xc}6 \textit{c}4 50.\textit{d}6 \textit{d}4 51.\textit{e}6 \textit{e}4 52.\textit{f}6 \textit{f}3 53.\textit{x}g6 \textit{g}6 54.\textit{g}5!)

47.g4 fxg4 48.hxg4 h5 49.f5 h4! with a draw coming up very soon.

47.\textit{d}4 h5! (47...\textit{b}5?! would not be a good idea. 48.g4 fxg4 [48...\textit{b}4 49.g5 h5 50.h4 \textit{b}5 51.\textit{d}5 \textit{b}4 52.\textit{e}5 leads to real winning chances for White] 49.hxg4 h5 50.f5 h4 51.fxg6 h3 52.g7 h2 53.g8=\textit{\textregistered} h1=\textit{\textregistered} 54.f6=\textit{\textregistered} \textit{a}5 55.\textit{b}6\dagger \textit{a}4 56.\textit{e}6 and White has serious chances in this unclear queen ending.) 48.h4 \textit{b}3! (48...\textit{b}5? 49.\textit{d}5 followed by c6 wins for White) 49.\textit{d}3!= 47...bxc6\dagger 48.\textit{xc}6 \textit{c}4 49.\textit{d}6 \textit{d}4 50.\textit{e}6 \textit{e}4 51.\textit{f}6 g5!! This is a truly surprising move, and probably what Suba was unable to find at the board. After 52.fxg5 hxg5 53.\textit{x}g5 \textit{f}3 54.g4 f4 we will enter a drawn queen ending. Some people do manage to lose the black side of this at times, but with the right knowledge it is a simple draw.
Chapter 2

Simple Minor Piece Endings

Viktor Moskalenko – Joan Fluvia Poyatos

Catalonia 2013

White wins easily here. But then this is supposed to be an easy chapter.
Endgames with minor pieces are vast and complex, even if you treat endings with opposite-coloured bishops separately, as I have done in this book. I will keep saying this until you actually do it: study the theory of these positions from some of the great books out there. For example: Dvoretsky’s Endgame Manual or Fundamental Chess Endings.

I will quickly race through a few nice points before throwing you to the lions. The first principle is very general in nature, but also truly essential to good endgame play.

**King activity**

Levon Aronian – Hikaru Nakamura

Wijk aan Zee 2014

This move keeps the king superficially close to the a5-pawn, without it being able to actually come to the rescue. At the same time, it brings the king away from the only plausible route to activity. A typical move 40!

41.\( \text{g7?} \)

With the black king stranded, White can force a favourable structure.

41...\( \text{h4} \) 42.\( \text{f5} \) \( \text{e1} \) 43.\( \text{e3} \) \( \text{e6} \) 44.\( \text{c4} \)

Black has no counterplay. His king is too far away.

1–0

Black’s most logical move was 40...\( \text{f7} \)! in order to bring the bishop into the game. After 41.\( \text{a6} \) \( \text{g6} \) White has to play 42.\( \text{h4} \) to even pretend that he is trying to win. With a weakness now established on h4, Black can just wait. White has no real way of improving his position.

Black may not even be forced to play this accurately. Let us say he just waits with something like 40...\( \text{e1} \)! 41.\( \text{a6} \) \( \text{d2} \). Where is White’s advantage going to come from? If he rushes to the queenside, the black king becomes very strong on the kingside. As we all know, the bishop can assist much more on the queenside than the knight will be able to on the kingside. Especially if located on a5!

We should also note that 42.\( \text{g7?} \) \( \text{f7} \) 43.\( \text{c5?} \) is a bad idea:

One of the most important things to understand about minor piece endings is that the king is, well... king. It is certainly stronger than minor pieces in a great majority of cases.

Nakamura’s endgame play has improved a lot recently, but on this occasion he messed it up. The fact that it was move 40 was probably part of the story; and maybe he did not have a great sense of danger either.

40...\( \text{d7?} \)
After 43...\textit{e}e1! the knight is trapped and Black wins.

\textbf{Knight endings are accelerated pawn endings!?}

Botvinnik famously categorized knight endings along with pawn endings. I am sure he meant this metaphorically and just wanted to underline how many of their respective properties are similar: the importance of king activity and passed pawns. The following example illustrates this in an almost surreal way. Obviously there is the additional point to this ending, that without knights it would be an immediate draw.

\textit{Krisz Szabo - Igor Lysyj}

\underline{Cappelle la Grande 2012}

\texttt{11 8.tlJa 4?}

White is completely dominated and cannot avoid exchanging knights. Where this exchange happens is very important though! In the game, White lost a pawn in the process. If he had been as passive as possible, he could have avoided this. 118.dl d6 119.e8†! The knight has to run before it is trapped. 119.d7 120.a7 e4 (with the threat ...d6) 121.b5 c6 122.a3 f2† 123.c1 d3† 124.b1 e1 White is painfully passive but Black cannot make serious progress. 125.a1 c2†

\begin{center}
\begin{tikzpicture}
\fill[lightgray] (0,2.62) rectangle (5.33,7.38);
\end{tikzpicture}
\end{center}

126.b1 x3† 127.bxa3 This is a draw.

118...d7!

The knight is fully dominated. Black wins.

119.d2 d6 120.e2 c6 121.e3 b5 122.c5 xc5 123.dxc5 xc5 124.e2 d6 125.d2 c6 126.d1 f5 127.d2 f4 128.d1 e3 129.c1 e2 130.b1 d2 131.a1 d4 132.cxd4 c2

0–1

\textbf{More about bishops later!}

We need to keep something for the complex minor piece endings chapter, so I will not talk too much about bishop endings here.

The main concept while using bishops in the endgame is clear. They are happiest when they can perform all of their duties on one diagonal. In the next example, Black probably did not understand what his opponent was up to and walked carelessly into a trap.
67...\textit{e}4?
67...\textit{f}3? is another blunder. 68.\textit{d}1! wins immediately. Seven of the sixteen legal moves drew. To give an example: moving the h-pawn did not...

68.\textit{d}1\texttt{!}
First the king is pushed away from the f5-pawn.

68...\textit{g}3
Now the bishop has a job on two diagonals.

69.\textit{c}2!
With the f5-pawn in trouble, Black only has one chance.

69...\textit{g}2\texttt{!} 70.b7!
70.\textit{xe}4? fxe4 71.b7 c2 72.\textit{d}2 e3\texttt{!} 73.\textit{xc}2 e2 74.b8=\texttt{=} e1=\texttt{=} gives Black drawing chances.

70...\textit{xb}7 71.\textit{xf}5 \textit{g}3 72.\textit{h}7 \textit{g}4 73.\textit{c}2 \textit{d}5
73...\textit{c}6 would have caused a bit more resistance but White wins nonetheless: 74.g6 \textit{e}8 75.g7 \textit{f}7 76.\textit{e}4 and White can put the other pawn on f6, before transferring the bishop to d5 at the right moment, winning.

74.g6 \textit{e}6 75.f5
1-0

The bishop is better than the knight

More often than not, though definitely not always. If we look at the Aronian – Nakamura example above, we can see both scenarios. When the position became frozen with no weaknesses for the black bishop to attack, it was pretty useless. But in more fluid situations with a race on the flanks, the bishop was a lot better than the knight.

Obviously the positioning of the king is important. Aronian was playing for a win because his king was very well placed. At the same time, Nakamura could have made a draw by activating his king.

If we have the combination of a more active king and bishop against knight, we have good reason to be very optimistic. The following game shows how the king and bishop can work together in order to dominate the knight.

\textbf{Mikkel Antonsen – Sune Berg Hansen}

\textbf{Helsingor 2013}
One of the great powers the bishop pair holds is that its holder will frequently be able to choose when exchanges will take place. This position might look only slightly worse for White to those without great experience in such matters. In practice it is not easy to defend.

27.\textit{\text{c7}} h5 28.\textit{\text{f1}} \textit{\text{f8}} 29.\textit{\text{f4}}?

Using his trumps! White splits the black pawns.

29...gxf4!

Black has no choice, but is also happy to open the position up for his bishops.

30.\textit{\text{xf4}} \textit{\text{e8}} 31.\textit{\text{e2}} \textit{\text{d7}} 32.\textit{\text{f3}}

Black is better and now chooses to go into a favourable bishop vs. knight ending, where his king becomes very active. It is not clear to me if he is winning with best play, but it is certainly very close.

32...\textit{\text{f6}}! 33.\textit{\text{e5}} \textit{\text{xe5}} 34.\textit{\text{dxe5}} d4 35.\textit{\text{c2}}

brining the king to the queenside to stop a black passed pawn. Nevertheless it might all be manageable.

36.\textit{\text{e2}} \textit{\text{e6}} 37.\textit{\text{xd4}}\uparrow \textit{\text{xe5}} 38.\textit{\text{f3}}\uparrow \textit{\text{f4}} 39.\textit{\text{b4}}

White avoided losing any material and the pawn ending is just salvageable. But Black can still ask him tough questions.

39...\textit{\text{e4}}!

\begin{center}
\begin{figure}
\begin{center}
\begin{tabular}{|c|c|c|c|c|c|c|c|}
\hline
& 8 & 7 & 6 & 5 & 4 & 3 & 2 \\
\hline
a & & & & & & & \\
\hline
b & & & & & & & \\
\hline
c & & & & & & & \\
\hline
d & & & & & & & \\
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e & & & & & & & \\
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f & & & & & & & \\
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g & & & & & & & \\
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h & & & & & & & \\
\hline
\end{tabular}
\end{center}
\end{figure}
\end{center}

40.\textit{\text{d2}}

A plausible alternative is:

40.\textit{g3}

This is the best try according to Stockfish, which is known to be the best endgame-playing engine. Black might very well be winning here as well, though it is very close.

40...\textit{\text{c4}}\uparrow 41.\textit{\text{f2}} b5 41...f5?! 42.\textit{\text{d2}}\uparrow leads to a survivable queen ending.

The following line is not conclusive, but quite interesting.

42.\textit{e1} \textit{\text{e6}}!

White is struggling to defend his queenside.

43.\textit{\text{f3}} f6 44.\textit{\text{e1}} \textit{\text{d4}} 45.\textit{\text{e2}} \textit{\text{c4}} 46.\textit{\text{d3}} \textit{\text{f5}} 47.\textit{\text{f4}} \textit{\text{xb4}} 48.\textit{\text{d2}} \textit{\text{b3}} 49.\textit{\text{c1}} a5 50.\textit{\text{hxh5}} b4 51.g4!

After 51.\textit{\text{f4}}? a4 52.\textit{\text{e2}} \textit{\text{c4}}! White stays dominated. Black is winning after:
53.\textit{d}2 \textit{g}4 54.\textit{d}c1 b3! 55.\textit{e}3 \textit{f}5 56.\textit{h}4 \textit{g}6 57.\textit{g}4 a3 58.\textit{d}xb3 axb2 59.\textit{d}d2+ \textit{c}3 60.\textit{e}2 \textit{c}2 61.\textit{e}3 \textit{d}1 White is in zugzwang and Black queens the pawn.

51...\textit{x}g4 52.\textit{d}xf6 \textit{f}5 53.\textit{e}8!
White achieves the draw by the ends of his nails.

40...\textit{f}6 41.\textit{e}1
41.\textit{e}2 \textit{c}4+ 42.\textit{d}d2 \textit{f}1 43.\textit{h}4 looks awful, but also offers some resistance. Black does not have a simple winning line.

41...\textit{b}3 42.\textit{d}d3 \textit{b}6 43.\textit{f}2+ \textit{d}4 44.\textit{h}1?
White is on the verge of defeat. 44.\textit{g}3 was the last try.

44...\textit{f}7 45.\textit{g}3 \textit{g}6 46.\textit{b}3 \textit{f}7 47.\textit{e}2+ \textit{e}5 48.\textit{c}2 \textit{d}5?!
A sign the players are getting tired. Here Black could have tried:

48...\textit{e}4!
The most logical move. The king dominates the white pieces.

49.\textit{d}2 \textit{f}5!
Keeping control.

49...\textit{xb}3 50.\textit{g}3+ \textit{f}4 51.\textit{h}5+ \textit{g}5 52.\textit{g}3 \textit{d}5 Black wins a pawn and should win the game in the long run. 53.\textit{f}1 \textit{g}2 54.\textit{e}3 \textit{b}7 55.\textit{c}4 \textit{b}5 56.\textit{d}6 \textit{c}6 57.\textit{e}3 is not so easy for Black to win, though I assume it is still possible.

50.\textit{c}3+!
White has to make a concession.

50...\textit{d}4 51.\textit{e}2+ \textit{e}5! 52.\textit{c}3 \textit{f}4
Black will play ...\textit{d}5 and win shortly after.

49.\textit{g}3 \textit{f}5 50.\textit{h}3
50.\textit{c}3 \textit{c}6 51.\textit{e}2 \textit{g}4 also looks hopeless.

50...\textit{g}5 51.\textit{f}4 \textit{f}7 52.\textit{e}3
Black won by creating a passed pawn. 55...b4! 56.§g7 There is no defence. 56.§xb4 loses to 56...§c6†. After 56.axb4 a3 57.§g7 then 57...§c4 is the simplest. 56...©f5 Other moves win as well 57.§e5 bxa3 58.§b5 a2 0–1

2. Yuri Vovk – Piotr Bobras, Cappelle la Grande 2007
There is only one way to win here; diverting the king. 90...©c5†! White resigned. 90...§xh5? 91.§e3 §g4 92.§f2 §h3 93.§g1 and White makes it into the corner. The game could have continued with 91.§e4? §a7†! Or another waiting move. 92.§d3 §xh5 93.§e2 §g4 94.§f1 §f3 and White fails to make it to h1.

White’s only chance is connected to the h-pawn. His king is ideally placed, so if he can get rid of the black knight the pawn becomes unstoppable. 55.§e1! §xe1 This offers less resistance, but White is winning anyway.
Black could also have tried 55...§d2, but White can dominate the knight with 56.§f5!. For example: 56...©c4 57.h4 ©e3† 58.§g5 ©c4 59.h5 ©e5 60.§f5 (60.§d3?!–) 60...§f7 61.§d3 ©c3 62.©e5 and White wins.
55...§xa3! was a bit more complicated. 56.§xf3 §xb4 57.h4 §c3 (57...a5 58.h5 a4 59.§d4 and White wins) 58.§g5! (58.h5? b4 59.h6 b3 allows Black to make a draw; However 58.§e5/ §f5 58...b4 59.§e4 b3 60.§e3 would have been an alternative way to win.) 58...b4 59.§e4† and White wins. 56.h4 §xa3 57.h5 §xb4 58.h6 ©c3 59.h7 b4 60.h8=§h b3 61.§e6† ©c2 62.§h2† ©c1 63.§f4† ©c2 64.§f2† 1–0

4. Fabiano Caruana – Vassily Ivanchuk, Reggio Emilia 2011
Caruana had grown tired, and blundered away the game with: 75.§e3? ©xe3 76.©xe3 §g5! 77.§f2 §f4 78.§g2 ©e3 79.h4 §f4 80.g5 hxg5 81.h5 §f5 82.§g3 §f6 83.§g4 §g7 0–1
75.h4! White has to prevent ...§g5 at all costs. 75...©e6 75...©e5 is no better. White can play almost anything after 76.g5! h5. For example 77.§e3 ©d8 78.§d2 and Black is not improving his position. 76.§g5! hxg5 76...h5 77.§e3 offers Black no winning chances. For example 77...©a5 78.§g2 with a draw closing in on account of 78...©e5?! 79.g6 §f6 80.§f4 and if anyone is better it is White. 77.hxg5 §f5 78.§e3† ©xe3 79.©xe3 ©xg5 80.c4! White draws.

5. Giulio Borgo – Viorel Iordachescu, Reggio Emilia 2006
38...b4! Black creates a distant passed pawn. 39.bxa4 This loses almost without a fight. 39.axb4+ ©xb4 40.©c3 a3 also leads to a winning position. For example: 41.©c4 ©d5† (Wrong is: 41...a2? 42.§b2 gxg3 43.exf3 ©d4 44.h3! White will succeed in exchanging all the kingside pawns, and the a-pawn cannot win on its own once it has been advanced this far.) 42.§c2 gxg3 43.exf3 ©b4 and Black should win, based on 44.©xe5? ©e3† 45.§b1 ©xb3 followed by ...a2†. 39...bxa3 40.e4 40.§c2 ©b4 is no better. 40...©b4 41.§c2 ©e3† 42.§b1 ©c4 43.§xc4 ©xc4 44.§xg4 fxg4 45.h4 0–1
Chapter 2 – Simple Minor Piece Endings

Panchanathan – Friedel, Berkeley 2011

Pinaula – Kempen, Guam 2012

Voitsekhovsky – Karalkin, Tomsk 2006

Adams – Golod, Germany 2011

46.\(\text{cxa7}\) White’s only chance to win is to allow his knight to be trapped. 46.\(\text{e7 a5!}\) would allow Black to escape with a draw. 46...\(\text{e8}\) 46...\(\text{b3}\) does not offer great resistance. White has excellent winning chances after 47.\(\text{b5}\) \(\text{xd7}\) 48.\(\text{c3}\) \(\text{c6}\) 49.a5 \(\text{bxa5}\) 50.\(\text{bxa5}\) \(\text{c5}\) 51.\(\text{d5}\) and while Black is distracted by the a-pawn, White will win the game on the kingside. 47.\(\text{b5}\) This is the way. White ensures that the resulting pawn ending is winning. 47.\(\text{b5}\) \(\text{xb5}\) 48.\(\text{a5}\) \(\text{d6}\) would be a draw as White has nothing to do with his extra tempos. 47.\(\text{c4}\) 48.\(\text{b5}\) also does not promise much. After 48...\(\text{d6}\) 49.\(\text{c8}\) \(\text{c7}\) 50.\(\text{e7}\) \(\text{d6}\) 51.\(\text{d5}\) \(\text{e2}\) White can torture Black, but he is unlikely to win. 47...\(\text{b7}\) 47...\(\text{d7}\) 48.\(\text{c6}\) \(\text{d6}\) 49.\(\text{c4}\) \(\text{e6}\) 50.\(\text{b4}\) followed by \(\text{a5}\) and White wins. Another interesting line is 47...\(\text{f7}\) 48.\(\text{c3}\) \(\text{d6}\), where Black is hoping to create counterplay with ...\(\text{a2-b1}\). But White can meet this with a regrouping of the knight: 49.\(\text{c6}\) \(\text{a2}\) 50.\(\text{b4}\) the idea is \(\text{d3}\) and \(\text{b4}\), followed by \(\text{a4-a5}\), winning. 50...\(\text{b1}\) 51.\(\text{d5}\) \(\text{c5}\) 52.\(\text{f6}\) Black has to give up the \(\text{c5}\)-square, as he has run out of moves. 52...\(\text{d6}\) 53.\(\text{c4}\) \(\text{a2}\) 54.\(\text{b4}\) \(\text{b1}\) 55.\(\text{d5}\) White wins. 48.\(\text{c6}\) 49.\(\text{bxc6}\) \(\text{d6}\) 50.\(\text{c4}\) \(\text{d6}\) 51.\(\text{b5}\) \(\text{c7}\) 52.\(\text{a5}\) \(\text{bxa5}\) 53.\(\text{xa5}\) Black resigned. White will win with his two extra tempos. 1–0

7. Stanislav Voitsekhovsky – Maksim Karalkin, Tomsk 2006

In a seemingly drawn endgame, White found a fabulous resource. 64.\(\text{xf5}\) \(\text{xf6}\) 65.\(\text{xf6}\)! The difficult move. Black is now in zugzwang. 65.\(\text{f4?}\) \(\text{xg3}\) 66.\(\text{f6}\) \(\text{f1}\) 67.\(\text{xg6}\) \(\text{h5}\)! White has no way to make progress. 65...\(\text{d4}\) 65...\(\text{xf5}\) 66.\(\text{xf5}\) \(\text{xf5}\) 66.\(\text{gxf5}\) \(\text{gxf5}\) 67.\(\text{xf5}\) is trivially won. 66.\(\text{xf4}\) \(\text{xf3}\) 66...\(\text{xf5}\) 67.\(\text{e2}\) 67.\(\text{xf6}\) \(\text{d2}\) 67...\(\text{h2}\) 68.\(\text{e4}\) 69.\(\text{xg4}\) \(\text{e3}\) 70.\(\text{e4}\) and White will win eventually. 68.\(\text{g4}\) \(\text{xg4}\) 69.\(\text{xf5}\) \(\text{d6}\) 70.\(\text{xe6}\) \(\text{e4}\) 71.\(\text{f4}\) \(\text{g7}\) 72.\(\text{g5}\) \(\text{d2}\) 73.\(\text{h5}\) \(\text{e4}\) 74.\(\text{f5}\) \(\text{d6}\) 75.\(\text{gf4}\) \(\text{e4}\) 76.\(\text{d5}\) \(\text{d6}\) 77.\(\text{h6}\) 78.\(\text{f4}\) \(\text{h7}\) 79.\(\text{h5}\) \(\text{e4}\) 80.\(\text{g6}\) \(\text{h8}\) 81.\(\text{g4}\) 82.\(\text{h5}\) 83.\(\text{f4}\) 1–0


White missed the win: 44.\(\text{d4?}\) \(\text{g2}\) 45.\(\text{e4}\) \(\text{h4}\) 46.\(\text{f5}\) \(\text{h3}\) 47.\(\text{h4}\)?? A horrible blunder. 47.\(\text{xf4}\) \(\text{h2}\) 48.\(\text{g3}\) is the point of the exercise. After 48...\(\text{h3}\)! 49.\(\text{h1}\) \(\text{g2}\) Black makes a draw, based on 50.\(\text{e3}\) \(\text{xf5}\) 51.\(\text{xf2}\) \(\text{a5}\)! when White should not gamble with 52.\(\text{b5}\), but rather take the draw immediately with: 52.\(\text{bxa5}\)! 47...\(\text{f2}\) 48.\(\text{xf4}\) \(\text{h2}\) 0–1

Instead he should have played 44.\(\text{f7}\) (or via e4) 44...\(\text{g2}\) 45.\(\text{g5}\) \(\text{h4}\) 46.\(\text{f4}\) \(\text{h3}\) 47.\(\text{xf4}\) \(\text{h2}\) 48.\(\text{xf4}\) \(\text{e5}\) 49.\(\text{e4}\)! with a simple win.


The black knight is trapped. At the moment it is not possible to play \(\text{c3}\) because of ...\(\text{d1}\). After a simple move, this option disappears and White wins. 78.\(\text{g1}\) \(\text{e6}\) 78...\(\text{d1}\) 79.\(\text{e5}\) \(\text{e5}\) \(\text{f2}\) and wins. 79.\(\text{c3}\) \(\text{a4}\) 80.\(\text{b3}\) \(\text{d5}\) 81.\(\text{xa4}\) \(\text{e4}\) 82.\(\text{h2}\) \(\text{f3}\) 83.\(\text{d6}\) \(\text{g2}\) 84.\(\text{h4}\)! 1–0
Chapter 2 – Simple Minor Piece Endings

D’Amore – Epishin, Saint Vincent 2006

Aaresjord – Nordahl, Oslo 2001

Topalov – Carlsen, Stavanger 2013

Melkumyan – Negi, Helsingor 2013

Sakelsek – Braun, Zenica 2004
Black seems lost, but holds the position with a few accurate moves. 61...\f3! 61...\h5? or similar rubbish is met with: 62.\g7 \f7 63.\f5 \e3 64.\g3 \d4 65.\f4 \c3 66.\e5 \b3 Black manages to win the a-pawn, but is not allowed to give up his bishop for the f-pawn. 67.\f6 \d5 (67...\g8 68.\g6! \xa3 69.\e6+--) 68.\e6 \xa3 69.\e7 \f3 70.\f6 \h5 71.\f4+--; 61...\c6 62.\h3 \f3 63.\d4+-- 62.\d6! The most testing, forcing Black to find another few accurate moves. 62.\g7 \c6 Not the only move. 63.\f5 \f4 64.\e6+ \c5! and ...\d7 on the next move draws. 62...\h5! 62...\d7? does not work. 63.\f5 \e3 (63...\f4 64.\f6 \e6 65.\f7 \xf7 66.\xf7 \e4 67.a4 \d5 68.a5 \c6 69.\e5 \b5 70.\c4 and White wins with a tempo.) 64.\f6 \e6 65.\g3! White does not want to part with the pawn. He would rather sit back with a pawn than a knight! 63.\f5 \f4 64.\f6 \c5 65.\f7 Nothing else holds any prospects. 65...\xf7 66.\xf7+ \d5 ½–½

11. Christian Aarefjord – Helge Andreas Nordahl, Oslo 2001
White had probably run out of mental energy after a hard fought game. In two moves he went from winning to lost. 58.\h5? \xc5 59.\b7?? Hard to understand from a chess perspective. The explanation must be that White was no longer thinking about the next move, but rather previous missed wins. Now even the draw is gone. 59.\g5! \xb6 60.\f6 was a simple enough draw. 59...\xb7 60.\f5 \d4 0–1

John-Paul Fenwick pointed out that White wins with 58.c6! Diverting the bishop and thus winning a vital tempo. 58...\xc6 59.\h5 \c5 59...\e4 60.\f4 and the pawn is going nowhere. The h-pawn however, will be very difficult to stop. 60.\h6 Black cannot stop both the white pawns.

12. Tadej Sakelsek – Arik Braun, Zenica 2004
Black wants to advance the f-pawn, but at the moment the white knight is in the way and the white king is too close. 45...\b4+! Draws the king away. 46.\xb4 46.\d2 \f3+! and Black wins. 46...\g6! White resigned. 47.\xg6 \f3 and the pawn queens.

13. Veselin Topalov – Magnus Carlsen, Stavanger (blitz) 2013
In a blitz game, even the best grandmasters in the world can make simple endgame mistakes. Here the king must go to the right square in order to keep White in the game. 45.\e5? Leaves the king exposed to a check on a1. 45...\xb5 46.\c2 46.\xb5 was a better practical chance, though after 46...\xb5 47.\f4 a5 48.\f5 a4 49.\f6 a3 50.\f7 a2 51.\f8=\+ a1=\+ \d1 Black wins in 71 moves. 46...a5 47.\f4 a4 48.\d4 0–1

After 45.\g5! \xb5 46.\xb5 \xb5 47.\f4 White will draw the queen ending. In such a position it is vital to get the first check!

45...\c1! 45...\c3? 46.\c4 f6 47.\g5! would give White activity and a draw. 46.\c4 46.\e8 f6 47.\f7 does not work on account of 47...\d3+! 48.\g3 g5 dominating the white king. 46...\f6! The domination of White’s strongest piece is crucial. 46...\d3+ 47.\g5! gives White counterplay. The following nice line soon reaches a draw: 47...\x2f 48.\h4 \f6+ 49.\x2f6 \xg4+ 50.\g7 \e5 51.\xh7 Unnecessary, but enjoyable. 51...\xc4 52.\xg6! With a draw. 47.\g5 47.\h4 \d3+ 48.\g3 g5! once again leaves White without counterplay. 47...\d3+!
The main point to the exercise. 47...f5? 48.\(\text{g}8\) would even put Black in danger of losing. 48.\(\text{g}3\) 48.\(\text{x}d3\) \(fxg5\) leads to a narrowly winning pawn ending. 48...\(fxg5\) 49.\(\text{g}8\) \(h6\) 50.\(\text{h}7\) \(\text{f}4\) 51.\(\text{h}4\) \(\text{e}5\) 52.\(\text{hxg5}\) \(h5\) 53.\(\text{g}8\) \(\text{h}5\) 54.\(\text{f}7\) \(\text{xe}5\) 55.\(\text{e}8\) \(\text{e}2\) 56.\(\text{g}2\) \(\text{f}6\) 57.\(\text{b}5\) \(\text{d}4\) 58.\(\text{c}4\) \(\text{g}5\) 59.\(\text{g}3\) \(\text{e}5\) 60.\(\text{f}7\) \(\text{f}5\) 61.\(\text{g}2\) \(\text{h}4\) 62.\(\text{f}3\) \(\text{h}3\) 63.\(\text{h}5\) \(\text{d}4\) 64.\(\text{g}3\) \(\text{xb}3\) 65.\(\text{g}6\) \(\text{d}2\) 66.\(\text{x}h3\) \(\text{f}4\) 0–1

*Caruana – E. Berg,* Rogaska Slatina 2011

*Ni Hua – Hou Yifan,* Xinghua Jiangsu 2011

*Volokitin – Moiseenko,* Kiev 2011

*Van Wely – Giri,* Wijk aan Zee 2012
15. Fabiano Caruana – Emanuel Berg, Rogaska Slatina 2011

Black can draw, but only with an accurate move that leads to a drawn pawn ending. Black missed the chance and was lost after: 43...h3? 44.f3 The d-pawn is stronger than the h-pawns. If there is a defence here, I have not found it. 44...h4 44...d6 no longer works. Black needs the opposition and therefore is lost after 45.exd6 gxd6 46.f5 e5 47.xh3 f5 48.h4 g6 49.d6 f7 50.xh5 e6 51.g6 xdx6 52.f6 d7 53.f7 d8 54.e6 c7 55.c7 c6 56.d8 b7 57.d7 a7 58.c7. 45.g3 f6 46.h2 h4 47.f4 c8 48.g2 e2 g5 49.h2 d7 49...h4 50.f1 g5 51.g1 d7 52.h1 e3 53.g3 and White wins. 50.d2 h4 51.g1 d8 52.f4 e8 53.h2 f7 54.xh3 f6 55.g3 f5 56.f3 h4 57.b8 h3 58.f4 f6 59.g4 e7 60.xh3 d7 61.g4 f6 62.f5 h4 63.g6 e1 64.f7 h4 65.b8 c8 66.e5 d7 67.f4 f2 68.b8 h4 69.d6 g3 70.c7 e1 71.e6 c3 72.f5 d4 73.xb6 xdx6 74.axa5 f2 75.b6 c6 76.a5 h4 77.e6 g5 78.a7 d2 79.a6 b4 80.b8 a3 81.a7 b7 82.d5 1–0

43...e6! 44.xd6 xdx6 45.f3 e5 46.g3 f5 47.h3 g5 would have drawn quite quickly. White does not win by advancing the d-pawn, but actually loses this time around! 48.d6?? 48.h2 with a draw is better.

48...c6 49.f4 h4 50.h2 c5 51.d5 g5 52.g4 f6 53.h5 e6 54.f5 e5 and Black is first.


In the game, Black was probably in time trouble. After 39...b3? 40.axb3 cxb3 41.exh7 c4 42.g7 42.axb3 cxb3 43.g7 b2 44.g8=wb 45.e6 a2† and Black wins. 42.b2! The check is important. 43.g8=wb 44.e6 On 44.xf4 then 44...xf1† and ...g1† wins. 44...e4† 45.d7 45.f7 d5† and the c-pawn will queen. 45...e7† 45...b7† takes a detour, but still wins. 46.c6 c7 47.b5 b6#

17. Ni Hua – Hou Yifan, Xinghua Jiangsu 2011

52.e6! d3 53.d4! f4† 54.xf4 gxf3 White also wins after 54.exf4 55.e6 e3 d3 56.f4 b3 57.d4 e8 56.c1 traps the knight. White wins.) 57.g5 g7 58.f2 and White wins on the kingside, while the bishop keeps control of the queenside. 55.g4 c6 56.d3 b5 57.axb5 cxb5 58.b6 c4 59.e7† White wins. 59.d5 60.g4 e6 61.c5 62.g5 f7 63.f5 h6 64.d6 g7 65.e6 g6 66.d5 1–0


59.e5! Obviously the only move. However, it does require confidence to play like this. 59...f7? 60.f5 followed by g4 and h5 leads to a technically winning position. 60.g4 60.h5 is not dangerous for Black. After 60...f5 61.h6 f6 the draw is not far away. 60...f5† Liquidating to a draw. It was possible to play 60.e7 61.h5 f8, when there is no clear win for White, but this would involve unnecessary suffering: 62.h6 f5 63.h5 f4 64.g6 f3 65.g7 xg7 66.xg7 f2 67.h8=wb 68.b8# The king is too far away. 63.e3 c3 64.e3 c3 65.d3 c4 66.e3 b5 1/2–1/2
Black looks entirely lost, but is this really the case?
It is not the intention of this book to teach endgame theory. It should either challenge you to broaden your knowledge of the theory or, for those readers who already have this covered, challenge you with training positions.

The material in this book is not based on themes to any great extent. I have not been out looking for relevant examples to illustrate all the known ideas. Rather, it is a compilation of the most interesting endgames I have come across in my research. Obviously it is not possible to work on a topic without discovering some patterns and recurring themes; or when it comes to basic rook endgames, two recurring themes – cutting off the king and shouldering. I shall illustrate cutting off the king in the exercises, but first let’s consider the latter topic.

**Shouldering**

The most important idea in the type of rook endgame where only one player has a rook is shouldering. Rather than suffering through a nonsense definition from the author, let’s pick the pockets of the Endgame Master Mark Dvoretsky:

“Black achieves a draw by not allowing the white king to approach the pawn.”

So, Dvoretsky’s Endgame Manual does not actually have a definition, just two simple examples. And they do the job beautifully. Copying the style, here is one of my two favourite examples (the other is to be found among the exercises).

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Thinker – Protector
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Trier 2010
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8 7 6 5 4 3 2 1
```

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a b c d e f g h
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This position is not new in chess literature. I am not sure where it comes from originally, but I found it (mirrored) in John Emms’ *The Survival Guide to the Rook Endgame*. It is all about shouldering.

75...f3 loses very easily to 76.d5 g3 77.e4 f2 78.e3 and the pawn is lost. For this reason, Black has to play a visually illogical move. Chess is like that; things that appear to “break the rules” are actually following the deeper patterns of the game.

75...f3

So, if a human had played this, I would have awarded it ‘!!’. But computers require no effort for this sort of thing and thus earn no rewards.

76.d5 e3

The black king is shouldering the white king away. Like two like-minded magnets, they cannot get too close.

77.e8† d3 78.a8 f3 79.a3† e2 80.e4 f2 81.a2† e1 82.e3 f1=Q†

Being computers, the game continued for another 50 moves – but we can safely declare it a draw here!
Chapter 3 - Simple Rook Endings

Aagaard 2007

1. Feller - Fedorchuk, Bethune 2006

2. Nogueiras - Estrada Nieto, Merida 2006

Ding Liren - Zhou Jianchao, Beijing 2012

4. Kagambi - De Winter, Tromso 2009

5. Zhukova - Pogonina, Plovdiv 2008
1. Aagaard 2007

To call this a study is a bit ridiculous, but this simple training position does illustrate shouldering quite well. Even FM's have routinely failed to solve it. The idea is simple; White cannot allow the black king to come to the f- or e-file, so the only way to win is:

1. g6f8+ g6h2 2. g6e5 g3 3. g6f4 g2 4. g6h8+ g6g1 5. g6g3 g6f1 6. g6f8+ g6g1

Here more or less any move wins, as long as it is not 7. g6f2? when 7... g6h1 draws. So instead I suggest:

7. g6f/ g6h1 8. g6h7+ g6g1 9. g6h2+-

2. Sebastian Feller – Sergey Fedorchuk, Bethune 2006

The game went: 72. g6f3? g6h4! 73. e6 g6c7! 73... g6c6? 74. g6d8 would allow White to win as in the game. 74. g6d7+ g6c6? 74... g6c8 would have made a draw. How White can improve his position eludes me. 75. g6d8 Suddenly there is a concrete threat in e6-e7. White won: 75... h6 76. g6f4 g6c7 77. g6d1 g6h2 78. g6f5 g6e2 79. g6f6 g6f2+ 80. g6g7 g6e2 81. g6f7 g6f2+ 82. g6e8 g6e2 83. e7 g6f2 84. g6c1+ g6b7 85. g6c4 g6f1 86. g6d7 g6d1+ 87. g6e6 g6e1+ 88. g6f6 g6f1+ 89. g6e5 1-0

Once you have seen the game it is not hard to see that White could have won on the spot if he had played 72. g6g3! which stops his king being cut off.


After 42. g6c8? White still had practical chances and indeed managed to win the game, but this does not entirely forgive his missing the direct win. 42... h6xg4 43. g6xg4 g6g7 44. f6+ g6a4+ 45. g6g5 g6e4 46. f6+ g6h7 47. g6f5 g6e1 48. g6c3 g6f1+ 49. g6e4 g6g1 50. g6d3 g6g6 51. g6d5 g6a1 52. g6g3+ g6f5 53. g6d6 g6a6+ 54. g6e7 g6a7+ 55. g6f8 g6xe5 56. g6g7 g6e6 57. g6e3+ We have reached Exercise 10.

White wins directly with: 42... g6d3! There is no defence for Black against the following tactical point: 42... h6xg4 43. g6d6+ g6xd6 44. g6xg6 45. f5! 1-0


White wins by cutting the black king off on the 5th rank: 50. g6e5! g6g6 51. g6b6 g6a8 52. c6 g6b8+ 53. g6a7 g6h8 54. c6+ h4 The counterplay comes way too late. 55. g6b7 g6f6 56. g6c5 1-0

5. Lawrence Kagambi – Eric De Winter, Tromso 2009

Black lost quickly after: 76... g6e2+ It was necessary to include the king in the defence: 76... h6! was the only move. After 77. g6e6 g6a2 White will fail to make progress. 77. g6d6 g6f2 78. g6e7 g6e2+ 79. g6f8 g6h6 80. f6+ g6f2 81. g6g8 1-0


Rook endings 101: White needs to cut off the black king as far away from the white pawn as possible. 48. g6d6! 48. gxh5 does not win. After 48... g6c7 49. g6e6 g6d7 50. g6e3 g6g2 White cannot make any progress. The black king is one row too close. But in the game the king was cut off far enough away: 48... g6c7 49. g6d1 g6g2 50. g6xh5 g6g3 51. g6h6 g6g4 52. h5 g6g2 53. g6h7 g6g5 54. h6 g6g2 55. g6h8 g6g6 56. h7 g6g2 57. g6a1 g6d7 58. g6a8 g6e7 59. g6g8 g6f2 60. g6g7 g6g2+ 61. g6h6 g6h2+ 62. g6g6 1-0
Chapter 3 – Simple Rook Endings

V. Hansen – G. Jones, Fagernes 2011

Nogueiras – Estrada Nieto, Merida 2006

Kogan – Gyimesi, Maalot 2008

Korobov – Nepomniachtchi, Rogaska Slatina 2011

Karlsson – Furhoff, Stockholm 2007

Graf – Velcheva, Athens 2008

0
62...\texttt{Ad}4! It is important to cut off the white king before queening the pawn. All other moves would allow White to get counterplay and make a draw. \texttt{63.\texttt{Be}3 63.g6 b1=\texttt{W}} is an easy win, of course. \texttt{63...\texttt{Bg}4 64.\texttt{Bc}7\texttt{+} \texttt{Bd}1 65.\texttt{Bd}7\texttt{+} \texttt{Bc}2 66.\texttt{Bd}2\texttt{+} 66.\texttt{Bc}7\texttt{+} \texttt{Bb}3 67.\texttt{Bb}7\texttt{+} \texttt{Bb}4 and Black wins. \texttt{66...\texttt{Bc}1 0–1}

77...\texttt{Bg}5! Good old-fashioned shouldering. The white king cannot easily join the action. \texttt{77...\texttt{Bg}5? 78.\texttt{Bf}5 \texttt{h}3 79.\texttt{Ba}3\texttt{+} \texttt{Bg}2 80.\texttt{Bg}4 \texttt{h}2 81.\texttt{Bc}2\texttt{+} \texttt{Bg}1 82.\texttt{Bg}3 \texttt{h}1=\texttt{W} 83.\texttt{Bf}3 and White wins.} \texttt{78.\texttt{Bf}5 \texttt{h}3 79.\texttt{Bf}4 \texttt{h}2 80.\texttt{Ba}1 \texttt{Bg}4 81.\texttt{Bf}3 \texttt{Bg}3 82.\texttt{Bf}2 \texttt{Bg}2 83.\texttt{Bd}8 \texttt{Bh}2 85.\texttt{Bh}8\texttt{+} \texttt{Bf}1 86.\texttt{Bg}8\texttt{+} \texttt{Bg}2 87.\texttt{Bx}g2\texttt{+} \texttt{Bx}g2 \frac{1}{2}–\frac{1}{2}

Black is threatening to keep the white king out of the game with ...\texttt{h}2 and only then improve his king and g-pawn. So: \texttt{57.\texttt{Bh}1!} is the only move. \texttt{57.\texttt{Be}3? is met with 57...\texttt{h}2 58.\texttt{Bf}2 \texttt{Bh}3 and Black wins.} \texttt{57...\texttt{Bf}3 Now 57...\texttt{g}3? 58.\texttt{Bf}3 would even lose!} \texttt{58.\texttt{Bf}1\texttt{+} \texttt{Bh}2 59.\texttt{Bf}1 \texttt{g}3 60.\texttt{Bg}3 \texttt{g}2 61.\texttt{Bf}2 \texttt{g}1=\texttt{W} 62.\texttt{Bx}g1 \texttt{a}1=\texttt{W} 63.\texttt{Bx}a1 Stalemate! \frac{1}{2}–\frac{1}{2}

Continued from Exercise 3. \texttt{57...\texttt{Bd}6? What is the point in sending the king to exile?} \texttt{58.\texttt{Bf}8!} White wins trivially. Seeing this idea is enough to throw \texttt{57...\texttt{Bd}6 on the rubbish heap.} \texttt{58...\texttt{Bb}7 59.\texttt{Bc}7 \texttt{Bb}1 60.\texttt{Bf}7 \texttt{Ba}1 61.\texttt{Bc}2 \texttt{Bf}3 62.\texttt{Bg}7 \texttt{Bg}3\texttt{+} 63.\texttt{Bf}8 \texttt{Bf}3 64.\texttt{f}7 \texttt{Bd}7 65.\texttt{Bf}2 \texttt{Be}6 66.\texttt{Bg}8 1–0

Black would have made a draw with \texttt{57...\texttt{Bf}5 58.\texttt{Bc}7 \texttt{Bf}6 59.\texttt{Bf}7. Another game reached the same position and was drawn after 59.\texttt{Bb}7 \texttt{Be}6 60.\texttt{Bb}5\texttt{+} \texttt{Bf}6 61.\texttt{Bf}1 \texttt{Bb}6 62.\texttt{Bf}1 \texttt{Bf}7 63.\texttt{Bf}1 \texttt{Bf}5 64.\texttt{Bf}8 \texttt{Bf}6 65.\texttt{Bf}4 \texttt{Bf}1 67.\texttt{Bf}1 \texttt{Bf}6 67.\texttt{Bf}1 \texttt{Bf}6 69.\texttt{Bf}1 \texttt{Bf}6 69.\texttt{Bf}1 \texttt{Bf}6 \texttt{Bf}6 \frac{1}{2}–\frac{1}{2} Prohaszka – K. Szabo, Heviz 2012. Best here is \texttt{59...\texttt{Bf}5! 60.\texttt{Bf}8 \texttt{Bb}6, when it is obvious that White cannot improve his position.}

\texttt{44...\texttt{Bf}6\texttt{+}! This simple tactic decides the game.} \texttt{45.\texttt{Bf}5 After 45.ex\texttt{f}6\texttt{+} \texttt{Bf}7 46.\texttt{Bh}6 \texttt{Bx}f6 47.\texttt{h}5 \texttt{Bx}f5 Black’s king marches in.} \texttt{45...\texttt{f}x\texttt{e}5 46.\texttt{Bf}5 \texttt{g}7 47.\texttt{f}6 \texttt{e}4 0–1}

Black draws with accurate play, though this is not what happened in the game. \texttt{62...\texttt{Bc}6? 63.\texttt{Bf}5 \texttt{Bf}5 64.\texttt{Bh}6? Missing 64.\texttt{Bf}4! \texttt{Bf}1 65.\texttt{Bd}6\texttt{+} \texttt{Bd}5 66.\texttt{Bg}4 when the black king is cut off and the h-pawn wins the game. The tablebases say “Mate in 34.”} \texttt{64...\texttt{Bf}7? White would not have been able to make progress after 64...\texttt{Bf}4 65.\texttt{Bc}6 \texttt{Bf}4. For example 66.\texttt{Bf}4\texttt{+} \texttt{Bf}5 and it all comes to nothing.} \texttt{65.\texttt{Bf}6! White now just wins.} \texttt{65.\texttt{Bf}5 \texttt{Bf}5 66.\texttt{Bf}4 would also win.} \texttt{65...\texttt{Bf}1 66.\texttt{Bf}7 \texttt{Bf}1 67.\texttt{Bf}7 \texttt{Bf}7 68.h6 \texttt{Bb}1 69.\texttt{Bf}7 \texttt{Bh}1 70.\texttt{Bf}6 1–0}

The right way to play was \texttt{62...\texttt{Bf}4, where 63.h6 \texttt{Bf}6\texttt{+} is an immediate draw. And after 63.\texttt{Bf}1 \texttt{Bf}6 64.\texttt{Bf}7 \texttt{Bf}7 65.\texttt{h}6 \texttt{Bf}6 66.h7 \texttt{Bf}7 67.\texttt{Bf}7 \texttt{Bf}7 68.h7 \texttt{Bf}7 69.\texttt{Bf}7 \texttt{Bf}7 68.h6 \texttt{Bf}6! White cannot make progress.}
Chapter 3 – Simple Rook Endings

Kamsky – Adams, Baku 2008

Brunello – Khurtsidze, Gibraltar 2012

V. Georgiev – Jakovenko, Wijk aan Zee 2007

Schandorff – A.S. Rasmussen, Helsingor 2012

Shomoev – Kobalia, Tomsk 2006

If Black had played ...h5 earlier he would have been okay. Now White had the chance to involve his king in the game. **58.h5! **\( \text{b3} \) 58...g5 59.fxg5 hxg5 60.h6 and White wins quickly. **59.\( \text{c1} \)** gxh5 59...\( \text{b2} \) 60.\( \text{c5} \) is not a repetition. **60.\( \text{h3} \)** Black resigned. He loses after: 60...\( \text{b4} \) 61.\( \text{h4} \) \( \text{b5} \) 62.\( \text{h5} \) \( \text{c6} \) 63.\( \text{xh6} \) \( \text{d5} \) 64.\( \text{h6} \) \( \text{c6} \) 66.\( \text{g5} \)


Black looks as if he is about to be mated, but the opposite is the case. **44...f5†! 45.\( \text{xf6} \) \( \text{h6} \) 46.\( \text{c1} \)! 46.\( \text{h8} \) lasts longer, but 46...\( \text{hh3} \) 47.\( \text{f5} \) exf5† (47...g5?! 48.\( \text{xh7} \) \( \text{xh7} \) 49.\( \text{g5} \) should also win, but not trivially) 48.\( \text{f4} \) (48.exf5 \( \text{g5} \) and wins) 48...\( \text{h4} \)† 49.\( \text{e5} \) \( \text{xe4} \)† 50.\( \text{d6} \) \( \text{a7} \)† and Black will win with the two extra pawns. **46...\( \text{g2} \)† 47.\( \text{h4} \) \( \text{h2} \)† 48.\( \text{g4} \) \( \text{g2} \)† 49.\( \text{h4} \) e5! It is game over. **50.f7 \( \text{xf2} \) With mate approaching, White resigned. 0–1

15. **Anton Shomoev – Mikhail Kobalia**, Tomsk 2006

It is always interesting to see very strong players play seemingly simple positions, as it makes it apparent to the rest of us just how awfully difficult chess is. That is, of course, if we do not fall into the trap of turning on Komodo (or another infallible clone) and believe that we would have been able to think as clearly as the machine. In reality, we would have struggled to even come close to thinking like the grandmasters. **63.b4**? The wrong pawn. Black wins with surprising ease. **63...\( \text{e3} \) 64.\( \text{b5} \) \( \text{d4} \)** Now we see the problem. It is not possible for the white king to keep the black king away, and the rook and the king will easily eliminate the pawns. **65.\( \text{b6} \) \( \text{g6} \)† 66.\( \text{a7} \) \( \text{c5} \) 67.a4 \( \text{g4} \) 0–1**

The correct plan was to advance the a-pawn in order to have the king on the right side of the pawn. Therefore the drawing line looks like this: **63.a4! \( \text{e3} \) 64.\( \text{b6} \) \( \text{d4} \) 65.a5 \( \text{b1} \) 66.a6 \( \text{xb3} \)† 67.\( \text{c6} \)! Shoulder the black king away. **67...\( \text{c3} \)† 68.\( \text{b7} \) \( \text{c5} \) 69.a7 \( \text{b3} \)† 70.\( \text{a6} \)** with a definite draw.

By the way, this can also be done with 63.\( \text{b6} \) or even 63.\( \text{b5} \)? \( \text{e3} \) 64.a4, but all other legal moves (63.a3, 63.\( \text{a6} \) and 63.\( \text{b4} \)) lose.


Black had a very successful opening and played the first twenty-odd moves immediately. However equality does not mean drawn. Over time, Sabino managed to generate a few problems for his opponent, who decided to go for a draw in a rook endgame. This is when it all went wrong. **58...g5?** This is an error of calculation, but there is also a lack of understanding attached to the move. White needs to push the black king in front of the pawns. The closer the most advanced pawn is, the easier this is to do. For that reason, we should automatically reach for the distant passed pawn in such a position as it is most likely the right move. But if we have more than 30 seconds per move, we might have the chance to solve the problem with a more reliable method than guessing! **59.\( \text{d5} \) g4** 59...h5 might look drawish, but here White can push the black king out of the way from the side. **60.a4†!** Only this move wins. **60...\( \text{f4} \) 61.\( \text{e5} \) h4 (61...g4 62.\( \text{a3} \) g2 63.\( \text{f4} \) and it is all standard stuff) 62.\( \text{f5} \) h3 63.\( \text{a3} \) g2 64.\( \text{g4} \) h2 65.a2† \( \text{g1} \) 66.\( \text{g3} \)** A known position from endgame theory. White wins: **66...h1=\( \text{g1} \) 67.\( \text{h3} \) g4† 68.\( \text{g4} \) f2† 69.\( \text{f3} \) d3 70.\( \text{a4} \) where the knight has been cleared from its protector and will be hunted down. **60.\( \text{d4} \) h5 61.\( \text{d3} \)** The most flexible. In general we should not give our opponents extra
options. Especially here, as $61.\texttt{f6}$ leads to a draw after $61...\texttt{g3} 62.\texttt{e3} \texttt{h4}$, and White would have no follow-up. $61...\texttt{f3} 61...\texttt{h4} 62.\texttt{e2}$ is the difference compared to the previous note. $62.\texttt{f6}+ \texttt{g2} 63.\texttt{e2} \texttt{h4} 64.\texttt{f2}+ \texttt{h1} 65.\texttt{f1}+ 65.\texttt{f4}! 65...\texttt{g2} 66.\texttt{f2}+ \texttt{h1} 67.\texttt{f1}+ \texttt{h2} 68.\texttt{f4}! Having gained time on the clock through the repetition, Sabino finds the win. $68...\texttt{g3} 68...\texttt{g3} 69.\texttt{e4} \texttt{h3} 70.\texttt{f1}$ and the pawns will not advance. $69.\texttt{xh4}+ \texttt{g1} 70.\texttt{g4} \texttt{g2} 71.\texttt{g8} 1–0$

Advancing the distant pawn was better. $58...\texttt{h5}!$ draws trivially: $59.\texttt{d5} \texttt{h4} 60.\texttt{d4} \texttt{h3} 61.\texttt{f6}+ \texttt{g3} 62.\texttt{e3} 62.\texttt{xg6}+ \texttt{f3} 63.\texttt{f6}+ \texttt{g3} 64.\texttt{e3} \texttt{g2} 65.\texttt{g6}+ \texttt{f1}$ and Black draws. $62...\texttt{g2}$ Usually it is good to stick to theoretical draws; if you know them! $62...\texttt{g5}$ was also good. $63.\texttt{e2} \texttt{h2} 64.\texttt{xg6}+ \texttt{h1}$ White cannot win.

17. Lars Schandorff – Allan Stig Rasmussen, Helsingor 2012

$58.\texttt{h8}=$\texttt{d1}! After the exchange of rooks, the pawn ending is trivial. $1–0$
64...Ec6†? 65.Ed7 Ec7† 65...Ec5 66.Ed8† Ec2 67.Ea8 would force the black king into the corner, which gives no winning chances. 66.Eg6 Eb3 67.Exh6 Ec4 68.Ea2! Dragging the black king into the corner. White is two tempos better off than previously. 68...Ea2 69.g4 Exe4 70.g5 Eb3 71.g6 Ec4 72.g7 Exg4 73.Eh7 Ed5 74.g8=Wy† Exg8 75.Eg8 1/2–1/2
Black was winning after the simple 64...Eb3†. 65.e5 is the only attempt I can think of. The checks available to White would not improve his position. 65...Ec4 A standard manoeuvre.
66.Ea2 Eb2 67.e6 Ec4 68.e7 Here there are a few ways to do it, all ending with the check on f4. For example: 68...Ec3 69.g4 Ec4 70.Ed7 Ef4† and Black wins.

Black went wrong with: 65...Eh3? 66.a7 f1=Wy 67.Exf1 Ed1† 68.Ed8=Wy Ed7 69.Ed3† Ed1 70.Ed1† 1–0
65...Eb3† would have drawn the game. 66.Ed6 66.Ed7 Eh3† is a nice little point. Black draws. 66...Ed8 67.a7 Eh8 and Black is ready to queen the pawn.

44...g5†! 45.Exg5 hxg5 is met with 45...Ec6 with the idea ...e6-e5#. After 46.g4 h4 Black wins. 45...Ed5† 46.Ed4 Eb5† 47.Ed3 d4†! The point. Loose pieces drop off. White played 48.Ed4, but reconsidered and resigned. 0–1

63.Ed8!! A nice tactical idea. 63...Exh6 After 63...Ed8 64.Ed6 Ed1 65.Exf7 Exh6 66.e6 White wins easily. 64.Ed6 Exd6† 65.Exf7 Exe5 66.Ed6† A perfect solution. Even though there are only four pieces left, there is nothing Black can do. 1–0
This is so instructive that you can probably forgive White having a second solution in 63.Ed6? Ed8 64.Ed6 Eg8 65.Ec6, when Black is in zugzwang. For example: 65...Ed8 66.h7† Exh7 67.Ed7 and White wins.
Chapter 3 – Simple Rook Endings

Shimanov – Nepomniachtchi, St Petersburg 2009

Fedorchuk – Saric, Bastia 2013

Dzierzenga – Najer, Rogaska Slatina 2011

Balogh – Kuczynski, Germany 2008

Cramling – Krush, Khanty-Mansiysk 2012

Asrian – Bologan, Warsaw 2005
22. Aleksandr Shimanov – Ian Nepomniachtchi, St Petersburg 2009
This exercise could be solved through elimination. In the game, White advanced his e-pawn and lost; something he would have been able to foresee with more than 30 seconds at his disposal...
The game went: 62.e6? g3 63.e7 63...Exa5† Exg4 64.Exe5 Exa1 65.e7 Exa8 and Black wins. 63...Exe1 64.e8=Exh8 65.Exe8 g2 66.Exf6 Exg4 67.Ed4† Exf3 68.Exh4 g1=Exh 69.EXh5 Exd4† 70.EXg6 Exd6† 71.EXg7 Exc7† 72.Ed7 Exf3 73.Ed5† Exc7† 74.Exc7 Exg4† 75.Exg7 Exc3† 76.Eh7 Exc7† 0–1
62...f8! would have ensured the draw. 62...Exf8 The only serious move from a human perspective. If you are a machine, you might as well advance the pawns and draw that way...
63...Exf8 g3 64.e6 g2 65.e7 g1=Exh 66.e8=Exf† With a theoretically drawn ending, although the game might last for another fifty moves before this result is achieved.

The game ended abruptly with 49.h5?? Exe2! 50.h6 f3 51.Ed5 f2 52.Ed6 Exe3 0–1. But White could have played more accurately.
49.Ed3! Elementary prophylaxis, though far from obvious. Black should not be allowed to put his king on e2 and enjoy the shield of the rook on e7. 49...Ed7† Or 49...Exg2 50.h5 f3 51.h6 f2 52.Ed8† Exf1 53.Ed2 Ed7† 54.Ec2 and the game will be drawn. 50.Exe2 Ed2† 51.Ed8†! But not 51.h5? Eb7† 52.Edb3 Exd7 and Black wins. 51...Ed2 52.Ed8 f3 53.h5 Exg7 54.h6 Exg6 55.h7 Exg7 56.Ed3 Black cannot make progress.

24. Pia Cramling – Irina Krush, Khanty-Mansiysk (2.4) 2012
White missed a wonderful way to win the game immediately and instead went down in a horrible way. 68.Ed5? Exf6 69.Edg8† Exg6 70.Edb8 Exf4 71.Exb5 Edg7 72.Edc5?? A very rare blunder from a grandmaster. 72.Exd4 was equal. 72...Exh5#
White could have delivered mate with: 68.f4† Exf4 69.g3† Exg5 70.Edg8† Exh5 71.Ed5 Threatening g4#. 71...Edg6 72.Exf5† Edg5 73.g4#

25. Sergey Fedorchuk – Ivan Saric, Bastia (rapid) 2013
White missed the chance to get a theoretical drawn position. After 54.Edg5† Exh4 55.Edg8 Exc7! Black was winning. It took another 11 moves before White resigned, but he is gone already.
54.Ed1! was needed first. After 54...Ec7 55.Edg5† Exh4 56.Edg8 Exc2 57.Edf1 White is able to block the more advanced passed pawn, which is the main idea behind these f- and h-pawn rook endgames.

Black missed the chance to draw in the last moments of the game (after a mistake by White a few moves earlier): 70...Exb5!! Instead the game went: 70...Eda3? 71.c7 Eh7 72.Edb6 Exc7 73.Exc7 a4 74.Edc6 Eda2 75.Edc5 1–0 71.c7 Ec6! This is maybe the surprising move. Black would be lost after 71...Eh7 72.Eda8†, but now there is no great way to win the black rook. The draw is obvious after: 72.Edc8=Exc8 73.Edxc8† Edc4!
A nice prophylactic display from the Armenian grandmaster, who sadly died at a young age.  
61.\texttt{f4}!! White needs to protect the g-pawn. After 61.\texttt{g6} \texttt{c4} 62.\texttt{h5} \texttt{c6} White has made no progress. 61...\texttt{d7} 62.\texttt{c8}! \texttt{xc8} 63.\texttt{xf6} \texttt{e7} 64.\texttt{g5} A theoretically winning position. Black's king is cut off and there is no time for ...\texttt{f8} because of \texttt{xf8} and \texttt{h6}, winning. 64...\texttt{h8} 65.\texttt{g6} \texttt{g8} 66.\texttt{h6} 1–0

\begin{figure}
\centering
\includegraphics[width=\textwidth]{./images/chapter3_diagram.png}
\end{figure}

I. Popov – B. Savchenko, Ulan Ude 2009
Bologan – E. Berg, Dresden 2008

\begin{figure}
\centering
\includegraphics[width=\textwidth]{./images/chapter3_diagram.png}
\end{figure}

Wang Hao – Gelfand, Moscow 2010
Bologan – Ragger, Eretria 2011
28. Ivan Popov – Boris Savchenko, Ulan Ude 2009

In this race, the question is how quickly the white king can make it to the kingside. The white rook will have to go to d7, and it would be unfortunate to block the rook's line of vision so the route is quite clear. Identifying this challenge is the difficult part of the exercise.

43. \textit{f}c6? does not work. After 43...d2 44.\textit{d}d7 g5! it is possible to see the downside of having the king “closer” to the line of action; but let us give some analysis: 45.\textit{d}d5 \textit{e}e2 46.\textit{d}d6 d1=\textit{a} 47.\textit{a}xd1 \textit{c}xd1 48.\textit{f}e5 \textit{h}e2 49.\textit{f}f5 \textit{x}xf3 50.\textit{x}g5 \textit{e}4! This move secures the draw. 51.h4 \textit{e}5 52.h5 f6\# 53.\textit{h}h6 f5 54.g5 f4 55.\textit{x}h7 f3 56.g6 f2 57.g7 f1=\textit{a} 58.g8=\textit{a} White will have some practical chances, but the ending is drawn.

Thus the correct move is: \textbf{43.\textit{c}c8!} f5 43...d2 is stopped by 44.\textit{d}d7 \textit{e}e2 45.\textit{d}d8, when White is winning thanks to the strength of his f-pawn. After 45...d1=\textit{a} 46.\textit{a}xd1 \textit{c}xd1 47.\textit{d}e7 \textit{e}e2 48.f4 \textit{f}f3 49.f5 \textit{x}g4 50.f6 the outcome is obvious. 44.\textit{g}xf5 \textit{g}xf5 45.\textit{e}d7 45.\textit{h}xh7 \textit{xf}3 46.\textit{d}d7 also won, but you only need one clear path to walk. 45...f4 46.\textit{d}d8 d2 46...\textit{f}f3 47.\textit{x}xd3\# 48.\textit{d}d2\# 49.h4 f3 50.h5 and White wins. 47.\textit{e}e7 \textit{xf}3 48.\textit{x}xd2 \textit{e}e3 49.\textit{d}d6 \textit{f}3 50.\textit{e}e6\# \textit{d}d2 51.h4 1–0

29. Wang Hao – Boris Gelfand, Moscow 2010

Sometimes even class aces like Boris Gelfand have complete meltdowns and fail to find relatively easy draws. They imagine something incredible and resign in the belief that their demise is “evident”. Here is one such example: 73...\textit{h}h5\# 74.\textit{g}g4 \textit{h}h1 Black is waiting. White cannot decisively improve his position. 75.\textit{g}g5 Black resigned. But the position was still a draw: 75...\textit{e}e6! 75...\textit{g}g1\# 76.\textit{f}f5 is entirely hopeless and must have been what the players expected. 76.f5\# 76.\textit{x}g7 \textit{g}g1\# 77.\textit{h}h5 \textit{h}h1\# 78.\textit{f}f4 \textit{f}f6 ensures a draw as well. For example: 79.\textit{g}g8 \textit{g}g1\# 80.\textit{h}h4 \textit{x}g6 and so on. 76.e8\# 77.\textit{d}d7 77.\textit{e}e3 cuts off the black king, but does not provide White with any way to improve his position. 76...\textit{e}e5 77.\textit{e}e8\# 78.d6 78.\textit{f}f6 There are no other ways to continue, but this gives nothing. 78...\textit{g}g1\# 79.\textit{h}h4 \textit{g}g6 80.\textit{h}h5 \textit{h}h1\# and Black draws. This example eerily resembles Gelfand – Wang Hao from page 15.


64.\textit{g}f3?! Black misses a chance to draw the game by defending from the side. 65.\textit{e}e5! A nice subtlety. Bologan knows his endgame theory; a benefit that comes from being a student of Mark Dvoretsky. If he had played 65.\textit{e}e6? Black would have drawn by 65...\textit{f}f6\# harassing the a-pawn from the side. 65.\textit{h}h3 65...\textit{e}e6 65.\textit{g}g8\# and White wins. 66.\textit{a}a7\# 67.\textit{g}g6 67.\textit{c}c7 Making matters simple. 67...\textit{a}a3 68.\textit{a}a7 \textit{a}a6 69.\textit{f}f5 70.\textit{e}e5 71.\textit{b}b5 \textit{a}a1 72.\textit{c}c6 \textit{e}e6 73.\textit{h}h7 \textit{d}d6 74.\textit{e}e6\# 75.\textit{d}d7 75.\textit{b}b6 1–0

Getting to the Vancura position is not easy, but it can be achieved with: 64...\textit{a}a5\# 65.\textit{c}c6 65.\textit{e}e4 \textit{b}b5 66.\textit{c}c8 \textit{a}a5 67.\textit{c}c6 \textit{f}f7 68.\textit{d}d4 \textit{e}e7 69.\textit{e}e4 \textit{d}d7 with a draw. Berg probably did not have enough time to realize that he would be able to play 65.\textit{h}h5\#, when White cannot avoid the Vancura position: 66.\textit{a}a7\# 66.\textit{d}d6 \textit{h}h6\# 67.\textit{c}c7 \textit{f}f6! and Black draws by harassing the white king. 66...\textit{g}g8 67.\textit{d}d6 \textit{h}h6\# 68.\textit{c}c7 \textit{f}f6! The game ends in a draw.


The game ended with: 69.\textit{f}f2\# 70.\textit{g}g3 70.\textit{h}h3 71.\textit{f}f7 71.\textit{f}f5 \textit{f}f6! (71...\textit{g}g2 72.\textit{e}e2 \textit{h}2 73.\textit{g}g5\# \textit{h}h1 74.\textit{f}f1 leads to mate) 72.\textit{a}x\textit{f}f6 \textit{g}g2 with a draw. 71.\textit{g}g2\! 71...\textit{h}2??
72.\texttt{g7}\texttt{h3} 73.\texttt{f2}! was seen in Bacrot – Robson, Khanty-Mansiysk (1.5) 2011, with the exception that the rook was on h6 instead of f7 to start with. This does not change anything with regards to how the position should be played. 72.\texttt{gg7}\texttt{h1} 73.\texttt{gg2} 74.\texttt{g2}\texttt{h2} 75.\texttt{gg7}\texttt{h1} 76.\texttt{gg2} and Black was stalemated. $\frac{1}{2} - \frac{1}{2}$

Instead White wins by delaying the advance of the h-pawn. This forces Black to lose time and the rook makes it to the 8th rank, deciding the game. 69.\texttt{dd3}!! \texttt{f5} 69...\texttt{gg4} 70.\texttt{ee3}! \texttt{gg3} 71.\texttt{dd8} also wins easily. 70.\texttt{aa3} \texttt{gg4} 71.\texttt{ee3}! \texttt{gg3} 72.\texttt{ee2}\texttt{h1} 73.\texttt{gg8} White wins. Black can delay matters with 73...\texttt{gg3} according to the tablebases, but obviously there is no hope there. 73...\texttt{h3} 74.\texttt{gg8}\texttt{h1} 75.\texttt{f2} \texttt{f4} Or 75...\texttt{h2} 76.\texttt{a8} with mate on the next move. 76.\texttt{gg7}\texttt{f3} 77.\texttt{dd7} \texttt{h2} 78.\texttt{a7}\texttt{h1} 79.\texttt{a3h3}#
32. Liviu-Dieter Nisipeanu – Zdenko Kozul, Croatia 2006
Black's passed pawn is stronger than the white one, as it is assisted by the king. 37...e3! Allowing White's threat. 38...f6t xf6 39.c8=wb e2 40.bc5+ 40...c6 is quickly disposed of with 40...d6 41.a3 b3! and Black wins. 40...xg2 Black also wins after 40...f1 41.c4 d4 42.d3 e4 43.c4 f2! For example: 44.d4+ xg2 45.d2 xf2 46.h4 f1 41.d5+ f3! 42.e4 42.xe5 f1! 42...e1=wb + 43.xe1 f1 The second e-pawn decides. 0–1

White was probably tired and missed the available draw with: 86.g5?? Black wins by taking on f2, but also with: 86.e3! 87.xe3 g4+ 88.xh5 xg8 89.g4 f3 90.g5 e4 0–1 86.g4! was the drawing idea. 86...h4 87.eh8! The main point. 87.g5? would be misguided. 87...xf2 88.g6 e3 89.g7 (89.e8 e2 90.g7 e1=wb 91.g8=wb e3 gives Black a winning attack) 89...e7 90.g5 e2! A nice trick shot. (90...f3? 91.f6! h3 92.e8 just draws. 90...e2?? also seems to win in a complicated matter, but it is impractical.) 91.f6 (91.eh4 e7! and Black wins) 91...h4 92.e8 xg7 93.xg7 h2 Black wins. 87...h3 88.g5 White has easily enough counterplay to make the draw.

34. Taggatz – Barsov, Bavaria (variation) 2009
43.a1?? 44.xf2 xa3?? looks tempting, but is insufficient. (44...g7 is a better chance, but White will struggle his way to a draw with 45.f3.) After 45.xf6 xh3 46.f5 Black would even need to be a bit observant. 46...h4! (46...h1? 47.f7! and White queens his pawn!) 47.g5+ h5 48.a6+ h6 49.xh6 xh7 50.g5 h6 51.g7+ g8 52.f7 h2 53.b6 a2 54.f6 Miraculously there is no way for Black to win this endgame.
43...g7! The only winning move. 44.a7+ h4 can be refuted in several ways. For example: 44...a5 (44...h5? is a faulty plan. White draws comically after: 45.xh5 g6 46.d2 xd8! xd4 47.d8! xh4 48.f4! h3 49.f3 h2 50.h8+ g1 51.g8+ h1 45.h5 f7 46.e2 a4 47.e2 f6xe2 eax3 and Black wins. 44...f8! 45.e2 45.xf6 e1 45...eax1 46.xf2 eax3 Black wins.

35. Nigel Short – Farrukh Amonatov, Bangkok 2012
Black should make a draw using the Vancura defence, something he was probably well aware of. Being short of time (presumably), he did not work out how to do so. 69...a5? 70.a8 a4 71.d3 g7 72.c3 Black is one tempo too slow to set up the Vancura defence. 72...f4 73.a7+ g6 74.b7 d4 75.d7 f6 76.b3 a1 77.c4 e6 78.c5 1–0 69...d5! was the fastest way to coordinate the pieces and thus the only way to draw. It is important to cut off the white king in order to win enough time to set up the defensive mechanism. 70.a8 70.b7 a5 and White has made no progress. 70...g7 71.e4 d6 72.e5 d6 The position is a theoretical draw. 73.d5 h7 74.c5 f6 Black has achieved the Vancura position.
Chapter 3 – Simple Rook Endings

**Burmakin – De Ramos,** Dubai 2013

**A. Muzychuk – Ju Wenjun,** Antakya 2010

**C.K. Pedersen – M. Andersen,** Helsingor 2013

**Dzagnidze – Kotronias,** Athens 2007
36. Vladimir Burmakin – Julius De Ramos, Dubai 2013
Black tried waiting, unsuccessfully. 78...Ec5? 79.Ed7† Ed8 80.Ed4 Black is lost. There is no way for him to defend the g6-pawn, after which the g5-pawn will sail away with all the glory. 80..Ea5 81.Eg7 Eb5 82.Eg6 Ec7 83.Ef6 Ebl 84.Ef5 Eb5† 85.Eg6 Ee5 86.Eh6 Ea5 87.Ef3 Exe6 88.g6 Eal 89.g7 Ehl† 90.Eg6 Eg1† 91.Eh7 Eh1† 92.Eg8 Eh7 1–0
Black had to challenge the e-pawn immediately: 78...Ec6! 79.Ed7† Ed8! 79...Eg8? would leave the king out of play. After 80.Ed6 Eh7 81.Ed8 the white king comes in to decide the game: 82.Ed4 Eh8 83.Ee6 Ef7 84.Ed5! This point will be revisited frequently in the chapter on fortresses. 84..Exe7 85.Exe7† Exe7 86.Ed5 Classical zugzwang; White wins. 80.Ed6 Ed7 81.Exg6 Exe6 Black is just in time and draws with standard opposition.

37. Christian Kyndel Pedersen – Mads Andersen, Helsingor 2013
White could have achieved the full point with 37.Ed8† Eh7 38.Ed7† Eg8 39.Ed7†, giving Black no chances for counterplay.

38. Anna Muzychuk – Ju Wenjun, Antakya (3.1) 2010
The game continued 48.Edxg5?, which looks entirely plausible. But Black was able to surprise White: 48...Edg7!! White might have mentally accepted that she had to give up the rook for the pawn, but she probably expected it to be later rather than sooner. The rest was plain sailing. 49.Edc3 Eh5† 50.Edc6 Ec5 51.Edxh5 Edxh2 52.g4 Edxg2 53.Edc4 54.Edxh5 Edf3† 55.Edg7 Ed7 56.Edg8 Edf6 57.Edg7 Edg3 58.Edh8 Eh7 0–1
48.Ed3! was thus the logical choice, defending the pawns and preparing the creation of a passed pawn. 48...Ed4 49.Ed2 can be met with a waiting move, for example 49.Ed8 or 49.Ed4 Edh4† 50.Edh3! and Black has no chance of winning the game. 49.Ed4 Edh4† 50.Edh4 Edxg2 50...Ed3 51.Edg4 Edxh3 52.Edh5 with a draw. 51.Ed4 Edc4 52.Edh3! Eb2 53.Edg4 and White draws.

I should mention that 48.Ed4 Eb2† 49.Edh3 Ed2 is no improvement for White, although she curiously still draws after 50.Edg3 Ed4 51.Edg4! Edh3 52.Edxg5. It is one of those absurdities, where the g2-pawn is unimportant. It could disqualify this position from being a decent puzzle, but matters little for the player trying to improve their game.

Black gave White a chance to claim the full point: 74...d4? But she wasted it with: 75.Ed7? The winning idea was: 75.Ed5 Eh4† 76.Ed7 Edg4† 77.Ed8, when Black’s king is cut off and White has won the necessary time to improve her position. 77...Edh3 (or 77...Edg2 78.Ed7 d3 79.Ed7 d2 80.Ed5 Edf4 81.Ed6 Edf4 82.Edg7 and White wins) 78.Ed7 d3 79.Ed5 Edg3 80.Ed7 Ed3† 81.Ed6 Edf3† 82.Edg7 Edg3† 83.Edh6 Edf3 It was inevitable this position would arise.
White can now transform into a winning endgame with 84...\texttt{xf4} 75.\texttt{g6} \texttt{xf7} 77.\texttt{xf7} \texttt{f3} 78.\texttt{d5} \texttt{e3} \frac{1}{2}-\frac{1}{2}

It was necessary to prevent the opponent's threat by going directly for the f-pawn: 74...\texttt{xf4}! 75.\texttt{g6} \texttt{d4} 76.\texttt{f7} \texttt{xf7}! 77.\texttt{xf7} \texttt{f4} 78.\texttt{e6} \texttt{d3} Black draws easily.
40. Daniele Vocaturo – Mark Bluvshtein, Wijk aan Zee 2011
After 67...d5? Black can only escape with a draw after 67...b7!!, preparing to place the king on a6. It is obvious that Black will eventually have to give up his rook for the white pawn. At that time, he will have no drawing chances if his king is cut off on the back rank.

67...b5! Not only a nice-looking move, attacking the black pawns, but essential prophylaxis against Black’s defensive idea. 67...b4† 67...b7 68.h7† now wins elementarily. 68.a6xb3 There are other lines available for Black, but not other outcomes: 68...c6 69.h5 b5 70.h6 c5 71.h7 b4 72.xb6 a6† 73.a7 a3 74.xb8 b5† 75.a6 and 68.b5 69.axb5 xxb3 70.h5 a4 71.h6 a3 72.h7 a2 73.c8† both lead to a white victory. 68...d7 is also pointless. White plays 69.h5 a7 70.h6 b5† 71.b8! and the double threat of xxb6 and h7-h8=∞ decides.

69.h5 We now see an important point behind White’s play. There is no defence against bringing the h-pawn all the way to the 7th rank and then either giving a check or playing h8=∞a8-a7†, picking up the black rook on h7. 69...b5 70.h6 70.axb5 a4 71.h6 won as above. 70...bxa4 71.h7 b3 72.a8∞ xh7 73.a7† 1–0

41. Arne Matthiesen – Karsten Rasmussen, Aarhus 2010
White missed the chance to win the game with: 59.e3! c6 This is the reason he did not play it. Other defensive tries fail eventually as well. For example: 59...e8 60.xe3 e3 61.a8=∞ xg3 62.h8 g4 63.g7† xh4 64.gxf7 and White mates in 34 with correct play. 60.e8! White queens with check.

Instead the game was drawn after 59.c8? xc8 60.xc8 e2 61.a8=∞ ½–½.

42. Alexei Shirov – Alexander Rustemov, Germany 2008
Let’s assume that the players were short on time here and each made his next move quickly. 40.e6?? fxe6? Black misses a big chance. 40...b5†! was the right move, after which 41.xh4 fxe6 leads to a draw, while 41.f6? f5† 42.e7 fails to 42...e5!. 41.xg6 f8 42.f6 g8 43.e7† h8 44.g4 xb6 45.xh4† g8 46.ad4 b3 47.xe6 b2 48.g4 d2 49.f6 b6† 50.g5 b5† 51.g6 b6† 52.h5 b2 53.g5 f7 54.g6† e6 55.g7 f7 56.h6 b8 57.h7 1–0

Instead White should have played 40.f6! d2 41.b8† h7 42.d8, when Black has nothing better than 42...xb6† 43.hxf7 b2, and after 44.e6 the difference between the two kings is overpowering. White wins.

43. Hrant Melkumyan – Dmitry Andreikin, Plovdiv 2012
The game went: 66.f3? c2 67.c1 d3? 68.g4 e1 69.xc2 xc2 70.e4 g1 71.f5 d3 72.g5 d4 73.g6 e6 74.d6 e5 75.g7 d7 76.f7 xg7† 77.xg7 ½–½ But if Black had instead played 67...c3! 68.g4 d4†, the white king would have been cut off and Black would have won.

66.f4? c2 and again Black wins.

This makes the random-looking 66.g3!! the only move. The idea is to defend the pawn, nothing more. After something like 66...c2 67.e1 c3 68.f5! White would have made the draw. The king is in perfect shouldering position.
44. Karsten Müller, 2010
I found this position deep in a piece of Karsten Müller’s analysis. As mistakes had been committed by both players from a position I am using later in the book, it really makes no sense to credit it to anyone other than Karsten.

The point of the “study” is of course that 78.\textsf{f}5? bizarrely loses! 78...\textsf{a}8! 79.\textsf{xf}2\textsf{t} (79.\textsf{b}2 \textsf{g}3 does not improve things) 79...\textsf{xf}2 80.\textsf{h}5 White looks like he is drawing — and he would be if the king was on \textsf{g}5. It isn’t, and he is lost. 80...\textsf{g}3! 81.\textsf{h}6 \textsf{h}4 82.\textsf{g}6 \textsf{a}6\textsf{t} 83.\textsf{g}7 \textsf{g}5 84.\textsf{a}7\textsf{t} 85.\textsf{g}8 \textsf{g}6 86.\textsf{h}8=\textsf{a}\textsf{t} 86...\textsf{f}6 and Black wins.

78.\textsf{h}5? \textsf{g}1 is simple.

White draws by shouldering. 78.\textsf{f}4!! \textsf{a}8 79.\textsf{xf}2\textsf{t} \textsf{xf}2 80.\textsf{h}5 It does appear paradoxical, but the white king is better placed on \textsf{f}4 than on \textsf{f}5. 80...\textsf{g}2 81.\textsf{h}6 \textsf{h}3 82.\textsf{g}5 with an easy draw.

King – Speelman, Sunningdale 2008

Zhou – Khandelwal, Sheffield 2011

Anand – Vallejo Pons, Linares 2005

Danielsen – Arvola, Helsingor 2013
45. Daniel King – Jonathan Speelman, Sunningdale 2008

King played 49.gc5? gxb2 50.gc4 gb3† 51.gd7 g7 52.g4 gd6 53.ed4 and a draw was agreed.

White wins by advancing the b-pawn quickly. 49.bb8† gd7 50.b5 Exb2 51.b6 The b-pawn is now a powerful asset. Black finds that he has limited options. 51...db3† After 51...f6 52.exf6† xf6 53.b7 gd7 Black cannot prevent the white king from making it to the 7th rank. He can then either head for c7 or e7, forcing Black to play ...dh7. Then ef7 will put Black in zugzwang. First the e6-pawn is lost, then the chap on f5. 52.df2 db2† 53.ed db3† Black would like to just wait, but if the king leaves the f-pawn then White will go for it immediately. 53...dh7 also fails to hold: 54.e3! Exg2 55.e8 db2 (55...gd7 56.b7 xf8 57.b8=E† ef7 ef7 is not much of a fortress. The white king marches up the board with evil intentions.) 56.xf7† gd8 57.db7 eb4 does not provide Black with any chances. White wins after 58.db8† gd7 59.b7!, when the white king will make it to e7 once again. 54.e2 eb2† 55.ed3 Exg2 55...db8 56.db8 df7 White wins.

46. Viswanathan Anand – Francisco Vallejo Pons, Linares 2005

Vallejo had what might have been the second most disappointing moment of his career (after losing to me of course) when he allowed the future (and previous) World Champion to escape with a draw after: 66...dh1?? 67.db8 Exh7 ½–½

The winning idea was not too difficult. Black wants to move the king without allowing White to give a check. 66...db2†! 67.ed7†! Simple prophylaxis; White cannot activate the rook. 68.ee2 ea7 The simplest version of the idea, preventing a check along the file once the king moves to the side. Other versions work as well. 69.xe3 ea2 Black wins.

47. Yang-Fan Zhou – Ankush Khandelwal, Sheffield 2011

In the game, White played: 45.ed4? Quite a poor move, White should be looking to help move the pawns forward. 45...db3! 46.e5 White loses simply after 46.ed5 f5 and 46.c5 Exb5 47.e6 Eb2 as well. 46...eh5 47.eb6 g4 48.c5 g3 49.e6 Ec3 50.ed7 h5 51.edb1 h3 52.db6 h2 53.eh1=ew 54.b8=ew Eh2† 55.ed7 Eh3† 55...Exb5 56.eb8 Edg4 also won. 56.e7 Ec3† 57.e8=ew Edg6 58.eb4 Eh8† 59.ed7 Eh2† 60.edb7 g1=ew and Black wins. 57...gd6! 0–1

45.db6! was the correct move. The king needs to protect the pawns as they move forward. 45...g4! Black cannot waste his time. 45...f5? is the wrong pawn to advance and would surprisingly even lose! 46.ee1! The key move. Black is struggling for counterplay. 46...Ed2 47.e7 Ee8 48.e6 g4 49.e7 g3 and simplest is 50.ea5!, when the pawns just march on. 45...Ec2 46.e5 forces Black to come up with 46...g4! 47.eb4 f5 48.ed8 f4, which is similar to the main line. 46.eh4 f5 47.eh8 Edg7 48.eh5 Ed6 The race ends in a draw after a photo finish. For example: 49.eh4† eg5 50.eh8 f4 51.ed8† Edh4 52.edh8† eg3 53.e5 f3 54.ed8 Edg2 55.ed8 Edc2 57.edb7 with an almost symmetrical position!

48. Henrik Danielsen – Benjamin Arvola, Helsingor 2013

White won a nice game after: 59...Ed5 60.ed Ed1 60...Ed4 also fails to hold. 61.e7 b3 62.e7 h4 (62...b2 63.Ed1 is another line. 63...h4 e8=ew Exe8 65.h7 h3 66.f6 h2 67.Ed1 g3 68.f7 g2 69.f8=ew g1=ew 70.e7† White starts a winning attack: 70...Ec3 71.Ed1† Edc4 72.Ed4† Black is
mated sooner or later.) 63.\texttt{ag}1! (63.\texttt{axg}4 \texttt{axg}4 64.\texttt{e}e8+ \texttt{b}2 65.\texttt{e}1 \texttt{h}3 transposes after 66.\texttt{e}2t!) 63...\texttt{h}3 64.\texttt{axg}4 \texttt{axg}4 65.\texttt{e}8+ \texttt{b}2 66.\texttt{e}2t \texttt{c}3 67.\texttt{axg}4 \texttt{b}1= \texttt{68.}\texttt{axh}3t The endgame is easily winning. 61.\texttt{e}7 \texttt{b}3 62.\texttt{ag}1!! Black probably missed this move in advance. White gets a queen and wins the game.

62...\texttt{axg}1 63.\texttt{e}8+ \texttt{b}2 64.\texttt{e}4t \texttt{c}3 65.\texttt{e}3t \texttt{c}2 66.\texttt{f}2t \texttt{c}1 67.\texttt{axg}1t \texttt{c}2 68.\texttt{c}5t \texttt{d}2 69.\texttt{d}4t \texttt{c}2 70.\texttt{c}4t \texttt{d}2 71.\texttt{b}3 \texttt{c}1 72.\texttt{c}3t \texttt{b}1 73.\texttt{g}5 \texttt{g}3 74.\texttt{axg}3 \texttt{a}2 75.\texttt{f}2 1-0

To save the game, it was necessary to remember one of the most general ideas in all rook endings: passed pawns must be pushed. 59...\texttt{b}3! 60.\texttt{hxg}5 \texttt{b}2 would have secured the draw.

Narayanan – Kanarek, Kocaeli 2013

Vallejo Pons – Morozevich, Monte Carlo 2007

Wang Yue – A. Sokolov, Paris 2006

Ernst – Venkatesh, Groningen 2008
49. S.L. Narayanan – Marcel Kanarek, Kocaeli 2013
White played 74...g8??, when after 74...g6! he was lost. The game finished: 75.h4 xf2†
76.g1 d2 77.h5 f2† 78.g2 e3 79.h6 d1 80.f8† g6 0–1
74.h4† g4 75.g8† xh4 leads us to the critical position. 76.g4†! is the point of the exercise. 76.h8†
is poor: 76...g5 77.g3 g1† 78.h3 h4 79.f8† e5 and Black wins. 76...xg4 Stalemate.

50. Wang Yue – Andrei Sokolov, Paris 2006
Black misses the rather difficult last chance to draw. The game went: 48...a3? 49.xb8† a5
Sokolov must have thought that the threat of ...c6† and ...a6 would force White to give a
perpetual, but actually the pawns are already so advanced that White can do without his rook.
49...a4 is met with 50.h4! (50.a8† b3 51.h4 a2 52.h5 c6† 53.g5 c5†! should draw, as
White cannot very well go to h4 with the king) 50...c6† 51.f7 a6 52.xb1! The only winning
attempt is to give up the rook. 52...a2 53.a1 b3 54.h5 b2 55.xa2† xa2 56.g4 a7†
57.g6 a6† 58.g5 a5† 59.g4 c3 60.h6 a1 (60...d4 61.h7 and the pawns just roll
down) 61.g5 h1† 62.g4 d4 63.f5! Shouldering. The black king cannot get to the defence.
63...d5 64.g6 (64.g6?? h5† is a trick worth knowing) 64...e6 65.f4 and White wins.
50.xb1 b3 50...a4 51.h4 is a tempo worse than the previous line. That is all we need to know.

51. Francisco Vallejo Pons – Alexander Morozevich, Monte Carlo 2007
In the game, the players agreed a draw immediately after: 52.xb3 ½–½
White could have won with fairly straightforward moves: 52.d5! c5 Activity seems to be
the only try worth looking at. Passive play is easily overcome: 52...e7 53.c5 b8 54.b6
d7 55.d4† e6 (55...e7 is too passive to offer any resistance. White can play slowly, as the king
is drastically cut off: 56.c6 c8† 57.b5 b8 58.d5 g8 59.b7 g4 60.c5 b8 61.b6)
56..d6† e5 57.d5† f6 58.c6 g4 59.g7 c8g8 60.b7 and the black king is cut off. 53.c5
b8 54.b6 g4 After 54...g4 55.b7 f3 White plays 56.g3! and wins easily. 55.xb3! The point
of the exercise. Black’s counterplay is eliminated. Now 55...h4 is answered with 56.h3† g4
57.c6 and White wins.
52. Sipke Ernst – Marani Rajendran Venkatesh, Groningen (variation) 2008
63.\texttt{f6}\ does not make it: 63...\texttt{b3} 64.\texttt{xf4} \texttt{c6} 65.\texttt{f5} \texttt{d6} 66.\texttt{f4} \texttt{f3}\! 67.\texttt{g6} \texttt{g3}\! 68.\texttt{g5} \texttt{f3} 69.\texttt{f5} \texttt{e7} 70.\texttt{g2} \texttt{f8} 71.\texttt{a2} \texttt{f1} Black makes a draw.

63.\texttt{xf4}\? \texttt{c6} 64.\texttt{e5} \texttt{b8} and Black will get close enough with the king to secure a draw.

The only winning move is \texttt{g6}!!, preparing the advance of the f-pawn. 63...\texttt{b3} 64.\texttt{xf4} \texttt{c6} 65.\texttt{f7} \texttt{d6} 66.\texttt{f4} \texttt{g3}\! 67.\texttt{f6} \texttt{g1} 68.\texttt{f5} White wins.

Pelletier – Ivanchuk, Cap d’Agde 2013

Carstensen – Aagaard, Helsingor 2012
53. Yannick Pelletier – Vassily Ivanchuk, Cap d’Agde 2013
Presumably short on time, Ivanchuk missed the winning idea. After 43...\texttt{g7?} 44.\texttt{f1} the game was later drawn.

43...\texttt{c5!} was the best move. The winning line is almost one-dimensional. 44.\texttt{f1} \texttt{g2} 45.\texttt{g1} \texttt{e1} \texttt{xg2} does nothing for the white position. Black is threatening \texttt{...g1} then queening the g-pawn. 45...\texttt{b2}! 46.\texttt{f1} \texttt{c4}! 47.\texttt{bxh4} \texttt{b4} 48.\texttt{c5} \texttt{b3} 49.\texttt{c6} \texttt{e2} 50.\texttt{b1} \texttt{b2} 51.\texttt{c7} \texttt{e1} 52.\texttt{e2} The only try, but it is not enough. 52...\texttt{xb1}! 53.\texttt{c8} \texttt{e1} Essential, but not too difficult. 53...\texttt{g1} 54.\texttt{f8} and White makes a draw. 54.\texttt{xel} \texttt{b1} \texttt{e1} 55.\texttt{e2} \texttt{b2} Black wins the g-pawn and the game.

Playing on my 39th birthday, my opponent had gifted me a pawn in the opening. After a further thirty moves however, it turns out that the position is not yet won. 37.\texttt{f4} Seeking simplifications. 37...\texttt{xd4} 38.\texttt{fxc5} \texttt{d3} 39.\texttt{f4} \texttt{b3} At this point I mistakenly believed the win was secure. It is easy to overestimate the value of two pawns when in time trouble. 40.\texttt{c5} \texttt{b4}! My idea. The threat of \texttt{...c3} is powerful, but... 41.\texttt{e3} \texttt{f5} 42.\texttt{xe5} \texttt{xb2}

54.
43.\texttt{c5}? White fails to spot a direct draw. 43.\texttt{e6} \texttt{g5} 44.\texttt{e5} would not give Black a chance to even play on. For example: 44...\texttt{f6} 45.\texttt{c5}! \texttt{c2} 46.\texttt{d4} and the fact that Black cannot play \texttt{...h5} is rather important for the potential pawn ending. I am not sure if Jacob considered the checks and did not pick up on this subtlety; or if like me he failed to see the idea altogether.

43...\texttt{c2} 44.\texttt{f4} \texttt{c3}? This move can only be explained by fatigue. I was intending to play 44...\texttt{c1} 45.\texttt{c6} \texttt{h5} 46.\texttt{c5} when the combined threat of driving the king to the centre and advancing the h-pawn decides. But then I thought, \texttt{why not just push the c-pawn one step forward first? This surely must be simpler.} Actually this is not the case. 45.\texttt{c6} \texttt{h5} 46.\texttt{e3} \texttt{g2} 47.\texttt{f3} \texttt{h2}
55. White had a study-like saving chance, based on his super-active rook and the poorly placed black king. 48.\texttt{e}4! (or \texttt{e}3) would hold. The point is that 48...\texttt{c}2 is met with 49.\texttt{f}4!! and Black cannot improve his position! For example: 49...\texttt{e}2 50.\texttt{f}3 \texttt{d}2 51.\texttt{e}3 \texttt{h}2 52.\texttt{f}4! 48...\texttt{c}2! 49.\texttt{f}3 \texttt{c}1 50.\texttt{e}3 \texttt{c}2? Once again I had to be accurate and, true to form, I missed my opponent’s best idea. 50...\texttt{g}5! was the winning move. Black is threatening to move the h-pawn, after which there is no defence. 51.\texttt{c}5\texttt{g} 52.\texttt{c}4\texttt{g} 53.\texttt{c}5 I saw this, but I failed to look just one step deeper, missing 53...\texttt{f}1!, when Black wins.

56. White had a fantastic drawing resource in 51.\texttt{c}5!! \texttt{g}4 52.\texttt{d}2. The difference compared to the game is miniscule but apparent after 52...\texttt{d}1\texttt{f} 53.\texttt{xc}2, where Black cannot keep White from giving checks from the side in the same way as the game. Both 53...\texttt{d}4 54.\texttt{c}3! and 53...\texttt{d}6 54.\texttt{c}4! lead to a draw as Black cannot keep the white king cut off on the c-file.

51.\texttt{d}2? Jacob returns the favour. 51...\texttt{d}1\texttt{f} 52.\texttt{xc}2 \texttt{d}5! 53.\texttt{c}1 \texttt{g}5 54.\texttt{c}2 \texttt{f}4 55.\texttt{c}4\texttt{g} 56.\texttt{c}3\texttt{g} 57.\texttt{c}2\texttt{g} 58.\texttt{b}2 \texttt{h}5 59.\texttt{c}4 \texttt{g}2 60.\texttt{c}2\texttt{g} 61.\texttt{c}3\texttt{g} 62.\texttt{c}4\texttt{g} 63.\texttt{c}4\texttt{g} 64.\texttt{c}4\texttt{g} 65.\texttt{h}8 \texttt{g}3 66.\texttt{g}8h8 \texttt{g}3 67.\texttt{h}2 \texttt{h}2 68.\texttt{g}7 \texttt{h}1 69.\texttt{g}8\texttt{h}2 70.\texttt{g}7 \texttt{h}5 71.\texttt{d}2 \texttt{h}1 72.\texttt{e}3! The toughest defence, preventing the black king from escaping. 72...\texttt{g}1 73.\texttt{h}7 \texttt{g}2 74.\texttt{g}7\texttt{f} 75.\texttt{f}1 76.\texttt{e}1 77.\texttt{f}4 \texttt{f}3 78.\texttt{f}3 \texttt{f}1= \texttt{f}1! Even here additional work would have been necessary, though the rook does drop off pretty quickly. 79.\texttt{f}4 \texttt{f}1\texttt{f} 80.\texttt{e}5 \texttt{b}5\texttt{f} 81.\texttt{e}4 \texttt{c}4\texttt{f} 82.\texttt{f}3 \texttt{d}3\texttt{f} 83.\texttt{g}2 \texttt{f}1\texttt{f} and 84...\texttt{f}2\texttt{f}.
White eventually won, but at this particular point he misplayed his position. The win is by no means easy from here, but you could definitely spend your time worse than trying to work out how to win this position. Please feel free to move the pieces around if this makes it easier for you to work out the mechanics of this ending.
I have a great fondness for endings with opposite-coloured bishops. Not only can they be aesthetically pleasing, but I happened to win an ending with this piece distribution in each of the tournaments where I made my three GM norms. I always found the general principles of opposite-coloured bishop endings to be quite easy to understand and implement, though the endings can be quite difficult to play. Most people I have worked with have approached these endings with only the knowledge that they are frequently drawn. While this is indeed a part of the overall story, it is only a small chapter and in many cases a mere prologue!

The best description of the strategic principles governing this type of endgame can of course be found in Dvoretsky’s Endgame Manual. Not being able to improve on perfection, I will use them here — though not in the same order, just to make a slightly different emphasis.

Let’s start with pawn placement. We all know that the pawns should be placed on the opposite colour of squares than our bishop, especially in bishop endings. Well, there is an exception to this rule, and quite a significant one: When defending an opposite-coloured bishop ending, the pawns should in general be on the same colour as your bishop. The reason for this is simple: the bishop will find it easier to defend the pawns and the pawns will find it easier to defend the bishop. As the opponent will only be able to attack the pawns with his king (or rook, should we throw them in the mix), the defence of the pawns can be quite solid.

An opposite-coloured bishop ending may end in a draw because one side controls the light squares and the other side controls the dark squares, the result being that no one can make progress. The way to win these endings is thus to try to control the colour of squares where the opponent’s bishop is located. For this reason winning an ending with opposite-coloured bishops will most often involve putting your pawns on the same colour squares as the opponent’s bishop.

This fight for each other’s adjacent territory naturally leads to a strategic principle that makes these endings more fascinating than your bread-and-butter minor piece endings: Positional factors frequently outweigh material factors, meaning that we quite often see pawn sacrifices made to improve a bishop’s range, create a passed pawn or some other positional gain.

The most important defensive method is therefore to attack the opponent’s pawns and thereby force them onto the wrong colour of squares. There is no better way to explain this than by example:

Confident of his drawing resources in the ending with opposite-coloured bishops, Black played rather quickly and ended up in a lost position, seemingly without offering any resistance along the way.
32...\textit{\$f4}?
As we shall see, it was important to include 32...\textit{\$b1}! 33.a3 before reverting to the plan seen in the game with 33...\textit{\$f4}!, when a draw would be achieved without much effort.

33.\textit{\$e3} \textit{\$c2}?
Black continues down the slippery slope.

After 33...\textit{\$d6±} White could have made some progress, but the game would not yet be decided.

34.\textit{\$xf4} \textit{\$xd1} 35.\textit{\$f2} \textit{\$f7} 36.\textit{\$e3} \textit{\$e6}
37.\textit{\$d4} \textit{\$d7}
37...\textit{\$f5} 38.\textit{\$d6} followed by \textit{\$c5} does not leave Black any better off.

38.\textit{\$c5} \textit{\$c2} 39.\textit{h4} g6 40.\textit{g3} \textit{\$d1} 41.\textit{\$b6}
\textit{\$c2} 42.\textit{\$e3} \textit{\$d1} 43.\textit{\$c5} \textit{\$c2} 44.\textit{\$b7} \textit{\$d1}

Obviously by the time they reached this position Hansen had realized what was happening, but for a long time White's simple idea of creating a passed a-pawn by giving up the b-pawn had escaped him. This is what happens to us if we try to navigate these endgames entirely by calculation.

45.\textit{b3}! \textit{\$c2} 46.\textit{a4}
The a-pawn can only be stopped by a hara-kiri bishop, which will do nothing to alter the result.
1–0

Now let us compare the position that could have occurred had Black inserted 32...\textit{\$b1}! 33.a3. The following position would have been reached on move 45:

White has lost control over a single light square, b3, which makes all the difference. There is no significant progress to be made, and the game would have ended in a draw quite rapidly.

The most common drawing method in these endgames is of course the fortress. Most often this is based on the bishop having obligations on one diagonal only – and that this diagonal is long enough for it not to get into zugzwang.

This is indeed what happened in the following game where White did not manage to foresee his opponent's threat in time.
The white bishop has to stay on the d1-h5 diagonal, but here comes the catch: it also has to be able to be defended by the king on both d1 and f3. This is not too hard to achieve, but it is also not hard to lose this ability, as happened in the game where the white king was forced to d1, after which the black king could take control of the vital f3-square.

102.\(\texttt{h}5\)?

102.\(\texttt{h}5\)? was the best move, though all bishop moves on the long diagonal that did not blunder the bishop would also have maintained the fortress. If the black king comes to c1, White will put his king on e2 and the bishop on b3/a4, when the position is a draw.

This is particularly interesting when we compare it with what happened in the game.

102...\(\texttt{c}3\)

White is already lost now, but it takes some time for Black to come to the zugzwang position where the fortress breaks (for more about fortresses and zugzwang, turn to page 285).

103.\(\texttt{d}1\) \(\texttt{f}2\)

Vacating the e3-square for the king.

104.\(\texttt{e}2\)

104.\(\texttt{e}2\) \(\texttt{e}1\) 105.\(\texttt{f}1\) also does not hold. After 105...\(\texttt{d}4\) the king reaches e3 because of 106.\(\texttt{e}2\) f3\(\texttt{\textdagger}\).

104...\(\texttt{e}1\) 105.\(\texttt{d}1\) \(\texttt{d}3\) 106.\(\texttt{e}2\)\(\texttt{\textdagger}\) \(\texttt{e}3\)

107.\(\texttt{b}5\)

From here on Black takes his time, but manages to get there in the end.

107...\(\texttt{h}4\)

Here for example 107...\(\texttt{f}3\) was mate in 16, but Black is correctly prioritizing winning over winning quickly.

108.\(\texttt{f}1\) \(\texttt{d}8\) 109.\(\texttt{c}4\) \(\texttt{a}5\) 110.\(\texttt{b}5\) \(\texttt{f}2\)
111.\(\texttt{c}4\) \(\texttt{f}3\) 112.\(\texttt{d}5\) \(\texttt{g}3\) 113.\(\texttt{c}4\) \(\texttt{b}4\)
114.\(\texttt{b}5\) \(\texttt{g}2\) 115.\(\texttt{c}6\) \(\texttt{f}2\) 116.\(\texttt{b}7\) \(\texttt{g}3\)
117.\(\texttt{a}6\) \(\texttt{g}2\) 118.\(\texttt{b}7\) \(\texttt{g}3\) 119.\(\texttt{a}6\) \(\texttt{f}2\)
120.\(\texttt{f}1\) \(\texttt{h}2\) 121.\(\texttt{e}2\) \(\texttt{g}1\) 122.\(\texttt{h}3\)
We can see that the diagonal from f1 to h3 is too short. If White had an additional square ("i4") he would make a draw, whereas now he is put in zugzwang.

122...\textcolor{red}{\texttt{a}}5 123.\textcolor{red}{\texttt{d}}1 \texttt{f1=\texttt{W}}1 124.\textcolor{red}{\texttt{x}}f1 \texttt{xf1} 125.\textcolor{red}{\texttt{c}}2 \texttt{e}2 126.\textcolor{red}{\texttt{b}}3 \texttt{d1=\texttt{W}}1 127.\textcolor{red}{\texttt{c}}4 \texttt{d}6 128.\textcolor{red}{\texttt{b}}5 \texttt{b}4 129.\textcolor{red}{\texttt{c}}6 \texttt{d}4 130.\textcolor{red}{\texttt{b}}7 \texttt{d}6 131.\textcolor{red}{\texttt{a}}8 \texttt{d}7 132.\textcolor{red}{\texttt{b}}8 \texttt{b}6 133.\textcolor{red}{\texttt{a}}8 \texttt{a}7#

The principle of one diagonal is a compelling one. The following game is quite a typical example of a ‘dead’ draw turning into a full point for the player with the better technique.

\textbf{Damir Bosnjak – Borki Predojevic}

Jahorina 2003

94.\textcolor{red}{\texttt{g}}3

This is not objectively wrong, but it creates some extra problems for White by allowing Black to get a passed pawn before White can force a draw directly.

94.\textcolor{red}{\texttt{a}}1! (or \texttt{b}2) is my favourite. The idea is that 94...\textcolor{red}{\texttt{d}}3 brings the king out of the quadrant of the white pawn, allowing White to force a draw with direct play:

95.\textcolor{red}{\texttt{g}}3 (or 95.\textcolor{red}{\texttt{g}}4) 95...\texttt{f}3 96.\textcolor{red}{\texttt{g}}4 \textcolor{red}{\texttt{e}}4 97.\textcolor{red}{\texttt{g}}5 \textcolor{red}{\texttt{d}}5 98.\textcolor{red}{\texttt{g}}6 \textcolor{red}{\texttt{e}}6 99.\textcolor{red}{\texttt{g}}7 \texttt{f}7 Black has no way to improve his position, as the bishop on e4 was never and will never be able to stop the white pawn without letting go of the f3-pawn, as his obligations were never on the same diagonal.

Hilariously (well, if you are into chess endgame humour that is!), 94.\textcolor{red}{\texttt{h}}8? actually loses. The variation is beautiful: 94...\textcolor{red}{\texttt{d}}3 95.\textcolor{red}{\texttt{g}}4 White cannot hesitate or Black will just win the bishop and return with the king in time to defend the f-pawn. 95...\texttt{d}5 96.\texttt{g}5 The same story; Black was threatening to win the bishop. 96...\texttt{e}4 97.\texttt{g}6 (97.\texttt{f}6 ends in zugzwang, as in the game.) 97...\texttt{f}5 98.\texttt{g}7 \texttt{g}8!

94...\texttt{f}3 95.\textcolor{red}{\texttt{e}}3 \textcolor{red}{\texttt{d}}5 96.\texttt{g}4?!

Doing nothing would still lead to a draw, so why move the pawn forward?

96...\texttt{e}6 97.\texttt{g}5?

White knows that he needs to keep his bishop's obligations on one diagonal, but he seems to have misunderstood the concept. The g5-pawn and the b2-square are not on the same diagonal; the bishop is split between the two and, as a consequence, quickly finds himself in zugzwang.
White would have made the draw if he had done nothing.

97...\textit{f}5 98.\textit{f}6 \textit{g}4 99.\textit{f}2 \textit{f}4

Zugzwang. Black wins the pawn and later the game.

100.\textit{h}8 \textit{x}g5 101.\textit{e}3 \textit{g}4 102.\textit{e}5 \textit{f}5
103.\textit{h}8 \textit{g}4 104.\textit{e}5 \textit{g}6 105.\textit{f}2 \textit{f}5
106.\textit{h}8 \textit{e}4 107.\textit{g}7 \textit{h}5 108.\textit{e}1 \textit{d}3 0–1

Generally it is easier to get a decisive result out of opposite-coloured-bishop endings with rooks on the board. However, just as with the one-diagonal principle above, we should not suppose that it is universally true. The following example is a rare case where the defender should keep the rooks on the board.

In order to evaluate a possible exchange of rooks correctly, it is necessary to look at the resulting ending. What we can quickly determine is that White cannot advance his pawn from g2 without allowing Black to create a strong passed pawn on h3. As Mastrovasilis was probably down to 30 seconds per move, he probably decided to get the rooks off while he had the chance, and worry about other things later.

94.\textit{a}7?

Something like 94.\textit{e}8 \textit{a}2 95.\textit{g}1 looks ugly, but there is no forced win as far as I or Houdini can see.

94...\textit{xa}7 95.\textit{xa}7 \textit{g}4 96.\textit{b}6 \textit{g}5 97.\textit{d}8+ \textit{h}5 98.\textit{g}1 \textit{g}3 99.\textit{c}7 \textit{e}4 100.\textit{b}6 \textit{c}6
101.\textit{f}1 \textit{g}4 102.\textit{e}3 \textit{b}5+ 103.\textit{g}1

This makes it a bit easier for Black, but the white position could not be held anyway.

103.\textit{e}1 would have required the black bishop to come in via g4, which would not have been a problem to arrange. White can try a few things, but eventually Black wins: 103...\textit{h}5
104.\textit{b}6 \textit{d}7 105.\textit{e}2 \textit{g}4+ 106.\textit{e}3 \textit{f}3
107.\text{xf}4?! (107.gxf3 h3!\rightarrow) 107...\text{xe}g2 108.\text{c}5 \text{f}3 109.\text{e}3 \text{g}6 110.\text{b}6 \text{f}7 111.\text{d}8 g2 112.\text{b}6 \text{e}6 Black will win by bringing his king to d1. The finish might look like this:

![Chessboard diagram]

White has to play \text{f}2, and after ...\text{d}2 the e-pawn marches through.

103...\text{e}2 104.\text{c}5 \text{f}3!

Black's three pawns easily decide the game.

105.\text{b}6 \text{g}2 106.\text{g}xf2 h3\uparrow 107.\text{g}1 \text{f}3 108.\text{c}5 e3 109.\text{b}6 h2\uparrow 110.\text{h}1 \text{f}2 111.\text{x}e3\uparrow \text{xe}3 112.\text{g}2 h1=\text{g}\uparrow 113.\text{x}h1 \text{f}3 0–1

A complicated example

The following is one of the most famous opposite-coloured bishop endgames of the last few years. By winning this game, Aronian qualified for the final of the World Cup, which he also won. It was analysed in some detail by Jonathan Hawkins in his interesting book *Amateur to IM*. His analysis was good, but to some extent incomplete. I would like to present what I believe to be the definitive analysis of this complex ending. As we shall see, the players had no chance to understand all of the complexities during the game and were by no means close!

Let's start with the shocking end.

**Aronian – Bacrot**

![Chessboard diagram]

The game ended dramatically with White playing 50.\text{f}5 and Black resigning needlessly after 50...\text{a}7. It did not take long for the drawing method to be published on the Internet. But even though I had seen all the analysis and understood it, I was unable to hold the position when pushed by John and Colin in the office. Poor Bacrot did not even know that the position should hold and thus
had no chance at all. I think his resignation was premature, but if he had played five more moves, it would have been timely.

Only after deep analysis did I realize that the diagram position is a case of mutual zugzwang. This is not so easy to discover, but quite simple to explain. Take the following line: 50.©f3 ©e7 52.©e4 ©d6

At this point Black absolutely needs his bishop on c5, ready to go to f8. If the bishop was anywhere else on the a7-g1 diagonal, White would play 53.©f5 and Black would not be in time to protect the h6-pawn from f8. The main point is that Black relies on the following drawing mechanism:

Black replies to 1.©g8 with 1...©c7 (or any other sensible bishop move) and after 2.©g7 h5 the pawn will go to h3, exploiting the fact that the bishop on f1 has duties on two diagonals, leading to the elimination of the a6-pawn.

The drawing line from the final position goes like this.

51.©f4 ©e7
51...h5!? is the computer’s favourite, and also okay, but I like the simplicity of keeping the pawn at h6.

52.©g4
The most aggressive attempt.

52.©e5
This would force Black to play:
52...h5!
This draws relatively easily.

It is essential to avoid moves like 52...©g1?? on account of 53.f6+ ©f7 54.©g4! and White wins.

53.©f4
After 53.f6+ ©f8 54.©f5 h4 55.©g5 ©f7 56.©f1 ©d4 White cannot make progress.

53...©f6 54.©e4 ©e7 55.©d5 ©d7! 56.f6+ ©e8!=
Black draws.

52...©d6!
The white king needs to be kept under control.

Instead after 52...©f6? 53.©e4 White gets to b7 while keeping the bishop on h3. The simple winning position will look something like this:
We can observe that the bishop on h3 has duties on one diagonal only.

53.\textit{e}4 \textit{b}6 54.\textit{f}6
54.\textit{d}3 \textit{e}5 55.\textit{c}4 \textit{h}5 56.\textit{h}3 \textit{f}2
57.\textit{b}5 also gets nowhere after 57...\textit{d}6, when there is no way forward for the white king.

54...\textit{c}6
54...\textit{c}7?? 55.\textit{d}5! would be a disaster.

55.\textit{e}5 \textit{c}5
Black draws.

In order to fully understand this endgame, we have to understand the roles of both bishops. We have observed that the white bishop worked well from h3, where it protected the f5-pawn while blocking the h-pawn. We also saw that the black bishop needs to be able to make it to f8 quickly, in order to protect the pawn on h6. If the ...h5 advance occurs prematurely, the black bishop will not be able to block the f-pawn and defend the h-pawn at the same time.

In order for the fortress to hold, the black king will have to prevent the white king from ever making it to b7. Therefore it has to be ready to go to d6 to block the white king's path at any time. To maintain the possibilities of ...\textit{f}8 and ...\textit{d}6 is not an easy combination, but it was within Black's reach at the end of the game.

Armed with this knowledge, let's have a look at the game in its entirety.

\textbf{Levon Aronian – Etienne Bacrot}

\textit{Khanty-Mansiysk (6.2) 2005}

1. \textit{d}4 \textit{d}5 2.\textit{c}4 \textit{c}6 3.\textit{f}3 \textit{f}6 4.\textit{c}3 \textit{a}6 5.\textit{a}4 \textit{e}6
6.\textit{g}3 \textit{dxc}4 7.\textit{g}2 \textit{c}5 8.\textit{dx}c5 \textit{xd}1 9.\textit{xd}1 \textit{d}5
10.\textit{xe}3 \textit{d}5 11.0-0 \textit{xe}3 12.\textit{xe}3 \textit{xc}5 13.\textit{xc}4 \textit{e}7 14.la1 \textit{d}7 15.\textit{fe}5
\textit{xe}5 16.\textit{xe}5 \textit{d}6 17.\textit{xd}7 \textit{xd}7
18.\textit{xb}7 \textit{a}7 19.\textit{c}6\# \textit{e}7 20.\textit{b}3 \textit{b}8
21.\textit{b}1 \textit{f}5! 22.e3 \textit{c}7 23.\textit{f}3 \textit{c}3!
23...\textit{c}2? 24.lf1 a5±

24.\textit{e}2 \textit{xb}3 25.\textit{xb}3 \textit{xb}3 26.\textit{xa}6 \textit{a}3
27.\textit{b}5 \textit{e}5! 28.\textit{g}2 \textit{a}1 29.\textit{xa}1 \textit{xa}1±

White obviously has real winning chances, though objectively the game should end in a draw. This verdict is also true in twenty moves from here, but along the way a lot of things will happen.

30.\textit{a}5 \textit{e}5 31.\textit{a}6 \textit{b}8 32.\textit{h}4 \textit{a}7 33.\textit{f}3
\textit{f}6 34.\textit{g}4 \textit{h}6 35.\textit{h}5
35...g5?

This leads to the weakening of the kingside. The main problem is that the black bishop will no longer be able to protect the base of the defence, the g-pawn, while at the same time fighting against the white passers.

Jonathan Hawkins gives the correct way for Black to hold. The lines are pretty, but I shall not go too deeply into them. Buy *Amateur to IM* if you want more details.

35...e5! 36.e8 b6 37.g6 a7 38.gxf5 exf5 39.e2

39...f4

My understanding of the position is that whenever Black is able to play this move, he draws.

40.e4 b6 41.f3 a7 42.d3 g1 43.c4 f2 44.b5 d6

Black has managed to create a barrier, or fortress-like position. The only way to break the fortress is to give up one of the passed pawns.

45.f5? Attempting to regroup the bishop before giving up the e-pawn.

45.e5† xe5 46.c6 f6 47.b7 g5 48.a7 xa7 49.a7 h4 50.b6 g3 51.e4 h4=

45.g1 46.g4 f2 47.e5† xe5 48.c6 f6 49.b7 g6 50.xg6 xg6 51.a7 xa7 52.xa7 g5 53.b6

53...h4! 53...h5?? 54.d7! h4 55.e8! White wins.

54.d7 g3 55.g4 h4!

Black draws as he is preparing ...h5 and ...g3, without White having time to play d7-e8-h5.
36.hxg6 hxg6 37.gxf5 exf5

We should also check the alternative recapture, even though it intuitively seems less convincing. The main problem is that Black will not be able to play ...e6-e5 without opening up a diagonal for White and giving him quick access to b7. Here is the proof:

First ...h5 is delayed.
47.g4 g7 48.e4 d7 49.xe6

Manoeuvring the king to h5 should also do it.
49..xe6 50.f5 e7 51.f6 e6 52.f4 b6 53.g4 e3

Black is desperately trying to keep control of all the access routes, but both his king and his bishop are unable to lose a move, which makes it easy to put him in zugzwang.

Black cannot allow the king to come to g6/g7.
56.xh6 e3 57.h5 d4 58.g5

White wins. The king will appear on f5 or g6, winning in either event.

38.f1 g5

White has managed to create the ideal structure in the centre. Now he manoeuvres around a bit before striking at e6, tripling the number of his passed pawns.
Up to this point, it looks as though Aronian has been 'going with the flow'. I know it might sound dismissive, but it is not meant to; the fact is that he has not had to do anything especially deep up to this point. Bacrot gave up a pawn in order to get a drawn ending and, after decent play from White, Black created extra weaknesses in his own camp. We have now arrived at the phase of the game where Aronian should prove himself and discover how the position is winning.

However, I think Aronian's drifting had been so successful up to this point that it was hard for him to change course. He simply shuffled his pieces around for a while longer, hoping that something easy would show up or that his opponent would self-destruct. This is indeed what happened, so it is hard to criticize Aronian for this strategy!

From our perspective, it makes sense to focus on the reality on the board rather than speculate on what was going on inside the players' heads – which might well have been entirely different from the narrative I gave above!

39.\text{g}3

It is obvious from his play in the remainder of the game that Aronian never understood where the pieces were best placed. The winning line is dependent on White playing f4 and e4 in the right order, meaning that \text{g}xe4 can be followed by \text{d}5, \text{c}6 and so on.

Thus the most accurate winning line goes like this:

\text{39.h3! b6}

39...h5 “Hoping to eventually create threats with the h-pawn which will be useful in defense.” – Hawkins. 40.e2 f4 41.e4 \text{f}6 42.f3 \text{e}5 43.d3 \text{g}1 44.d7 \text{a}7 45.e8 \text{h}4 46.d7 \text{d}6 47.h3 \text{e}5

A crucial position. White wants to play f4 and \text{f}3, but this is not so easy to achieve without losing the e-pawn or allowing a drawing ...f4 punch. But there is a way:

41.f4! \text{c}7 42.f3 \text{b}6 43.e2

The triangulation has won a tempo. Black is
not able to play ...f4 as White simply takes the pawn and enjoys a superior version of the ending we are approaching.

43...\texttt{g6} 44.f4 \texttt{a7} 45.\texttt{d3} \texttt{f6} 46.e4

Black is lost. His king was nailed down to the defence of the f5-pawn until this point. And now after taking on e4, he cannot make it to d6 in time to block the white king's advance. At the same time the white bishop is happy on h3, performing both its duties on one diagonal.

39...\texttt{f6} 40.\texttt{g2} \texttt{b6}

White will have to take on f4, after which he will never be able to pin Black down to the weak f-pawn and delay the king's transfer to d6. We will essentially end in the same scenario as in the game.

Actually it is a bit surprising to me that an educated chess player like Bacrot would not take the chance to rid himself of a pawn on a light square, no matter if he had any of the details worked out. To the rest of us this is a reminder that, even when we have no idea of the final outcome, there are always some useful guiding principles to fall back on.

41.\texttt{h4}?

White was still winning, but we shall not go into the small nuances here. The fastest way is 41.\texttt{f4} \texttt{a7} 42.\texttt{b7} \texttt{b8} 43.\texttt{f3} \texttt{e6} 44.\texttt{e2} \texttt{d7} 45.f4 \texttt{c7} 46.\texttt{f3} \texttt{a7}

41...\texttt{g6}?

Black misses the chance to play 41...f4!.

42.\texttt{c6}? \texttt{d8}?

42...f4! still works as before. Obviously White should not have continued to allow it. It seems that both players were waiting for the other to do something.

43.\texttt{g3} \texttt{b6}
44.e4?
A horrific move. The f5-pawn is weak and White should seek to exploit this fact, not exchange it.

The winning line at this point should go something like: 44.Wf4 Wf6 45.Wd7 We7 46.Wf3 Wb6 47.Wd4 Wg5 48.Wf4† Here the only way I can think of for Black to deviate from ground already covered would be to advance the king with 48...Wg4. Still, White wins relatively easily: 49.Wf2 Wa7 50.Wb5 Wb6 51.We2† Wf4 52.Wf3 Wh5

We are back where we started in the mutual zugzwang position. To finish off, we need to deal with a question raised by Hawkins, who tried to find a White win after 50.Wf1?.

He managed to prove a win after 50...h5† 51.Wg3 Wa7, which he found suggested by some commentators. We already know that the h-pawn needs to stay on h6 so that the black bishop can do two jobs on the same diagonal; thus it should come as no surprise to us that White is winning here. The shortest winning line goes like this: 52.Wd3 Wg7 53.f5! Wd4 54.Wc2 Wa7 (54...Wf6 55.Wh4) 55.Wh4 Wh6 Otherwise the king just takes on h5 and White wins. 56.f6! Black has no defence. The white king runs around to e5 and helps the f-pawn promote. The white bishop will stop the h-pawn, so the outcome is certain.

However, Black does not need to panic, and he should be fine if he leaves the pawn on h6. For instance, 50...Wa7 51.Wc4 Wc5 52.Wf3 We7! 53.Wc2 Wd6 54.Wc4 Wc7 and once again the position is drawn.

50.f5 Wa7

Nope, it does not get any less tragic the second time around...

1–0
Chapter 4 – Opposite-Coloured Bishops


2. Muir – Hambleton, Reykjavik 2013

3. Bromberger – Atalik, Augsburg 2004

4. Ponomariov – P.H. Nielsen, Beijing 2011

5. Safarli – Amin, Tromso 2013

6. Khukhashvili – Girya, St Petersburg 2009
1. Alexander Grischuk – Murtas Kazhgaleyev, Astana (rapid) 2012

42.\textit{d8}! White wins the b6-pawn and then the game. 42.b4? \textit{d7} leaves White without a win. 42...\textit{g6} 43.\textit{b4} \textit{f7} The point of White's play is that 43...\textit{f5} 44.b5\textdagger{} \textit{c5} is met strongly with 45.\textit{e7}#. 44.\textit{xd3} 1–0

2. Andrew Muir – Aman Hambleton, Reykjavik 2013

White should draw relatively easily, as long as he does not panic. 46.axb3 a3 47.b4 a2 48.\textit{xa2} \textit{e2} 49.\textit{b3} 50.\textit{f3}? But this, alas, is panic. White draws easily with 50.\textit{b5} \textit{c4} 51.\textit{b6} \textit{d4} 52.\textit{b7} \textit{f4}, when he all he has to do is: nothing! If the black king goes for the b-pawn, White can play \textit{e2}, f2–f3, b8=\textit{=W} and \textit{exe3} with a draw. 50...\textit{e3} 51.\textit{b5} \textit{c4} 52.\textit{b6} \textit{d4} 53.\textit{b7} \textit{f4} The difference here is that the white king can be forced back. 54.\textit{d1} \textit{d3} 55.\textit{e1} \textit{g3}\textdagger{} 0–1

3. Stefan Bromberger – Suat Atalik, Augsburg 2004

White resigned after: 60...\textit{e1} 0–1 This is not just the most practical move; it is also the only one that wins.

Atalik gave the following line as proof: 60...\textit{d2}? 61.\textit{h4}! \textit{xe3} 62.\textit{g3} \textit{xd4} 63.\textit{b3} \textit{c7} 64.\textit{f3} \textit{d6} 65.\textit{xe2} \textit{xb2} 66.\textit{d2} \textit{c5} 67.\textit{a4}? \textit{d4} 68.\textit{d7} \textit{e4} 69.\textit{xe6} \textit{d4} 70.\textit{e2} \textit{c5} 71.\textit{f7} \textit{d6} 72.\textit{xe6} \textit{xf4} 73.\textit{d7} \textit{e5} 74.\textit{a4} \textit{f4} 75.\textit{c2}\textdagger{} \textit{d4} 76.\textit{b3} \textit{d6} 77.\textit{f3} \textit{c7} 78.\textit{e2} \textit{a5} 79.\textit{f3} \textit{d2} 80.\textit{xe2} \textit{e3} 81.\textit{f3} \textit{c5} 82.\textit{e2} \textit{d4} 83.\textit{xe6} \textit{b4} 84.d3 \textit{f4} 85.\textit{g4} \textit{f2} 86.\textit{xe2} \textit{c5} 87.\textit{e4} Black cannot breach the fortress.

4. Ruslan Ponomariov – Peter Heine Nielsen, Beijing (rapid) 2011

White wins by creating zugzwang. 38.\textit{f8} \textit{g8} 39.\textit{g7}? The black king is stalemated. 39...\textit{h5} 40.\textit{gxh6} \textit{h7} 41.\textit{c7} \textit{g8} 42.\textit{d6} \textit{c4} 43.\textit{e7} White plays \textit{h6–h7}\textdagger{} and wins. 1–0

5. Eltaj Safarli – Bassem Amin, Tromso (1.4) 2013

If Black had played ...\textit{f6} on the last move, he would probably have saved the game. Now White manages to exchange his worthless pawn on f5 for the annoying back-stopper on a5. 74.\textit{f6}\textdagger{} \textit{xf6} 74...\textit{h7} 75.\textit{e3} gives Black problems on the back rank. 75.\textit{xa5} White has a winning ending. The technical part takes a bit of time, but should not be doubted. 75...\textit{e7} 76.\textit{d3} \textit{e5} 77.\textit{b5} 77.\textit{c4} won a bit faster: 77...\textit{f8} 78.\textit{xc5} \textit{xe5} 79.a5 and the pawn marches on. 77...\textit{h5} 78.a5 \textit{h3}\textdagger{} 79.\textit{c4} \textit{c3}\textdagger{} 80.\textit{b4} \textit{c1} 80...\textit{c7} offered a bit more resistance, but it can be overcome: 81.a6 \textit{d4} 82.\textit{c4} \textit{g6} 83.\textit{d5} \textit{e3} 84.\textit{c3} \textit{f5} 85.b4 \textit{f4} 86.b5 \textit{f3} 87.b6 and so on. 81.\textit{b7} \textit{c3}\textdagger{} 82.\textit{b5} \textit{f1} 83.\textit{a6} \textit{d4} 84.\textit{c4} \textit{f2} 84...\textit{f5}\textdagger{} 85.\textit{a4} 58.\textit{a7} \textit{e5} 86.d5 White had an elegant forced win in 86...\textit{d7}! \textit{g1} 87.a7 \textit{b3} 88.\textit{xf7}\textdagger{} followed by 89.\textit{f3}\textdagger{} winning the bishop. 86...\textit{f1} 86...\textit{e3} would only postpone the inevitable. 87.\textit{c4} \textit{g1} 88.a7 \textit{c1}\textdagger{} 89.\textit{b5} \textit{a1} 90.\textit{xf7}\textdagger{} \textit{g6} 91.\textit{f1}\textdagger{} 1–0

6. Sopiko Khukhashvili – Olga Girya, St Petersburg 2009

Black is disorganized for a moment. White needs to strike. 96.\textit{e6}! \textit{c5}\textdagger{} 96...\textit{f6} 97.\textit{xe6} \textit{g6} is even worse. 97.\textit{h6} \textit{xe6} 98.\textit{g6} \textit{c8} 98...\textit{d5} can be most simply refuted by 99.\textit{xd5} \textit{exd5} 100.\textit{f5} and Black will end in zugzwang with his bishop on e8 and king on g8. 99.\textit{e5} \textit{c6} 100.\textit{f6} \textit{d5} 101.g5 \textit{f8} 102.g6 \textit{g8} 103.g7 \textit{e8} 104.\textit{b4} 104.f5! would have won instantly. One gets the feeling that White was securing a bit of extra time on the clock by just moving around. 104...\textit{f3}
105.\textit{\texttt{\texttt{Bb2 e4 106.a2 f5 107.g4 g4 108.d6 h5 109.a5?!}}} White is clearly not finding the win. 109.a2! and \texttt{h2} just wins. 109...g4 110.g5 f5 111.h5 h7 112.g5 f5 113.g1 d3 114.a8 f5?! 114...c8 115.h1 h7 would have forced White to find the win described earlier. 115.h1 h7 116.xh7! 1-0

\begin{figure}[h]
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\includegraphics[width=\textwidth]{chess_diagram}
\caption{Uhlmann – Spassov, Porz 1990}
\end{figure}

\begin{figure}[h]
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\includegraphics[width=\textwidth]{chess_diagram}
\caption{Gashimov – Eljanov, Elista 2008}
\end{figure}

\begin{figure}[h]
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\includegraphics[width=\textwidth]{chess_diagram}
\caption{Kalaitzoglou – Nikolaidis, Porto Rio 2012}
\end{figure}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{chess_diagram}
\caption{Roiz – Socko, Lublin 2011}
\end{figure}
7. Wolfgang Uhlmann – Liuben Spassov, Porz 1990
A simple elimination exercise; not that this helped Spassov. 91...@£6?? 92.£4! White is allowed to make progress and the position goes from drawn to winning. 92...£c5 92...gx4 93.g5+- 93.£f7† @g6 94.f5† @h6 95.£c7 £xf2† 96.£f1!? A slightly quicker win was 96.£d1! £g3 97.£d7 when there is no defence to £g8 and mate. 96...£g3 97.£b7! White was still able to mess up, but Uhlmann avoids a cunning trap. As this was in the days of adjournments, this was maybe not even by luck! 97.£d7 £f2† 98.£g1 £a2 99.£g8? £a7!! 100.£xa7 £f2† 101.£xf2 Stalemate. 97...£c2 98.£xb4 £g7 99.£b6 £f8 100.£g6 £f2† 101.£g1 £e7 102.£xg5 £f6 103.£h5 £e5 104.f6† £e4 105.f7 £f4 106.£h8 £f2† 107.£g2 £c5 108.£e8† £d4 109.£g3 1–0
By elimination we can see that 91...@£8! would have caused no problems for Black.

The techniques of prophylaxis and elimination are useful in dealing with this exercise. What is Black’s idea? For a number of students, this question has been more difficult than it should have been. 55.£d1!? Sadly for the amateur, this blunder prevented him from drawing with the GM. 55...£d2 56.£e2 £g1! The point. 57.£c4 £h2 58.£f7 58...£g2 e3→ 58...e3 0–1
After 55.£c1 I have only found one idea for Black: 55...£e7 56.£f1 £xh4!? 57.gxh4 £xf4 But this really is a stretch. 58.£g2 £e5 After 58...g5? 59.£xh5 gxh4 60.£h3! Black even loses. 59.£b5 f4 60.£e8 Black has no winning chances.

White won with a nice little combination, which is the only pristine solution, though other moves also win eventually. 89.a6! £a8 89...£xd4 90.£b4† (90.£c6† £b5) 90...£xb4 91.£xd4 £c8 92.a7 £b7 93.h5 gxh5 94.f5 h4 95.e6 £xe6 96.f6!+- 90.£d6 £b8 91.£c6† £d5 92.a7 £a8 93.£b6 1–0
89.h5!? gxh5 90.a6 works in much the same way, but I doubt that anyone would choose to do it like this.
89.£c6† keeps the domination, but is a small step backwards.
However 89.£d6? £xd6 90.exd6 £b5 91.£c3 £e6 92.£d4 £c8 93.£e5 £c6 94.f5 also wins.

10. Michael Roiz – Bartosz Socko, Lublin 2011
65...£f7?? A remarkable mistake for such a strong player, which shows how difficult chess is; especially with short time controls and the ever-increasing ingenuities of the top players. 66.£f4!
White now has g3-g4 coming, breaking up the black kingside. 66...£b7 67.£e1 £c8 68.£f2 £g7 69.£g3 £f7 70.£e1 £g7 71.g3 £f7 72.£c3 £b7 73.g4 hxg4 White is also winning after 73...fxg4 74.£e1 £c8 75.f5 gx5 76.£g3, when he will get a second passed pawn on the h-file. Zugzwang upon zugzwang is likely to follow. 74.h5 gxh5 75.£xf5 g3 76.£e1 g2 77.£f2 The difference in ability between the passed pawns is apparent. White wins as he pleases. 77...£e7 78.£g6 £d5 79.£xh5 £f6 80.£g4 £e6 81.£g5 £f7 82.£f5 £b7 83.£g1 £a8 84.£e5 £c7 85.£f5 £f7 86.£d6 £f6 87.£c7 £xf5 88.£b7 £xb7 89.£xb7 £g4 90.£c6 1–0
Black had to play 65...£xf3 66.gxf3, and now not 66...£xf3? 67.£xg6, when he is in zugzwang, but 66...£f7!, when White has no winning prospects at all.
Galliamova – Kovalevskaya, Russia 2006

Saric – Topalov, Kozloduy 2013

Paragua – Jakovenko, Tromso 2013

Aagaard – Van den Berg, Wijk aan Zee 2001
This exercise is little more than a trap. Black fell for it in the game. 91...h3? 92.hxh3 gxh3 93.d7+ d6 94.b5! Surprisingly Black is in zugzwang. 1–0

The drawing method was 91...b5! 92.axb5 a5 and Black has established a strong blockade on the dark squares. 93.e7 c5 94.a6 d8 95.f7 b6 96.b7 This is as far as White can make it. Black can force a draw with 96...h3! 97.c7 xc7 98.xc7 h2 and so on.

12. Mark Paragua – Dmitry Jakovenko, Tromso (1.1) 2013
This example beautifully illustrates how passed pawns are more important than material. 50...c1! 51.c4 White could have tried 51.b4 xa3 52.c3, with the idea that 52.xa2? 53.c4! leads to a draw. However, Black does not have to be so impatient, and should keep the bishop on a3: 52...f5 53.xa3 (53.xa3 g5 54.xd4 does not work. If nothing else, then 54.xb2! wins.) 53...g5 54.h3 g6 Black is ready to start advancing his pawns. The bishop will join in at the decisive moment to secure the victory. 51...xb2 52.cxb5 Amusingly, Stockfish gives 0.00 as an initial evaluation. White is, of course, entirely lost. 52...a5! The key idea. Black wins the bishop on the kingside and later on wins the game with the a-pawn. 53.a4 g5 54.e3 fs 55.e2 c5 56.b6 h4 57.b7 g5 58.f3 f4! 59.f4 b8 60.e2 g4 61.db5 g5 62.f5 f3 63.e4 63.g5 allows Black to win with 63...f2 with the threat...g2. For example 64.f1 h2 65.xg4 g1 wins. 63...f2 64.e2 a7 64...g2 was simple, but Jakovenko probably wanted to avoid calculation. 65.h5 g5 66.hxg4 f1=wr 67.xf1 h6 0–1

13. Ivan Saric – Veselin Topalov, Kozloduy (rapid) 2013
Both players were undoubtedly out of time, but this does not mean that the position is not interesting. 59.e5?? c6 60.f4 d1?? 60...c2 or 60...d3 would have drawn. 61.d5! b7 62.g4! hg4 Or 62...e2 63.g5 and White has too many passed pawns. 63.d6 1–0

The winning move was: 59.d5! xd5 59...d7 60.b7 c7 61.d6! xb7 62.d7+– 60.e6 e6 61.g5+– The only square where the bishop can both control the h4-square and be ready to assist on the f4–b8 diagonal.

14. Jacob Aagaard – Adrianus van den Berg, Wijk aan Zee 2001
Black has to find the only move to avoid losing material or getting mated. 51...e4? 52.e7 h2
Here I missed a rather basic win: 53.e7t! c8 (After 53...a8 54.h5 there is no defence.) 54.e6t d8 55.d7t White wins, as the black bishop drops. Instead I played 53.e8t? and won the game on move 83; shortly after my opponent lost the will to live.

51...e2? also does not work. White wins with: 52.d7! d4 Delaying tactics, but the end is nigh. 53.h7! c5 54.g7 a7 (54...a8 55.g8 e7t 56.d8 does not improve Black's situation.) 55.d8t a6 56.b7 a7 57.c6t b8 58.b7 a8 59.a7t a8 60.a8+ a7 61.a7 61.a8#

51...g2! was the only defence. The main point is that 52.d7 d4 works this time, with...g7 coming. If White tries 52.h8t a7 53.c7, then 53...g7 saves the day.
Chapter 4 – Opposite-Coloured Bishops

Kovalevskaya – Dworakowska, Istanbul (ol) 2000

I. Popov – Potkin, Moscow 2012

Hagen – V. Georgiev, Odense 2012

Karjakin – Wang Hao, Tashkent 2012
You would expect the players to be tired and short of time by this point, but White conducted the final phase flawlessly. 141...Sb7! Taking control over b2. 141...Sg8 141...Se2 loses in instructive fashion: 142.Sf6! The immediate threat is Sf7, and after 142...Sg8 144.e7 Sb2t 145.Sf6 Se2t 146.Sd7 Sd2t 147.Sc6 Be2 White has a study-like win. 148.Sc5 Bd2t 149.Sc3! Sxd3t 150.Sc4 Bd4t 151.Sc5 Se3 Sc3 152.e8=Q! Sxh7 153.Sc6 Sg7 154.Sc3 Sc1 155.Sc2 Sc3 156.Sc3+– 142.Sc6 Sd5 142...Sd6 would have forced White to show a bit more technique, which I think she would have done with pleasure. 143.Sc7 Se5t 144.Sc6 Sg1t 145.Sc4! Sxg4t 146.Sc5 Sg1 147.Sd8t! (Preventing ...Se8.) 147...Sg7 148.Sc5 White mates in 25. 143.Sc8t Sc8 144.Sc7 Sd7t! Simple and practical, though White also had a direct win in 144.Sc3 Se3 154.e7! Sxe7 146.Sc4t Sc7 147.Sc8t Sd7 148.Sc6 Sd6 149.Sc8 Se6 150.Sc1. 144.Sc7 Sxe7 145.Sc8t Sc8t 146.Sc7 Se1 147.Sc2 Sc6 148.Sc2t Sc6 149.Sc7 Sc1t 150.Sc8 Se1 151.Sc7 Sc6 152.Sc2 Sc6 153.Sc8 1–0

As has been said repeatedly, passed pawns are hugely important in endings with opposite-coloured bishops. This position is no exception. In the game Black messed things up with: 48...f2? 49.Sc2 Sxh3t 50.Sc2 f4 51.Sc7 Sc7 52.Sc3 Sc3 53.Sc2 Sc6 54.Sc4t It is clear that Black retains winning chances, and we will return to this game later on. For now, it suffices to say that he has missed the bus and is left waiting at the stop, blindly hoping that another one will appear. 48...Sc6 was interesting, but the star move was 48...g4!, which creates an extra passed pawn. After the forced 49.hxg4 Sxe4 50.Sc1 Black can win in long variations after 50...Se7 or 50...h3, but the move to see is: 50.h6! 51.Sc5 Sc6 There is no defence against the two approaching passed pawns. A possible line is 52.Sc6 h3 53.Sc7t Sc8 54.Sc4 f2t! and the h-pawn will queen.

17. Ivan Popov – Vladimir Potkin, Moscow 2012
Black probably played the next few moves without thinking; which is a shame: 44...Sc5t 45.Sc5 g4 46.Sc3 Sc7 47.Sc6 Sc6 48.Sc7 Sc6 49.Sc4t White held the draw in 102 moves.

The calm 44...Se7! gave excellent winning chances. Now 45.Sc3t is the critical line to consider. After 45.Sc6t? Sc6h6 46.Sc7t Sc8t 45.Sc4 t8 It is clear that Black retains winning chances, and we will return to this game later on. For now, it suffices to say that he has missed the bus and is left waiting at the stop, blindly hoping that another one will appear. 45...f5! The big point, without which Black cannot play for a win. 46.Sc2 46.Sc5t is refuted by 46...Sc6t! 46.Sc6t 47.Sc7 Sc4t The win is trivial.

67...f3! 67...a7? would allow the same draw as in the game. 68.Sc5 Sc7t This seemingly natural move throws the win away. Black would have been able to win the game only by keeping the white king at a distance through effective shouldering. 69.Sc5! Black is now forced to push the f-pawn forward and no longer manages to keep control of the light squares. 69...f2 70.Sc4 Sc3 71.Sc5 Sc3 72.Sc2g2t g3 73.Sc4 Sc8t 74.a7 Scxa7 75.Scxg3 ½–½

After 67...f3 68.Sc5 then 68...h4! was the winning move. The first threat is ...g3. 69.Sc5 69)...f2 70.Sc4 Sc3 the king comes to h2 and, if necessary, g1. White is one tempo too slow to stop the pawns. 69...Sc3t 70.Sc4 f2– The pawns roll to the bottom.
Chapter 4 – Opposite-Coloured Bishops

Golubev – Poluektov, Odessa 2004

S. Williams – Istratescu, Hastings 2012

Zelbel – Luft, Pula 2012

Vajda – Asrian, Menorca 1996

T. Kosintseva – Javakhishvili, 2009

Kokarev – Bogdanovich, Moscow 2012
19. Mikhail Golubev – Yury Poluektov, Odessa 2004

Mikhail won quickly, but had a little help: 34.\textit{Qb}3?! \textit{Qf}7? 34...\textit{f}4\# or 34...\textit{R}da7\# would have given White a difficult task to convert his advantage. 35.\textit{R}e8! Black has no good defence against \textit{e}5-e6. 35...\textit{c}7 36.\textit{R}xa8 \textit{R}xa8 37.\textit{R}b8 1-0

34.\textit{f}4\# is possible. 34...\textit{R}da7 35.\textit{R}e8 is similar to the main line below. 35...\textit{Q}f7 36.\textit{R}f8\# \textit{Q}g7 37.\textit{Q}c5 \textit{Q}b7 38.\textit{R}b4! \textit{R}xb4 39.\textit{Q}xb4 \textit{R}b7 40.\textit{Q}f6 White should win, although some work remains.

Best was: 34.\textit{Q}e8! \textit{Q}f7 A move like 34...a5 allows White to play 35.\textit{Q}b8! followed by 36.e6 winning. 35.\textit{R}f8\# \textit{Q}g7 35...\textit{Q}e6 is met strongly by 36.\textit{R}d1! \textit{Q}f7 37.\textit{Q}e8\# \textit{Q}d7 38.\textit{Q}g8 and White wins. 36.\textit{e}6! This is the main point. 36...\textit{R}xd6 37.\textit{e}7 White wins.


White wins by creating a passed h-pawn. 46.\textit{Q}f5! \textit{Q}xd4?! An important point of White’s play is that after 46...\textit{c}3 47.\textit{Q}g6 \textit{Q}h6 he can force a zugzwang. He can probably improve the position of the king and bishop, but the direct approach wins: 48.g5 \textit{Q}g5 49.\textit{Q}g4! \textit{Q}d8 50.\textit{Q}f7 \textit{Q}c7 51.\textit{Q}e7 a4 52.\textit{Q}e8 Zugzwang. The toughest defence is probably 46...\textit{R}d8 47.\textit{Q}g6 \textit{Q}c7, which has confused some people. However, White wins with: 48.d5! \textit{cx}d5 (48...\textit{xc}5 49.\textit{dx}c6 \textit{Q}xe6 50.\textit{Q}xg7 \textit{Q}xa3 51.\textit{Q}h6 \textit{Q}c2 52.\textit{Q}g6 \textit{Q}d6 53.\textit{Q}f5— The h-pawn decides.) 49.\textit{Q}xd5 \textit{Q}f8 (49...\textit{xc}5 50.\textit{Q}xg7 \textit{Q}xa3 51.\textit{Q}h6 \textit{Q}f5 52.g5— The white pawns arrive first.) 50.c6 \textit{Q}g3 51.a4 \textit{Q}c7 52.\textit{Q}c4 \textit{Q}e5 53.\textit{Q}b5! Black is in zugzwang, for example: 53...\textit{Q}c7 54.\textit{Q}h6 \textit{Q}xh6 55.\textit{Q}xf6 \textit{Q}e8 56.\textit{Q}g6 \textit{Q}xh4 57.\textit{Q}xg7 \textit{Q}f5? 55.\textit{Q}g6 \textit{Q}xh4 54 and now the double threat 56.\textit{Q}f5! g3 57.\textit{Q}xe5 g2 58.\textit{Q}c7 g1=\textit{Q} 59.\textit{Q}e8+— when Black’s checks will not lead anywhere. 47.\textit{Q}g6 a4 47...f5 48.gxf5 \textit{Q}d8 49.\textit{Q}f6! \textit{Q}xf6 50.\textit{Q}xg6+= 48.\textit{Q}f5 \textit{Q}b2 49.\textit{Q}xg7 The h-pawn queens. 1-0


46.\textit{Q}f5?! This slow move allows Black to save the game. 46...\textit{Q}d8 The simplest way to hold. 47.\textit{Q}c2 In the event of 47.\textit{Q}e6 \textit{Q}c7! White has to backtrack. 47...\textit{Q}c7 48.\textit{Q}e4 48.\textit{Q}e6? \textit{Q}xc6 49.\textit{Q}e4\# \textit{Q}c5! forces White to play accurately to hold. (49...\textit{Q}c7 is a simpler draw.) 50.\textit{Q}f7 \textit{Q}c4 51.\textit{Q}e8 \textit{Q}b6 52.\textit{Q}d8+ \textit{Q}xd8 53.\textit{Q}xd8 \textit{a}5 54.\textit{Q}e7 \textit{d}3 55.\textit{Q}b3! a4 56.\textit{Q}h4!! The only way to draw. (56.\textit{Q}xf6? b4 is too slow). 56...\textit{Q}xh4 57.\textit{Q}xf6 \textit{b}4 58.g5 \textit{b}3 59.\textit{Q}xb3+ \textit{Q}xh4 60.g6= 48...\textit{d}3?? A horrible mistake, probably caused by a feeling of ‘having to do something’ before the opponent comes too close. However, this is one of those cases where the fortress holds and activity fails. After 48...\textit{Q}d6! 49.\textit{Q}g6 \textit{Q}e7 50.\textit{Q}g7 \textit{a}6 51.\textit{Q}f5 \textit{Q}d8 52.\textit{Q}d3 \textit{Q}a5 Black is fine. 49.\textit{Q}xd3 \textit{Q}xc6 50.\textit{Q}e6 \textit{a}5 51.\textit{Q}f5 There is no defence against \textit{Q}f7-e8, winning. 51...\textit{b}4 52.\textit{Q}c2 \textit{Q}c7 53.\textit{Q}a4 1-0

White needed to win an important tempo with 46.\textit{Q}d5!, threatening \textit{Q}d6 which would win immediately. 46...\textit{Q}c7 is thus forced. 47.\textit{Q}c2 a5 There are other moves, but nothing better. 48.\textit{Q}d3 b4 49.\textit{Q}b5 Black is slowly being tied down. 49...\textit{Q}d8 50.\textit{Q}e6 \textit{Q}c7 51.\textit{Q}xf6 \textit{Q}f4 52.\textit{Q}e6 Black is in zugzwang. Moving any of the pawns will just drop them; moving the king will allow \textit{Q}e7; and if the bishop goes to e3, d2 or c1, White has \textit{c}7\# and \textit{Q}e7, queening the pawn. 52.\textit{Q}c7 (and similar) will be met with: 53.\textit{Q}h4! \textit{g}xh4 54.\textit{g}5 White is winning, for example: 54...\textit{Q}f4 55.\textit{Q}g6 \textit{h}6 56.\textit{Q}c7\# \textit{Q}xc7 57.\textit{Q}f7 \textit{Q}g5 58.\textit{Q}e8 \textit{h}3 59.\textit{Q}g7 \textit{h}2 60.\textit{Q}g8=\textit{Q} \textit{h}1=\textit{Q} 61.\textit{Q}xg5 \textit{Q}e4\# 62.\textit{Q}f8+— The checks will soon come to an end.

46.\textit{Q}c2 followed by \textit{Q}d5 wins through transposition.
22. Simon Williams – Andrei Istratescu, Hastings 2012

After missing a sea of easy wins, this time around White misses the last chance. The game went:

42. \(\text{d}6\) \(\text{f}3\)! Black has enough counterplay now. 43. \(\text{h}3\) \(\text{b}8\) 44. \(\text{f}6\) A draw was agreed. A check on b6 would be the simplest way for Black to push White away. \(\frac{1}{2}\)-\(\frac{1}{2}\).

Instead he should have played: 42. \(\text{c}7\) \(\text{d}7\) 42...b2 43. \(\text{e}xb2\) \(\text{f}3\) is a tricky try, but White has a direct win: 44. \(\text{d}2\) \(\text{c}5\)† 45. \(\text{h}6\) \(\text{f}6\) Threatening \(\text{g}7\) and \(\text{d}8\) with mate. 45... \(\text{d}5\) 46. \(\text{g}7\) Black's defences are of a temporary nature, for example 46...h5 47. \(\text{h}3\) \(\text{a}5\) 48. \(\text{f}2\) \(\text{f}3\) 49. \(\text{h}6!\) \(\text{a}3\) 50. \(\text{d}2\) and White wins at least a piece. 43. \(\text{f}2\) \(\text{a}4\) 44. \(\text{f}6\)! A slight improvement of the position, freeing the e-square for the bishop. The king is equally well placed on e6. 44... \(\text{c}6\)† 45. \(\text{d}5\) \(\text{c}8\) 46. \(\text{f}8\)† \(\text{d}7\) 47. \(\text{d}8\)† \(\text{c}7\) 48. \(\text{f}4\)† \(\text{b}7\) 49. \(\text{e}5=–\) White is in control. Black has no defence against \(\text{e}6\) intending \(\text{f}7\). If Black tries \(\text{e}8\), White will play \(\text{xe}8\) and \(\text{d}7\).


Black wins with a classical break. 85... \(\text{g}5\)! It is obvious that this can be delayed a bit, and that 85...b2 can be played first. Actually, this is probably the slightly more accurate move order, as it forces the white king to e2 at once. Still, we will focus on the way it played out in the game. 86. \(\text{hxg}6\) 86. \(\text{e}6\) is met by: 86... \(\text{f}5\)! 87. \(\text{fxg}6\) (87. \(\text{xf}6\) b2 88. \(\text{c}4\) \(\text{a}2\) 89. \(\text{d}5\) does not work, as the black king will make it to g4 soon enough.) 87... \(\text{f}6\)! Simplest. Black just wins. Note that he could still have gone wrong with 87... \(\text{g}4\)? 88. \(\text{xb}3\) \(\text{xb}3\) 89. \(\text{e}4\) when the white king hides in the corner. 86... \(\text{f}5\)? A blunder. Black wins as in the game after 86...b2 87. \(\text{c}2\) \(\text{f}5\)!. 87. \(\text{gx}5\) White misses his chance. After 87. \(\text{xb}3\)! we can either transpose to previous lines after 87... \(\text{xb}3\) 88. \(\text{xf}5\) or declare it all a draw after 87... \(\text{f}5\) 88. \(\text{d}1\) g3 89. \(\text{f}3\). 87...b2 88. \(\text{c}2\) h5 89. \(\text{e}6\) 89. \(\text{g}7\) \(\text{g}7\) 90. \(\text{h}5\) does not save the day, as Black now has 90... \(\text{a}2\) winning. 89...h4 90. \(\text{b}1\) \(\text{f}6\) The revolution is over and Black wins easily. The bishop on f6/g7 can control the white pawns and defend the b2-pawn at the same time – the principle of one diagonal. The king meanwhile goes to the kingside to help the h-pawn. 91. \(\text{d}5\) h3 92. \(\text{c}2\) h2 93. \(\text{b}1\) \(\text{b}4\) 94. \(\text{e}6\) \(\text{c}3\) 95. \(\text{h}1\) \(\text{d}2\) 0–1

I should remember to point out that 85... \(\text{g}6\)? would fail to 86. \(\text{xb}3\)! \(\text{hx}5\) 87. \(\text{e}6\) h4 88. \(\text{e}4\) h3 89. \(\text{f}3\) \(\text{b}2\) 90. \(\text{f}2\) and White draws even without the g-pawn. The king will hide in the corner and the bishop will be sacrificed for the f-pawn.

24. Dmitry Kokarev – Stanislav Bogdanovich, Moscow 2012

Again we have a classic break, creating passed pawns. 54. \(\text{b}3!\) \(\text{xb}3\) 54... \(\text{xb}3\) 55. \(\text{xb}5\) is hopeless. 55. \(\text{d}4!\) The key move. The f-pawn needs to be eliminated before progress can be made on the queenside. 55. \(\text{b}4?!\) has been suggested by about half of the IM-level players to whom I have shown this exercise. The GMs get it, but there seems to be a prophylactic switch which has yet to be turned on in some of the IMs' heads. Black wins with 55... \(\text{f}4!\), when one of the pawns will promote. Some IMs see this, and thus reject the b2-b3 idea altogether. I am not sure exactly why this is; maybe because they do not fully appreciate that the main point of 54. \(\text{b}3!\) is to change the pawn structure, rather than to find a win that cannot be calculated. 55... \(\text{b}2\) If Black delays this move, White will soon be able to exchange the h6-pawn for the f5-pawn. This will leave h2 to decoy the black king, while White can return with \(\text{b}2\), followed by marching the king to b4 and playing c3-c4, winning easily. 56. \(\text{xb}2\) White wins here too, as his bishop becomes active. 56... \(\text{hx}6\) 57. \(\text{c}1\)† \(\text{h}5\) 58. \(\text{e}5\) \(\text{g}4\) 59. \(\text{b}4\) \(\text{f}4\) 60. \(\text{d}2!\) Accurate play. 60... \(\text{f}3\) 61. \(\text{e}1\) \(\text{f}4\) 62. \(\text{h}4\) \(\text{e}4\) 63. \(\text{h}2\) \(\text{f}4\) 64. \(\text{g}4\) \(\text{c}2\) 64... \(\text{g}5\) 65. \(\text{e}4\) \(\text{hx}5\) 66. \(\text{xb}5\) \(\text{c}2\) 67. \(\text{f}4\) The pawns cannot be stopped. 65. \(\text{xb}5\) \(\text{g}5\) 66. \(\text{c}4\) \(\text{hx}5\) 66... \(\text{d}3\) 67. \(\text{a}4+–\) 67. \(\text{c}5\) \(\text{g}6\) 68. \(\text{c}6\) \(\text{f}7\) 69. \(\text{a}4\) \(\text{e}7\) 70. \(\text{a}5\) \(\text{d}6\) 71. \(\text{g}3\)† \(\text{d}5\) 72. \(\text{b}6\) 1–0
Chapter 4 – Opposite-Coloured Bishops

Hagen – V. Georgiev, Odense 2012

Kramnik – Nepomniachtchi, Moscow 2011

Kramnik – Nepomniachtchi, Moscow 2011
25. Gata Kamsky – Lou Yiping, Tromso (1.4) 2013
In a drawish ending, Kamsky got a sudden chance to win the game. 73.d6! â€xd6 Black also
cannot hold with 73...â€f6. Of a few winning lines, I prefer 74.â€c8 with d6-d7 to follow. White
will either be allowed to play â€g4 or â€g6-f7-e8, winning the bishop. 74.â€g6 â€e5 74...â€e5
75.h5 â€e3 76.h6 â€d4 also does not work. White can play 77.â€h3 â€c5 78.â€f1 and win the
bishop. 75.â€h3? But this manoeuvre is too slow! It was essential to use prophylactic thinking to
prevent Black’s only drawing idea, which meant playing 75.â€c8!! to control the a6-square. After
75...â€c5 76.h5 â€d6 77.h6 â€d4 78.â€f7 (78.h7? â€e7 would be embarrassing) 78...â€c5 79.â€a6
White wins the game slowly. Black cannot hide his king in the corner, as White will use zugzwang
to force ...a5, then take en passant and promote the pawn. 75...â€c5! Black is now in time to
liquidate the pawns on the queenside.76.h5 â€d4 77.h6 â€d6 78.â€f7 â€a5! There is no time to
waste. 79.bxa6 b5 80.h7 â€c7 A draw could easily have been agreed here. 81.â€f1 b4 82.â€e6 b3
83.â€d5 b2 84.â€d3 â€h8 85.â€c5 â€g7 86.â€e4 â€b8 87.â€b6 â€d4† 88.â€b5 â€a7 ½–½

26. Boris Gelfand – Alexei Shirov, Bazna 2009
Gelfand missed a great chance to make one of the most aesthetically-pleasing breaks in history.
58.a4? â€xa4 59.f5 â€c2 Black sets up a simple fortress. 59...exf5 60.e6 â€b3 would also have held.
60.fxe6 fxe6 61.â€xe6 â€b3† 62.â€xf6 â€c2 63.e6 â€d3 64.â€g3 â€c2 65.h5 gxh5 66.g6 â€d3
67.â€h4 â€d8 68.â€e7† â€e8 69.â€g7 â€c2 70.â€h6 â€b3 71.â€h5 â€c4 72.â€h6 â€b3 73.â€g7 â€c2
74.â€h7 â€d3 75.â€h6 â€c4 76.g7 â€g8 77.â€g6 â€d7 ½–½
58.h5? gxh5 59.f5 does not work due to 59...exf5 60.e6 h4 and Black draws.
White was winning with: 58.f5! exf5 59.e6! 59.h5? gxh5 60.e6 does not work. Black will not
take the pawn, but play 60...h4! 61.exf7† â€xf7 62.g6 â€g6 and run the king to a8 with a draw.
59...â€xe6 Waiting moves like 59...â€f4 fail to 60.exf7† â€xf7 61.â€xf4. White will win the g6-pawn
and take the full point. 60.h5! gxh5 61.g6 The fourth pawn moves forward. Luckily the a-pawn
will be left to decide the game. 61...fxg6 62.â€xe6 h4 62...â€d8 is met by 63.â€d5! and the
a-pawn queens. 63.a4 h3 64.a5 â€d8 65.a6 â€c8 66.â€g3+ Black is in zugzwang.

27. Joel Akesson – Jonny Hector, Gothenburg 2004
62.â€e8? This allows Black to occupy the key diagonal immediately.
62...â€d6!! The bishop has to lose its pawn and Black wins easily. 63.â€c7?! The king can
also go to e8, which makes it bishop move a human game and less of a study. The main point is
to win the rook rather than the bishop when the pawn promotes. 63...â€xd6 64.â€e8† â€xe8 65.â€d6
66.â€c5 White will slowly but surely take the full point. 64.â€xb7 â€c2 65.â€b5! h2 66.â€xe5† The
simple win. 66...â€c5? is more aggressive and harder to keep control of, but it also works. 66...â€g6
67.â€e6† â€f5 68.â€xh2+–
Another winning line was: 62.â€a3? â€b3 (62...â€xh2 63.â€xb7 â€c2 64.c8=â€w is easily
winning for White; 62...â€b5 63.â€e7 wins as in the main line above.) 63.â€d6 This method is slightly more
accurate if you speak the language of engines, but for those of us who speak in half points, there
is no difference between 1–0 and 1–0.
Chapter 4 – Opposite-Coloured Bishops  

White lost after: 104. @d1? @e3!! This cuts off the king and is good enough to win. However, placing the bishop out of reach from tempo gains on a7 or g1 was more logical, if harder to see.  

105. @c2  The typical manoeuvre 105. @g7 @e5 106. @f7 @e4 107. @e6 @d3 108. @d5 does not work on account of 108... @d2! when Black is first. The best defensive try was 105. @e2!, when after 105... @d5 106. @f5 the win is by no means easy to find for Black. If the bishop goes to g1, White checks on f3, ready to play b5-b6. And if the bishop goes to b6, White will win a tempo with @c6 at a critical moment. Thus the only winning move is 106. @a7!!, both stopping the b-pawn and avoiding losing time: 107. @f3 @d4 108. @e6 c3 109. @d1 @d3 110. @d5 c2 111. @xc2 @xc2 112. @c6 @b3 Black wins.  

105... @e5 106. @f7 @d4 107. @e6 @c3 108. @e4 @b3 109. @d5 109. @d5 @b4 is the standard manoeuvre. Black will advance the c-pawn and take on a4. 109... c3 110. @c6 @xa4 111. b6 @b3 112. b7 @f4 113. @b5 a4 114. @d5 @b2 0–1  
The bishop would be misplaced after 104. @b1? @d5 105. @f6 @d4 106. @e6 @c3 107. @d5 @b3. Black will combine the threat to the a-pawn with advancing the c-pawn.  

104. @g7? is also too slow: 104... @e5 105. @f7 @d4 106. @e7 @c3 107. @g6 @b3 108. @f7 @b4 The a-pawn falls.  

104. @f5! was the right move. What White needs is to get the bishop on the other side of the king so that it can interfere from behind. The direct threat is @f4. 104... @e5 105. @f5! The bishop can also go to g6 and h7. 105... @d4 105... @a7 does not win a tempo this time, as White is not necessarily on his way to c6. 106. @g4 @d4 107. @f3 White draws. 106. @f4 @c3 107. @e4 @b4 107... @b3 108. @e6! is the point of the bishop’s positioning. 108. @e6 Black cannot make progress.  

104. @f5† @e5 105. @g5! transposes.  


82... @e4? 83. @h7 @h1 83... @c2† 84. @e1 @h2 would either end in rook and bishop versus rook, or in a draw after 85. @g4 @f5! 86. @xf4† @xf4 87. @h8= #. 84. @g4 @hxh7 85. @xf4 a1= # 86. @xa1 @xa1† This endgame is a theoretical draw, but in this game White did not hold it. …0–1  

82... @c4? 83. @hxh7 @xd4 84. @a7 would result in a draw.  
The way to win without the opponent’s assistance is: 82... @d5! 83. @d7† The best chance. After 83. @hxh7 @xd4 84. @d7 † @e4 85. @h7 @c2† White is mated. 83. @f6 looks natural, but the bishop quickly runs out of squares: 83... @c2† 84. @e1 @e6 85. @d4 @d2 86. @c3 @d3→ 83... @e4 84. @f6 84. @h8 @c2† 85. @e1 @f5 86. @e7† @d3 would leave White struggling to meet ...@f3!. A possible line goes: 87. @f7 @e3 88. @d1 @d2† 89. @d1 @e4 90. @e7 @c2† 91. @d1 @h2 and White is mated soon. 84. @c2† 85. @g1 Other king moves do not improve things for White, for example 85. @f1 @f3 86. @d1 @h2 87. @g1 @hxh6 and the win is trivial. Also 85. @e1 @f3 86. @e7† @f4 87. @e5† @f5! wins for Black, for instance: 88. @h8 @f2† 89. @f1 @g8→ 85... @f5!! The great point. The king is going for the h6-pawn. 86. @h8 @g6 87. @g7† @f5 with the threat of ...@a1= #. 87... @hxh6 88. @g4 @c8 89. @e5 @c4 90. @h2 @h5 Black wins, for example: 91. @g2 @a4 92. @a1 @c4 93. @f2 @g4→ There is no defence against ...@b4-b1-h1, either with mate or something similarly damaging.

One important piece of advice I always give regarding calculation is that you should always check candidate moves on the last move of your line before you evaluate. Sadly this is something I have discovered through disappointment. The game went:

68...\texttt{h4}?! 69.\texttt{e2} \texttt{f2} 70.\texttt{xex3} \texttt{xe3} 71.\texttt{h7}!! I had missed this move. I felt sure that I was going to win after 71.\texttt{xe3} \texttt{xb4} 72.\texttt{c2} \texttt{g3} 73.\texttt{h7} \texttt{h4}!, but I had not worked out how. (73...\texttt{b8}? would allow the white king to move up the board and thus give away a draw.) 74.\texttt{f5} The winning method involves triangulation to allow the black king to come to g4 and then to join the defence. 74...\texttt{h5} There are other squares, but this is the most forcing. 75.\texttt{e4} \texttt{h6}!! Black needs ...f5 to come with check. Now after 76.\texttt{e3} \texttt{h4}! White is in zugzwang, which is also the case after 76.\texttt{d5} \texttt{f4} 77.\texttt{e6} \texttt{g5}++. 71...\texttt{h4} 72.\texttt{xe3} \texttt{exh7} 72...\texttt{xb4}? 73.\texttt{c2}! would even lose! 73.\texttt{d5}+ \texttt{g3} 74.\texttt{b5}?? White draws after 74.bxa5 \texttt{exa7} 75.\texttt{d4} \texttt{exa5} 76.\texttt{c6}, though a few more moves would have been played. 74...\texttt{h4} 75.\texttt{e4} f5 76.\texttt{xf5} \texttt{exa4} 77.\texttt{d2} \texttt{b4} 78.\texttt{d3} \texttt{f4} 79.\texttt{c3} \texttt{e5} 80.\texttt{c4} \texttt{d6} 81.\texttt{d4} a4 82.\texttt{c3} \texttt{c5} 83.\texttt{f7} a3 84.\texttt{b3} \texttt{xb5} 85.\texttt{c2} \texttt{d4} 0–1

The winning line goes: 68...\texttt{d2}! 69.\texttt{xe3} 69.\texttt{e4} allows Black to take on h6, but there is also a tactical win: 69...f5! 70.h7 \texttt{fxe4} 71.\texttt{h8}=\texttt{w} \texttt{f4}! and it is time to resign. 69...\texttt{xe3} 70.\texttt{h7} \texttt{d8} I rejected this at the board on account of 71.\texttt{g8}, missing that 71...\texttt{f3}! wins the game immediately, which is enough to understand that this is the way to play. 71.bxa5 White can try this, but he is a rook down and this can be felt. 71...\texttt{f3} With the threat of ...\texttt{f2}+ and advancing the f-pawn. White needs to free his king. 72.\texttt{d1}+ \texttt{f4} 73.\texttt{b3} 73.a6 \texttt{h8} wins. 73...\texttt{d2}+ 74.\texttt{f2} \texttt{xa5} 75.\texttt{g8} This is White’s last try, but it does not work. 75...\texttt{d2}+ 76.\texttt{f1} \texttt{f3} 77.\texttt{b3} \texttt{f2}+ 78.\texttt{g1} \texttt{b6} 79.\texttt{h8}=\texttt{w} \texttt{b2}+ 80.\texttt{h1} \texttt{b1}+ 81.\texttt{h2} \texttt{c7}+ White is mated.

31. Andreas Skytte Hagen – Vladimir Georgiev, Odense 2012

As promised, we return to this game. Georgiev was exhausted at this point; not only because the game had been long and hard fought, but this was Round 8 of a two-game-a-day event (and who plays well on a Sunday morning anyway?). In Round 9 Georgiev offered me a draw. Half out of pity, half out of respect, I accepted. 73...\texttt{c2}? This allows White to get to e2 or e3. 74.\texttt{e2} The win is gone, as the white king is too close. 74...\texttt{d4} 75.\texttt{cxd4} \texttt{d5} 76.\texttt{e1} \texttt{b3} 77.\texttt{d2} \texttt{c3}+ 78.\texttt{e1} \texttt{e4} Almost zugzwang, but not quite. 79.\texttt{d5} \texttt{a2} 80.\texttt{d6} \texttt{f5} 81.\texttt{d} \texttt{xd7} 82.\texttt{xc3} \texttt{xc3} 83.\texttt{b1} \texttt{e6} 84.\texttt{c4} \texttt{xc4} 85.\texttt{a1} \texttt{d3} \frac{1}{2}–\frac{1}{2}

The following manoeuvre can be performed in a few different ways, but the end position is essentially the same no matter what. 73...\texttt{f3} 74.\texttt{e1} \texttt{h5} Zugzwang. 75.\texttt{f2} 75.\texttt{c5} \texttt{c2} just speeds up the process. 75...\texttt{d2} Another zugzwang, forcing the king to f1, so it cannot reach e3. 76.\texttt{f1} \texttt{c2} 77.\texttt{e1} \texttt{g4} A final zugzwang. 78.\texttt{f2} \texttt{d4}! 79.\texttt{cxd4} \texttt{b3}– White has no defence against ...\texttt{c3}. The king is too far away.
32. Vladimir Kramnik – Ian Nepomniachtchi, Moscow (variation) 2011

41.\(\text{d}\)2!! A wonderful move. It took me quite a while to understand why this was the only way to hold the position. 41.\(\text{d}\)3? loses narrowly to 41...\(\text{b}\)4! 42.\(g\)4 \(\text{a}\)3 43.\(g\)5 \(\text{g}\)7!! 44.\(x\)xh6 \(\text{x}\)xh6 when White has no defence against ...b5-b4-b3 followed by the advance of the a-pawn. If he had only one more move, he would make the draw. 41...\(\text{b}\)4 42.\(g\)4! A waiting move. The only other drawing move is 42.\(h\)5, with exactly the same idea. 42.\(c\)2? \(\text{a}\)3 43.\(d\)3 \(h\)5! would lose the game. Black can simply pick up the white pawns, as the bishop has to keep control of the black pawns. 42...\(\text{a}\)3 42...\(f\)6 allows White to draw in the usual way for such positions: 43.\(\text{c}\)8 \(\text{a}\)5 44.\(d\)7! \(\text{x}\)xh4 45.\(c\)1 \(a\)4 46.\(c\)2 \(a\)5 47.\(d\)6 \(b\)4 48.\(d\)7 \(b\)3† 49.\(c\)3 \(f\)6† 50.\(c\)4 Black has lost the fight for the light squares on the queenside, and can only advance the pawns to squares where they will be easily blocked. 43.\(d\)3! Black cannot make serious progress.

33. Vladimir Kramnik – Ian Nepomniachtchi, Moscow (variation) 2011

40...\(a\)4? does not work. White must avoid 41.\(c\)2?, when the bishop blocks the white king’s path: 41...\(g\)7!! (41...\(a\)3? 42.\(b\)1 \(x\)xh6 43.\(d\)3 enables White to establish a fortress; 41...\(x\)xg6? 42.\(d\)2 \(b\)4 43.\(d\)3! also allows him to escape.) 42.\(x\)xh6 \(a\)3 43.\(b\)3 \(b\)4 44.\(d\)5 \(c\)3–+

However, with 41.\(f\)5!! \(x\)xg6 (41...\(b\)4 42.\(d\)7 \(a\)3 43.\(e\)6 is the main concept.) 42.\(d\)7 \(b\)4 43.\(d\)3 White makes a draw – barely!

The winning move is: 40...\(b\)4! The point is that the constellation on a4/b5 is not important for the domination of the light squares; instead Black needs to get his king to a3 and pawns to b3 and a4. 41.\(c\)2 After 41.\(x\)xh7 \(b\)3! the a-pawn is unstoppable. 41...\(x\)g6 42.\(b\)3 The best try. 42.g4? \(b\)5 43.\(d\)3† \(a\)4 wins quickly. 42.\(d\)2 \(c\)3† 43.\(d\)3 \(b\)5 44.\(b\)3 \(e\)1 45.\(f\)7 \(a\)4! 46.\(x\)xg6 \(b\)3 47.\(c\)4 \(x\)xg3 48.\(f\)5 \(h\)4 Black wins in the same way as in the main line. 42...\(b\)5 43.\(f\)7 \(a\)4! 43...\(a\)4? fails to 44.\(e\)8†! \(a\)5 45.\(d\)3 \(b\)3 46.\(c\)4 and White makes a draw. 44.\(d\)3 \(a\)3 45.\(x\)xg6 45.\(c\)4 a4 46.\(x\)xg6 is met by 46...\(c\)1 47.\(b\)5 b3 48.\(e\)4 b2 with the threat of ...b2. White can only play 49.\(c\)2, when 49...\(d\)2! transposes to the main line. 45...\(b\)3 46.\(c\)4 \(a\)4 47.\(b\)1 \(c\)1 48.\(b\)5 This fortress is the only try White has. It almost works, but Black can arrange a zugzwang which forces White to slowly compromise his position on the kingside, until he finally runs out of waiting moves entirely. 48...\(b\)2 49.\(c\)2 \(d\)2 50.\(f\)5 \(g\)5 51.\(a\)5 \(f\)6 52.\(b\)5 \(d\)8 53.\(g\)4 \(g\)5 54.\(a\)5 \(f\)6 55.\(b\)5 \(d\)8 White is in zugzwang. He will first lose the pawns, then have to let go of the fortress.
White is clearly better, but with so few pieces left on the board it is not a surprise that Black is able to hold with the best moves. And they are?
With dynamics being one of the two big factors in chess, keeping your pieces active and in majority is a simple winning strategy; so simple that it is useless! But if we scale it down a bit, it actually becomes quite useful.

**Active Rooks**

The two most important strategies for rook endgames are:

- To have the most pawns; preferably of the kind that can be promoted
- To keep your best piece - the rook - as active as possible

These two aspirations are equal, but not always aligned. At times we have to put the rook on a stupid square to defend an important pawn. And at times we have to give up a less important pawn in order to create active counterplay for our rook. The first scenario has a tendency to be temporary while the second has a tendency to be immediate and urgent, as dynamic actions can be.

If I had to choose a more dominant concern, it would be the activity of the rook. There are many positions where an active rook holds a draw a pawn (or even two pawns) down. And there are many positions with equal pawns where the defending side loses because his rook is poorly placed.

The following game between two of the best players in the world illustrates a few typical scenarios.

### Levon Aronian – Francisco Vallejo Pons

Istanbul (ol) 2012

White has a slight edge, as his rook on b6 is pressing on the a6-pawn. But it is purely optical and can be neutralized with two accurate moves. Vallejo, who has a tendency to run out of time around this part of the game, made things much harder for himself by putting his rook in the corner. Active rooks...

31...\(\text{Exa8}\)?

The wrong path. The rook needs to do stuff.

31...\(\text{Exc4}\)!

This is not immediately easy to evaluate. But if we trust the idea that the active rook is a great asset to us, we will be able to understand that Black should be fine. You could imagine that one would calculate the following line during the game:

32.a3 \(\text{Ec3}\) 33.\(\text{Exa6}\) \(\text{Exf3}\) 34.\(\text{Exe2}\) \(\text{Eb3}\) 35.\(\text{Exa5}\) \(\text{h6}\)

It is hard to evaluate if this is the right move, or if 35...\(\text{g4}\) is. I have chosen to make this the main line, as it leaves a way for the black king to join the game.

36.\(\text{Exb5}\) \(\text{Exa3}\) 37.\(\text{Exb7}\)
Black can play 37...\texttt{b}3 and draw the game without great difficulty. But the more provocative line also seems to work:

37...\texttt{a}a2?! 38.\texttt{e}e3

My computer is trying to convince me that White has a 0.22 advantage after 38.\texttt{f}f3 \texttt{a}a3† 39.\texttt{g}g4 \texttt{a}a2 40.\texttt{g}g3 \texttt{a}a3† 41.f3, but with Black playing 41...\texttt{b}b3, then ...h5 and/or ...\texttt{h}7, the draw is quite apparent.

38...\texttt{a}a3† 39.\texttt{e}e4?!

White can of course retreat to e2 with a quick draw.

39...\texttt{h}3!

It might not look it at first sight, but it is Black who is playing for a win here. The active rook is a direct way to create passed pawns! White obviously does not have to go down this road, but it is interesting to see where it leads. I have to admit that I did not want to spend time working out exactly where the position goes from drawn to lost for White; the main thing is to understand the mechanics of the position.

40.b5 \texttt{x}xh2 41.b6?

But my guess is that this could be the point where the bridge is crossed, burned and crumbled. Defend the f2-pawn and escape with a draw.

41...\texttt{x}xf2 42.\texttt{d}d7 \texttt{b}b2 43.b7 \texttt{h}h7 44.\texttt{d}d5 g4 45.\texttt{c}c6 h5!

The pawns work better together.

46.\texttt{d}d5 \texttt{x}xb7! 47.\texttt{x}xb7 \texttt{h}h6 48.\texttt{c}c6 g3 49.\texttt{d}d1 \texttt{g}g5 50.\texttt{d}d5 \texttt{f}f4 51.\texttt{f}f1† \texttt{g}g4!

The pawns are unstoppable. Black wins.

32.a3

The position might still be a draw, but things have become a bit more difficult for Black.

32...\texttt{f}f7 33.\texttt{g}g2!

A clever move, staying away from checks.

33...h6
34.f4?
34.\(g3\) looks more natural. I don’t understand the rush. In a position where the opponent is passive, tactics do not make a lot of sense.

34...gxf4 35.\(f3\) \(c8\!\!\!\!\!\!
Vallejo correctly uses his chance to activate his rook.

36.\(xa6\) \(c2\?\)
The way to hold the game was not obvious, but it was there. 36...\(c3\)!

37.\(xf4\) \(xf4\!\!\!\!\!\!
White still has some practical chances here, but with accurate play Black will hold. After something like 38.\(a5\) \(xh2\ 39.\(xb5\) (39.\(g3\) \(h5\) and Black is fully okay.) 39...\(xf2\) 40.\(e4\) \(g5\) there is no reason why Black should lose.

38.\(xh6\) \(c3\) 39.\(e4\) \(xh4\) 40.\(xh4\) \(xa3\) 41.\(xf4\) \(e6\) 42.\(f5\) \(a2\) 43.\(f3\) \(e2\) 44.\(f4\)
1–0

King Activity

It is obviously not enough to look after just our rook activity. We also need to make the most out of our other piece on the board. If this sounds very simple, so simple that you are considering sending this book back to the shop claiming an immediate and full refund, I ask you to hesitate for a moment to either check your own games, or at least have a look at the games below.

In the first game, Black was on the way to securing half a point when she got hit by 69.\(e5\)!? Her reaction looks fine on the surface, but the downside soon becomes apparent.

For example, the pawn ending after 41.\(f5\)$ is an obvious draw.
Chapter 5 – Challenging Rook Endings

Nana Dzagnidze – Ju Wenjun

Nanjing 2009

69...dxe5??
This 'obvious move' allows the black king to be cut off.
69...\(\text{\textit{f}}\text{\textit{5}}\)! was the right move. White cannot take on d6 and advancing the e-pawn will do little good. Black has no problems and a draw will be the result quite soon.

But this was not the only way to play. 69...\(\text{\textit{f}}\text{\textit{7}}\)?! 70.\(\text{\textit{e}}\text{\textit{a}}\text{\textit{8}}\) \(\text{\textit{e}}\text{\textit{6}}\)! also saved the game, though it is slightly less straightforward.

70.\(\text{\textit{e}}\text{\textit{4}}\)
It can be a bit hard to accept that Black is already lost here. But with the king cut off, this is the case.

70...\(\text{\textit{e}}\text{\textit{x}}\text{\textit{a}}\text{\textit{5}}\)
70...\(\text{\textit{d}}\text{\textit{d}}\text{\textit{1}}\) 71.\(\text{\textit{a}}\text{\textit{6}}\) \(\text{\textit{d}}\text{\textit{4}}\) 72.\(\text{\textit{e}}\text{\textit{e}}\text{\textit{3}}\) \(\text{\textit{d}}\text{\textit{7}}\)

This was mysteriously suggested by one commentator as a drawing method. Maybe a horizon problem with the engine? White wins easily by playing 73.\(\text{\textit{e}}\text{\textit{a}}\text{\textit{8}}\) and pushing the pawn forward.

71.\(\text{\textit{d}}\text{\textit{5}}\) \(\text{\textit{a}}\text{\textit{7}}\)
71...\(\text{\textit{d}}\text{\textit{a}}\text{\textit{1}}\) 72.\(\text{\textit{e}}\text{\textit{e}}\text{\textit{6}}\) 73.\(\text{\textit{e}}\text{\textit{x}}\text{\textit{e}}\text{\textit{5}}\) also leaves the black king cut off and unable to help with the defence.

72.\(\text{\textit{e}}\text{\textit{e}}\text{\textit{6}}\) 73.\(\text{\textit{e}}\text{\textit{x}}\text{\textit{e}}\text{\textit{5}}\)

White simply wins.

73...\(\text{\textit{d}}\text{\textit{a}}\text{\textit{8}}\) 74.\(\text{\textit{e}}\text{\textit{l}}\) \(\text{\textit{c}}\text{\textit{8}}\) 75.\(\text{\textit{d}}\text{\textit{d}}\text{\textit{6}}\) \(\text{\textit{f}}\text{\textit{8}}\) 76.\(\text{\textit{d}}\text{\textit{d}}\text{\textit{7}}\) \(\text{\textit{a}}\text{\textit{8}}\) 77.\(\text{\textit{e}}\text{\textit{f}}\text{\textit{1}}\) 78.\(\text{\textit{g}}\text{\textit{7}}\) 78.\(\text{\textit{c}}\text{\textit{6}}\) \(\text{\textit{e}}\text{\textit{8}}\) 79.\(\text{\textit{b}}\text{\textit{7}}\) \(\text{\textit{d}}\text{\textit{8}}\) 80.\(\text{\textit{f}}\text{\textit{5}}\) \(\text{\textit{d}}\text{\textit{4}}\) 81.\(\text{\textit{x}}\text{\textit{c}}\text{\textit{5}}\) \(\text{\textit{f}}\text{\textit{6}}\) 82.\(\text{\textit{c}}\text{\textit{8}}\) \(\text{\textit{e}}\text{\textit{6}}\) 83.\(\text{\textit{c}}\text{\textit{5}}\) \(\text{\textit{d}}\text{\textit{5}}\) 84.\(\text{\textit{c}}\text{\textit{6}}\) \(\text{\textit{b}}\text{\textit{4}}\) 85.\(\text{\textit{c}}\text{\textit{7}}\) \(\text{\textit{h}}\text{\textit{4}}\) 86.\(\text{\textit{g}}\text{\textit{8}}\) \(\text{\textit{e}}\text{\textit{6}}\) 87.\(\text{\textit{d}}\text{\textit{8}}\) \(\text{\textit{a}}\text{\textit{4}}\) 88.\(\text{\textit{b}}\text{\textit{7}}\)

1–0

While the previous example showed a king being cut off, there are also less obvious situations. The kings may look active, placed close to the centre, but in reality they are not connected to where the action is. The following is a case in point. The white king made it to the queenside and assisted the pawn, winning the game:
61...\texttt{a}a1?
This looks flexible and normal, but does not address the real concerns in the position. White now goes to d4 and c5 with the king.

62.\texttt{d}d4 \texttt{f}f5
White also wins after 62...\texttt{c}c1 63.a5 \texttt{a}a1 64.\texttt{b}b5 \texttt{a}a4† 65.\texttt{c}c5 \texttt{xf}4 66.a6 \texttt{a}a4 67.\texttt{b}b6 e5 68.\texttt{a}a7 e4 69.\texttt{b}b7.

63.\texttt{c}c5 e5 64.\texttt{f}xe5 \texttt{xe}5 65.\texttt{b}b6 \texttt{d}d1 66.a5 \texttt{d}d6† 67.\texttt{c}c7 \texttt{a}a6 68.\texttt{a}a4 \texttt{d}d5 69.\texttt{b}b7 \texttt{h}h6 70.a6 \texttt{h}h7† 71.\texttt{b}b6 \texttt{h}h6† 72.\texttt{b}b5 1–0

Black could have held with three different moves.

One of them is 61...\texttt{e}e7 with the intention \texttt{d}d4 \texttt{d}d6 and the white king's path is blocked. There are some more complex lines after 62.\texttt{e}e5, where Black is walking a tightrope after 62...\texttt{e}e3† 63.\texttt{d}d4 \texttt{e}e1.

Other ways to block the king's advance would be the artificial 61...\texttt{c}c3 or even 61...\texttt{h}h3 62.\texttt{d}d4 \texttt{h}h5!

In the final game of this chapter the difference between an active and an inactive king, even in a case where the rook is poorly placed, is illustrated quite well.

Viswanathan Anand - Michael Adams

Paris 2013

1.e4e5 2.\texttt{f}f3 \texttt{c}c6 3.\texttt{b}b5 a6 4.\texttt{a}a4 \texttt{f}f6 5.0–0 \texttt{e}e7 6.\texttt{e}e1 b5 7.\texttt{b}b3 0–0 8.a4 b4 9.d4 d6

2013 was a bad year for Anand, despite starting with a great game against Aronian. He seemed to get worse throughout the year, culminating in losing the World Championship title to Carlsen. For some previous World Champions losing the title has been a chance to regroup, rethink their chess and come back stronger. I sincerely hope that this will also happen to Anand. This game seemed to represent everything that was wrong with Anand in 2013. A timid opening, a few inaccuracies and then losing to a player doing everything right! The last part must hurt especially, as it is so hard to do anything about.
Chapter 5 – Challenging Rook Endings

10.dxe5 dxe5 11...xd8 exd8 12...bd2 c5 13...c4 g4 14...e2 a5 15...d5 b8 16...b3 xb3 17.cxb3 h6 18.h3 f6 19...xe5 xd5

This is probably the critical moment of the game. White should have entered complications, leading to a draw. I am unsure of why Anand did not go for this.

20.exd5?
20...c6! c3 21.bxc3 d1+ 22.h2 b6 23.cxb4 d6+ 24.e5 xc6 25.exd6 and after b2 a draw seems highly likely.

20...xd5 21.f4 e6 22.c1 d6 23.g3 e8

Black’s position is very comfortable. He has the two bishops and the pawn on b3 is weak. If it was possible to do a tablebase on this position and get a result, my guess would be that it is a draw. However, I suspect that White would have to find quite a lot of nice moves to prove it.

24.e3?
But this is not one of them. Better was probably 24...c6 a5+, and the game goes on.

24...c5 25.d3!?
In the ensuing rook endgame, White will struggle to get his king into play because of the pile of rubble in front of it. After the game it is easy to say that 25...c4+ was a better chance, but it appears to be the case.

25...xg3 26.fxg3
Black has a very pleasant choice here. Keep an edge with 29...f5 or go into a rook endgame with equal pawns; a rook ending where the black rook will be poorly placed on

26...ed8 27.d4 d1+ 28.xd1 xd1+ 29.h2

26...ed8 27.d4 d1+ 28.xd1 xd1+ 29.h2
a4 and the white rook perfectly placed behind the passed pawn. It turns out that the deciding factor is the white king’s inability to enter the battle.

29...\( \text{a}4! \) 30.\( \text{f}4 \) \( \text{f}6 \) 31.\( \text{f}6 \) \( \text{f}b2 \) 32.\( \text{f}a2 \) \( \text{a}3 \) 33.\( \text{f}c6 \) \( \text{f}c3! \)

Black is threatening to keep two connected passed pawns. Obviously if he was successful with this, he would win the game immediately. But the a-pawn will distract him. The reason for commending this decision is that Black wins vital time to bring the king into the game before exchanging.

34.\( \text{c}5 \) \( \text{f}7 \) 35.\( \text{f}6 \) \( \text{f}7 \) 36.\( \text{f}7 \\

If White focused on bringing the king into the game with 36.\( \text{f}4 \) \( \text{f}7 \) 37.\( \text{f}7 \) \( \text{f}a3 \) 38.\( \text{f}c5 \) \( \text{f}a7 \) 39.\( \text{f}g3 \), things would only look worse after 39...\( \text{f}b7 \).

36...\( \text{f}a3 \) 37.\( \text{f}c5 \) \( \text{f}a7 \) 38.\( \text{f}b5 \) \( \text{f}a4 \\

White has managed to win all the black kingside pawns, but with his own king out of play he has no realistic chance of saving the game.
1. Pogos Nakhapetian – Sergei Zhigalko, Herceg Novi 2006
Zhigalko is a very technical player who is always looking for the long-term factors. He has won a lot of instructive games, including this rook endgame. In the middlegame White was better, but an odd decision to exchange queens allowed Black to get rid of his main concern – the safety of his king. 47...gc6! The c-pawn is stopped as far up the court as possible and White is prevented from chasing the h-pawn with his king. 48.\textit{\texttt{e}5} \textit{\texttt{g}4}! This involves a rook sacrifice, but Black has calculated till the end. 49.\textit{\texttt{d}5} \textit{\texttt{xf}6}! 49...\textit{\texttt{ec}8} 50.\textit{\texttt{c}6} \textit{\texttt{g}3} 51.\textit{\texttt{d}6} \textit{\texttt{h}2} 52.\textit{\texttt{ec}1} \textit{\texttt{g}2} 53.\textit{\texttt{ec}2}† would only be a draw. 50.\textit{\texttt{c}6} \textit{\texttt{e}6}! The rook is sacrificed on a square where it will distract its counterpart. 51.\textit{\texttt{c}7} \textit{\texttt{e}8} 52.\textit{\texttt{c}8=} \textit{\texttt{e}†}?! This gave Black an easier ride. 52.\textit{\texttt{d}6}?! offers more resistance, but does not change the result. 52...\textit{\texttt{g}3} 53.\textit{\texttt{d}7} (53.\textit{\texttt{e}2} \textit{\texttt{g}8} 54.\textit{\texttt{e}3}† \textit{\texttt{g}4} 55.\textit{\texttt{d}3} \textit{\texttt{f}5} and Black wins.) 53...\textit{\texttt{g}8} 54.\textit{\texttt{d}2}! This tricky move has brought us to Exercise 12. 52...\textit{\texttt{xc}8} 53.\textit{\texttt{xc}8} \textit{\texttt{h}2} 54.\textit{\texttt{ec}1} \textit{\texttt{f}5} 55.\textit{\texttt{d}4} \textit{\texttt{f}4} 56.\textit{\texttt{d}3} \textit{\texttt{g}3} 57.\textit{\texttt{h}1} \textit{\texttt{g}2} 58.\textit{\texttt{e}2} \textit{\texttt{f}3}† 59.\textit{\texttt{e}3} \textit{\texttt{h}5} 0–1

2. Sergey Karjakin – Vladimir Potkin, Moscow 2012
The theme of this exercise is Domination. 35.\textit{\texttt{d}4}?! \textit{\texttt{e}7} 36.\textit{\texttt{xd}5} \textit{\texttt{ed}8}† 37.\textit{\texttt{c}4} \textit{\texttt{ec}8}† 38.\textit{\texttt{d}3} \textit{\texttt{d}8}† 39.\textit{\texttt{c}2} \textit{\texttt{ec}8} makes it very hard for White to do anything active. Especially since Black is threatening ...\textit{\texttt{ec}4}. Deep analysis shows that Black does indeed hold the draw. But for the practical player, the lack of progress is enough to discard this line.

35.\textit{\texttt{e}6}! \textit{\texttt{fxe}6} On 35...\textit{\texttt{eg}7}? then 36.e7† might not be the computer’s choice, but it is good enough for me! 35...\textit{\texttt{e}7}!! was a worthy try, but White wins after 36.\textit{\texttt{xf}7} \textit{\texttt{ff}8} 37.\textit{\texttt{d}4} \textit{\texttt{e}6} 38.\textit{\texttt{g}7} \textit{\texttt{ec}8} 39.\textit{\texttt{f}8} \textit{\texttt{ff}8} and so on. 36.\textit{\texttt{d}4} \textit{\texttt{g}7} 37.\textit{\texttt{gxg}7}†! The point. The pawn ending just wins. 37.\textit{\texttt{h}8}† \textit{\texttt{e}7} 38.\textit{\texttt{a}8} also wins, amusingly, but only because of the idea in the game. 37...\textit{\texttt{gxg}7} 38.\textit{\texttt{e}5} \textit{\texttt{f}7} 39.\textit{\texttt{d}6} \textit{\texttt{a}4} 40.\textit{\texttt{a}3} 1–0

3. Erwin L’Ami – Loek van Wely, Wolvega 2010
Van Wely had given up a rook with the hope of delivering ‘perpetual rook’ based on a stalemate trick. However, L’Ami had seen that it did not work and accepted the gift. What follows is a beautiful king march to safety. 41.\textit{\texttt{e}1}! 41.\textit{\texttt{g}1}?? \textit{\texttt{xf}2}† would throw the win away. The white king needs to be able to hide behind the g-pawn when he returns from the queenside. 41...\textit{\texttt{xe}2}† 42.\textit{\texttt{d}1} \textit{\texttt{de}2}† 43.\textit{\texttt{c}1} \textit{\texttt{ec}2}† 43...\textit{\texttt{d}1}† 44.\textit{\texttt{c}2} \textit{\texttt{d}2}† 45.\textit{\texttt{b}1} changes nothing. 44.\textit{\texttt{b}1} \textit{\texttt{c}1}† 44...\textit{\texttt{xb}2}† 45.\textit{\texttt{xb}2}! and there is no stalemate. 45.\textit{\texttt{a}2} \textit{\texttt{a}1}† 46.\textit{\texttt{b}3} \textit{\texttt{a}3}† 47.\textit{\texttt{c}2} \textit{\texttt{c}3}† 48.\textit{\texttt{d}2} \textit{\texttt{d}3}† 49.\textit{\texttt{e}2} \textit{\texttt{e}3}† 50.\textit{\texttt{f}2} \textit{\texttt{f}3}† 51.\textit{\texttt{g}1} \textit{\texttt{f}1}† 52.\textit{\texttt{h}2} \textit{\texttt{h}1}† 53.\textit{\texttt{g}3} \textit{\texttt{h}3}† 54.\textit{\texttt{f}4} \textit{\texttt{f}3}† 55.\textit{\texttt{e}5} \textit{\texttt{f}5}† 56.\textit{\texttt{d}6} \textit{\texttt{f}6}† 57.\textit{\texttt{c}5} \textit{\texttt{c}6}† 58.\textit{\texttt{b}5} Black resigned. 1–0

Only five pieces on the board, but the position still offers a lot of resistance!

1. $\text{hf5}$? would allow Black to draw with a stalemate trick: 1...$g4$ 2. $\text{hf4}$ $g3$ 3. $\text{hf3}$ $g2$! 4. $\text{e4}$ $h2$

5. $\text{h2}$ $h3$ 6. $\text{a1}$ $g1$=?? 7. $\text{xg1}$

1. $\text{a1}$? is a tricky waiting move. Black draws in only one way; with shouldering. 1...$g3$ 2. $\text{f5}$ $h3$ 3. $\text{a3}$ $h4$!

1. $\text{a3}$ $g4$! 2. $\text{f5}$ $g3$! 3. $\text{f3}$ $h3$ 4. $\text{a3}$ $h4$! and draws.

1. $\text{e4}$! $g4$ 1...$g3$ 2. $\text{a3}$ $g2$ 3. $\text{f5}$ wins a bit trivially. The line might be long, but there are not a lot of difficult moves involved: 3...$h3$ 4. $\text{g4}$! $h2$ 5. $\text{a2}$ $g1$ 6. $\text{g3}$ $h1$=?? 7. $\text{f3}$ $g4$ 8. $\text{xg4}$ $f2$ 9. $\text{f3}$ $d3$ 10. $\text{a4}$ $c5$ 11. $\text{d4}$ $e6$ 12. $\text{e6}$ $c5$ 13. $\text{d2}$ $e6$ 14. $\text{g3}$ $f1$

15. $\text{d5}$ $c7$ 16. $\text{e5}$ $a8$ 17. $\text{f3}$ $g1$ 18. $\text{g5}$ $h2$ 19. $\text{g2}$ $h3$ 20. $\text{g8}$ 2. $\text{e3}$ $g3$ 3. $\text{a4}$!!

White wins, on account of 3...$g2$ 4. $\text{f2}$ and it is all over.


Sometimes it can be difficult to spot the chances when they are there.

The point is that the checks are quickly wasted: 55. $\text{a7}$ $\text{xf4}$ 56. $\text{xc7}$ $\text{xf4}$ 57. $\text{a4}$ 58. $\text{c4}$ $\text{xa7}$! After this it is White who has problems to solve. (Black could also set up a fortress with 58...$\text{xc4}$ 59. $\text{a8}$?? $\text{e4}$ when, according to the tablebases, the position is drawn with the h-pawn removed. I cannot see a way in which having the pawn will be a liability, so we can easily call this a drawn endgame.) 59. $\text{xa7}$ $\text{e5}$ 60. $\text{b6}$ $h4$ 61. $\text{c5}$ $h3$ 62. $\text{c2}$ $\text{f4}$ 63. $\text{d4}$ $g5$ 64. $\text{c1}$?

A horrible move, probably caused by the continuous stress of the increment. 64. $\text{f2}$ was the correct move, which Jonathan would have found easily with more time. After 64...$\text{g4}$ White can draw in many ways, for example: 65. $\text{e3}$ $f4$ 66. $\text{e2}$ $\text{g3}$ 67. $\text{f3}$ $\text{f2}$ 68. $\text{f2}$ and so on.

64...$h2$ Now Black is winning. 65. $\text{xf3}$ $\text{g3}$ 66. $\text{xf4}$ $h1$=?? 67. $\text{xf5}$ $f4$ Jonathan fought valiantly, but 40 moves later he had to yield.

White wins with: 55. $\text{a7}$! 55. $\text{b7}$ first is also possible, with the same line in mind. 55...$\text{g7}$

Defending against the threat of $\text{h8}$t. After 55...$\text{a1}$ 56. $\text{b7}$ Black cannot prevent the pawn from queening, as White is winning a tempo with the check on h8. But here the black rook is too close. 56. $\text{b7}$ $\text{b4}$ 57. $\text{a6}$ $\text{a4}$ 58. $\text{b6}$ $\text{xf4}$ 59. $\text{c8}$ White wins.

6. Anthony Miles – Erik Jelling, Copenhagen 1993

The game was agreed a draw after: 38. $\text{b7}$ 39. $\text{c1}$ $\text{c3}$ 40. $\text{c7}$ $\text{d3}$ 41. $\text{d7}$ $\text{c3}$ 1/2–1/2

The first part of the solution is not that difficult to spot, but even if White gets a queen it is not obvious that he is winning! 38. $\text{b7}$ $\text{c4}$ 39. $\text{b4}$ 40. $\text{bxh4}$ $\text{f7}$ 41. $\text{b8}$=?? $\text{c4}$ It was John Shaw who pointed this exercise out to me. Being busy managing us, he simply noted that the computer was unable to win the position despite claiming +1 trillion. It took us minions only a few minutes to work out that this was a fortress attempt, and thus had to be toppled with a zugzwang idea. For example: 42. $\text{b7}$ $\text{b4}$ 43. $\text{b7}$ $\text{c4}$ 44. $\text{a6}$ $\text{b4}$ 45. $\text{d1}$ and Black cannot improve his position, while White can get another queen on the kingside.
Grandmaster Preparation – Endgame Play

Macieja – P.H. Nielsen, Wolvega 2010

Svane – Shengelia, Kozloduy 2013

Poghosyan, 2012

Riazantsev – Korneev, Chalons en Champagne 2009

Grandelius – Gritsenko, Vung Tau 2008

Nakhapetiane – S. Zhigalko, Herceg Novi (var) 2006
Chapter 5 – Challenging Rook Endings

Bologan – E. Berg, Dresden (ol) 2008

Jones – Yu Yangyi, Reykjavik 2013

Lahno – Finegold, St Louis 2011

Reshevsky – Fischer, Los Angeles 1961
7. Bartlomiej Macieja – Peter Heine Nielsen, Wolvega 2010
In the game, Black was lost after: 38...exf5? 39.gxf5 g6 40.axa6 exf2 41.b5 h4 White also wins after 41...exh2 42.b6 hxh1 43.b4 e4 44.bxh6 gxh6 45.g5 c8 46.b7 c8 47.g6 h5 48.c8 b7 49.g8t! h5 50.cxb7 e4 51.g5 h3 f5 52.exf5 gxg4 53.c6 f5 54.d5. 42.b6 hxg3 White won this ending on move 62, but we shall stop it right here, as 43.b7! gxh2 44.a1 would have won instantly.

Black could have drawn with: 38...exf2t! 39.gxf3 exa2 The most direct. If you see why it is a draw, you play it. Still, it is comforting that 39...exf5! 40.axa6 exg5 41.a5 e5 would also suffice, even if the circumstances are a bit scary. 42.c4 g4 43.c5 e4 44.b5 e3 45.a2 g5 46.c6 c5 47.axd5 bxc5 48.b7 g4t 49.b6 gxf3 50.a7 e4 51.b7 e8 Black draws. 40.gxg2 c6 41.g3 exg5 42.g4 c5 43.g5 c6 h3 44.axb6 exh2 45.axa6 gxf3 46.b5 h4 with a draw. 42...f6! To me this is the surprising concept. But we need to remember that this is a race and tempos are more important than material. 43.exf6 xf6 44.a5 e5 45.axa6 e4 46.b5 e3=

8. Poghosyan, 2012
Taken from analysis of the rook ending by Poghosyan; with 3 vs. 3 on the kingside and an a-pawn. White wins by pushing the black king to the weaker squares. 1.h7! g6 2.a7! h7 3.a8=g8 4.xa8 f4 5.g6 h3 5.f4! 5.f3! Poghosyan stops here, but we can extend the analysis a bit for the sake of clarity. 5...g8 6.b7 f7 7.c6 e6 8.c5 e5 9.c4 e6 10.b4 and White wins.

58.b7? A horrible blunder. 58...exa7†! 59.a7 g3 Black just wins. Tragic. 60.c6† e5 61.cb5†舍不得 62.g5 h2 63.xg3 h1= 64.a3 c6 65.c3†舍不得b5 66.c5†舍不得xb4 67.c7舍不得b5 68.c7舍不得 c6 69.a8舍不得 d5 70.a7舍不得 d8 71.b3舍不得 d7 72.b8舍不得 e8 73.a7舍不得 f7 74.b8舍不得xb3 0–1

White was winning after 58.c6†!. The king cannot advance to the 5th rank because of舍不得c5† followed by舍不得a5. And after 58...舍不得g7 59.cb4 the g-pawn falls. So a natural try is 58...舍不得f7, but after 59.cb6 it is hard for Black to improve his position, which is a sad reality to face in a race!

10. Rasmus Svane – David Shengelia, Kozloduy 2013
Black had to make a life or death decision on the last move before the time control. Not a great moment to solve complex problems. 40...h5? 41.c6!! e8 42.a5 White is winning. 42.g4 43.b6 axb6 44.axb6 e8 45.c2 h4 46.b7 h3† 47.g3舍不得f3† 48.h4舍不得h8† 49.g5舍不得f5† 50.g6舍不得f4 51.c8=舍不得h5 52.exd4舍不得exd4 53.b8=舍不得† 1–0

Black could try 40...舍不得f3, but this does not work either. 41.exh6舍不得c8 42.c6舍不得f2† 43.g3舍不得f1 (43...舍不得f4 44.c1) White creates a path for the king: 44.h3!!舍不得g1† 45.舍不得h2舍不得f1 46.cb2舍不得h1† 47.g3舍不得h1† 48.g2舍不得f3† 49.舍不得h2舍不得c1 50.g4† and White wins after both 50...舍不得f4 51.a5 and 50...舍不得e3 51.a5.

The saving grace was perpetual check. This is done by trapping the white king in a limited space: 40...舍不得c8 41.d8舍不得f2† 42.g3舍不得f4!! White has achieved all his goals on the queenside, but cannot escape the perpetual.
White has an extra pawn, but it is not so easy to make progress. Black is ready with ...\(d2\) and ...\(e3\) to gain counterplay against the white pawns. Riazantsev found a brilliant solution.
37.\(e2!! \) \(e2\)
Otherwise White wins immediately with ...\(e3\). 38.\(e1 \) \(e1\)
This is the move that could have discouraged White from bringing his king to the queenside. However, the counterplay is an illusion: 39...\(d1\) 40.\(a4 \) \(a3\).

Black wins in beautiful style. 54...\(f5\) 55.\(d3\) \(d3\) 56.\(d6 \) \(d6\) 57.\(h6 \) \(h6\).

If White had played 55.a5? the win would already be gone. After 55...\(g7\) 56.a7\(\#\) all Black has to do is to realize that he must play 56...\(f6\), with the idea 57.a6 \(g6\) and White is in zugzwang. After 58.a8 \(f6\) 59.a7 \(g7\) 60.a5 \(xh6\) 61.a6 \(f4\) 64.\(c7 \) \(c7\).

55.\(a5!! \) A fabulous move. It most likely stole all of Bologan's time from him. 55...\(\#6\)
55...\(a7\) 56.g5 and White wins by bringing the king to the queenside. 56.a7? Things were going according to plan, but Bologan missed the chance to play 56.a5\(\#\) winning immediately, as after 56...\(xg5\) he has 57.a5\(\#\) winning an important tempo. 56...\(a5\) 57.a5 \(d6\) 58.a6\(\#\) After having missed the trivial win, White has to play good moves to finish the game. There are two winning lines:

The simplest win was 58.a6 \(f6\) and then 59.a7 \(g6\) 60.g5 and the h-pawn goes.
58.a8\(\#\)? also wins, but only after some stunning moves. After 58...\(a8\), which is the best defence, White only wins with the following line: 59.a6\(\#\) \(h7\) (59.a8 \(b3\) 60.a6 does not help Black.) 60.g5 \(xg5\) 61.a5 \(xh5\) 62.a6 White has exactly enough time to play this small move, which just wins. 62.a3 (62.a8 \(g7\) 63.a7 \(g8\) 64.a6 is trivial.) Here it is very important that after 63.a5\(\#\) White can play 64.a6, and win.
58...\(g7\) 59.g5 White is in zugzwang. After 59.a8 \(g6\) 60.a6 \(f6\) there is no way to improve the position, just as in the note to move 55. 59.a5\(\#\) 60.a5 \(xh5\) 61.a7\(\#\) 62.a6 \(a3\) 63.a8\(\#\)
White also won't win after 63.a6 \(e8\) 64.a5 \(e6\) 65.a6 because of 65.a.e3 66.a.c6 a3 67.a.b7 a7 68.a.b6 a7 69.a.xa7 a7 with a draw. 63.a.g7 63...\(a7\)? would lose to 64.a.a7 since after 64.a.a7 65.a.e5 a7 White can play 66.a7! leaving Black no defence against 67.a.h8\(\#\), winning the rook. 64.a.f5 We have seen this position before, in the *Simple Rook Endings* Chapter, position 30 on page 63.
14. Kateryna Lahno — Benjamin Finegold, St Louis 2011

White managed to create a disaster after $44.\text{g}5? \text{g}2\# 45.\text{h}6 \text{b}4$, when Black is going to play $...e5$ and $...\text{f}7$ eventually, threatening mate. $46.f4$ This only takes away an escape square. $46...\text{b}3 47.\text{h}7 \text{b}2 48.\text{h}6 \text{b}1=\# 49.\text{xb}1 \text{f}7 50.\text{e}8 \text{f}2\# 0–1$

White could have drawn by making the most of the king's ability to provide counterplay. $44.f7!!$ Freeing the $f6$-square for the king. $44...\text{g}7$ The most tempting. $44...\text{b}4 45.\text{g}5 \text{g}7 46.\text{f}8=\# \text{xf}8 47.\text{g}x\text{g}6$ will also end in a draw. White's activity is enough. $45.\text{f}8=\#$!

Securing the advance of the white king. $45...\text{f}8 46.\text{e}5 \text{e}3 46...\text{b}4 47.\text{g}x\text{g}6$ and White draws. $47...\text{e}8 48.\text{f}6 \text{e}3 49.\text{b}x\text{b}4 \text{d}7 50.\text{b}6$ and progress cannot be made. $47.\text{g}x\text{g}6 \text{e}8 47...\text{f}3 48.\text{f}6 \text{g}8 49.\text{g}x\text{e}6$ is an elementary draw. $48.\text{f}6 \text{d}8 49.\text{h}x\text{b}5 \text{d}7 50.\text{g}b6$

Once again, true progress is impossible.

15. Gawain Jones — Yu Yangyi, Reykjavik 2013

White missed a golden chance at the end of the time scramble. $37.\text{c}c5? \text{xd}4!$ Black is happy to liquidate as many pawns as possible, even if he temporarily loses one himself. $38.\text{xf}5=\# 39.\text{x}g6 \text{h}8 39...\text{f}6$ was more natural. White cannot seriously prevent Black from playing $...\text{d}6$ and equalizing very soon. $40.\text{c}e5 \text{d}8 41.\text{e}6 \text{dc}8 42.\text{a}5$ Black draws all the same though. The players continued another 24 moves, but we shall cut it here. $\frac{1}{2}–\frac{1}{2}$

$37.\text{g}5t \text{e}5 38.\text{e}6$ was very strong, cutting the black king off (and it can always be sent further away with $h4\#$). Black has a lack of sensible moves. $38...\text{d}5 38...\text{f}4 39.\text{c}5=\#$ is bad news for Black. $39.\text{f}2 \text{f}4$ Black has to do something. If White is given enough time, he will play $\text{d}3$, $\text{c}4$, winning. $40.\text{f}3 \text{f}5$ Again $\text{e}4$ cannot be tolerated. $41.\text{h}6 \text{g}5 42.\text{e}4 \text{xd}4 42...\text{f}5 43.\text{h}5$ and White wins. There is time for $d4-d5$ and $\text{c}1$ to stop the f-pawn. $43.\text{xd}4 \text{hxh}6 44.\text{d}5 \text{g}5 45.\text{d}6 \text{c}8 46.\text{d}7$ and $47.\text{c}7$. White wins.


Reshevsky lost the game after playing too slowly. $40.\text{c}6? \text{g}5 41.\text{hxg}5t \text{hxg}5 42.\text{b}5 \text{g}4 43.\text{c}8$ Another interesting line was: $43.\text{c}1 \text{g}3 \# 44.\text{g}1 \text{a}2!!$ Black values his own pawns highly. $45.\text{b}1 \text{f}3 46.\text{b}6 \text{g}2 47.\text{f}1 \text{h}2 48.\text{e}1 \text{h}1 49.\text{d}2 \text{xb}1 50.\text{a}7 \text{f}2 51.\text{a}8=\# \text{f}1=\#$ Black wins. $43...\text{f}5 44.\text{b}6 \text{g}3 \# 45.\text{e}1 45.\text{g}2 \text{a}2 \# 46.\text{g}1 \text{f}3$ leads straight to mate. $45...\text{a}1 \# 46.\text{e}2 \text{g}2 47.\text{g}8 \text{g}8 \text{a}6$ is hopeless. $47...\text{e}4 48.\text{f}4 \text{f}4 \# 49.\text{b}7 \text{g}1=\#!!$ A bit inaccurate, but still enough to win. $49...\text{e}4$ was mate in a few moves and thus even stronger. $50.\text{b}8=\# \text{f}1=\# 51.\text{b}8 \text{e}4 52.\text{a}8=\# \text{d}4 53.\text{d}8=\# \text{c}4 54.\text{d}3=\# 55.\text{b}5 \text{d}2=\# \text{e}5 57.\text{b}2=\# \text{f}5 0–1$

$40.\text{b}5$! White should have held the game. The b-pawn needs to be pushed forward quickly. $40...\text{g}5 40...\text{e}5 41.\text{b}8 \text{e}5 42.\text{e}4 43.\text{b}6$ is a draw. But Black has to give a perpetual check. He would be worse off after 43...\text{xe}a6 44.\text{b}7. For example $44...\text{a}2 \# 45.\text{e}1 \text{b}2 46.\text{b}8=\#$ $47.\text{b}8=\#$ and White wins. $41.\text{b}8 \text{g}4 41...\text{gh}4$ This does not work. White queens the b-pawn and the rook plays divide and rule with the black pawns. $42.\text{b}6 \text{g}3 \# 43.\text{f}1 \text{xe}a6 44.\text{b}7 \text{f}3 45.\text{f}8 \text{e}7 46.\text{f}3 47.\text{g}3 48.\text{h}5 \text{xb}7 49.\text{g}6$ White draws.
Chapter 5 – Challenging Rook Endings

Huschenbeth – Buhmann, Germany 2011

Tal – Taimanov, Riga 1958

Inarkiev – Vitiugov, Novgorod 2011

P.H. Nielsen – Postny, Khanty-Mansiysk 2011

Anand – McShane, London 2012

Rapport – Ki. Georgiev, Sarajevo 2011
17. Niclas Huschenbeth – Rainer Buhmann, Germany 2011
White won in classical style by hiding his king behind one of the enemy pawns. The whole operation was based on an important point at move 57/58.

17. Niclas Huschenbeth – Rainer Buhmann, Germany 2011
White won in classical style by hiding his king behind one of the enemy pawns. The whole operation was based on an important point at move 57/58. 52.f5! 52...gxh6 fxg4 53.g5 fxg2 54.h5 hxg2 55.h6 h2† 56.g7 h3 would have allowed Black to hold the game. 52...gxh5 53.gxh5 h3 54.g6 g2† 55.h6 h2 and Black just draws. 53...f4 54.g6 g2 55.g7 f3 56.exa2 f2 57.a1 g3! Black’s best fighting chance, but not enough to save the game. 57...g1 58.g1f1 was the deep point behind White’s play. This type of move is hard to see, especially as it moves towards an enemy object before stopping right in front of it. 58.f1 f3† 59.g6
Gaining time on the clock one supposes. 59...g3† 60.h7 h3† 61.g6 g3† 62.h6 f3† 63.e6! g3 64.exf2 exg7 65.d6 d6† 66.c6 The black king is cut off and White wins the game. 66...g7† 67.c6 g6† 68.h7 g7† 69.a6 g6† 70.a5 d7 71.c2! Of course. The king is not allowed into the game. 71...d6 72.b5 1–0

18. Ernesto Inarkiev – Nikita Vitiugov, Novgorod 2013
Inarkiev did not manage to make a lot of progress in the game: 55.d3?! a3† 56.e2? 56.c2 a1 57.f5 would still have won. 56...e4 57.f2 f3†? After 57...a2†! 58.e1 d3 59.exf7 e3! 60.a1xa6 a draw can be agreed. 58.g1? 58...e1† 59.d2 d4 60.c2 would still cause Black a lot of problems. 58...g3† 59.f1 f3† 60.e2 e3 61.d1 a1† 62.c2 d5 63.f2 f4 64.c3 ½–½
55..b4 b1† 56.a5 b5 is not progress for White.

The winning idea involves activating the white rook, which is surprisingly passive on f6. 55.f5!! White needs this exchange to be able to avoid having his king blocked on the 5th rank. 55...gxh5 56.exf5† e6 Other moves lead to the same place. 57.a6† d5! In the event of 57...e7 58.a4 a1 59.f5 White wins trivially. 58.b4! b1† 58...a2 59.f5† e6 60.a5 is another important point. 59.a5 c5 60.b5† With this check available, White wins.

The World Champion has mysteriously misplaced his rook from a8 to a1, where it cannot hold the black king to ransom. But alas, Luke McShane misses his chance.

90...e8? allowed Anand to correct his error and hold the game. 91.a8! g4 92.g8† f3 93.a8 e1 94.a7 d1 95.a8 e3 96.dh3 f3 97.a3† f2 98.a2† e3 99.a3† e2 100.a2† d1 101.a1 f2 102.d2 e2 103.e8 e3† 104.g3 g2† 105.h3 h2 106.g3 g2† 107.h3 h2 108.h3 g2†

90...g4! was the winning move. 91.a2 91.g1† h4 92.g8 e2† 93.g1 f3 transposes to our main line. 91...e4 Black is preparing ...f3 and ...e2†. 92.a8 e2† 93.g1 f3 94.g8† 94.a8 could be met with king to g3, but even stronger is 94...e1! 95.a7 g5!, when White has no defence. For example: 96.e7 (96.g8 loses fastest to 96...g3 97.d7 h2† 98.h1 f2 99.g8 f4 with ...g4 on the next move.) 96...g3 97.e7 f2 (97...e3 98.e1 e3 and White is mated in four moves.) 97...f2† 98.f1 h2 99.g8 h1† 100.xh1 e5 White is mated. 94.g8† e3 96.e8† 96.f1 h2 and White will lose as soon as Black gets to give a check on the first rank. 96...e2? 96.g8 h2† 97.e1† 98.e2 e3 99.dh3 e1 wins in a similar way. 98.e1 h3 99.dh2 e1! From here on everything is rather easy, though it takes some time. 99...e2?? 100.g3 f2† 101.g2 and it would be a draw again. 100.a8 100.a8 f2† 101.g2 e2 is decisive. 100...e1 101.a7 f2 102.e1† e1† 103.a2 e8 104.a1† e2 105.a2† f3 106.e3† e3 107.e1 Black wins.
Chapter 5 – Challenging Rook Endings

20. Mikhail Tal – Mark Taimanov, Riga 1958

A golden oldie. Tal misses the win in the rook ending, only to be looked upon graciously from above in the drawn queen ending. 50.\texttt{b5}! 51.\texttt{b7}+ \texttt{xb7} 52.\texttt{xb7} g2 53.\texttt{b8}+ \texttt{g1}! =\texttt{g1}! Objectively the game should be drawn, but White has some practical chances and these positions are very hard to play for humans. 54.\texttt{c7}+ \texttt{e8} 55.\texttt{c8}+ \texttt{e7} 56.\texttt{c7}+ \texttt{e8} 57.\texttt{d6} \texttt{d4}+ 58.\texttt{c6} \texttt{e4}+ 59.\texttt{b6} \texttt{b4}!? 59...\texttt{e3}+ would be a draw. 60.\texttt{a6} \texttt{a4} 61.\texttt{b7}? Here White could have won. 61.\texttt{a7} \texttt{d4}+ 62.\texttt{b7} \texttt{b4}+ transposes to the game. 61...\texttt{b4}+ 61...\texttt{b3}+ would have made the draw again. This time, White carries the full point home. 62.\texttt{b6} \texttt{e7}+ 63.\texttt{c8} \texttt{e4} 64.\texttt{b5}+ \texttt{f8} 65.a6 \texttt{e6}+ 66.\texttt{c7} \texttt{e7}+ 67.\texttt{d7} \texttt{c5}+ 68.\texttt{c6} \texttt{e3} 69.\texttt{b7} \texttt{e7}+ 70.\texttt{c8} \texttt{e3} 71.\texttt{f6}+ \texttt{g8} 72.\texttt{d8}+ \texttt{h7} 73.\texttt{c7}+ \texttt{h6} 74.a7 \texttt{e4} 75.\texttt{b6}+ 1–0

The winning idea was: 50.\texttt{c5}!! \texttt{c7} 50...\texttt{d8} loses to 51.\texttt{d6} \texttt{g7} 52.a6. 50...g3 fails to 51.c7 g2 52.c8=\texttt{g1}! =\texttt{g1}! with a mating attack. 51.a6 51.\texttt{d5}!? to protect the c-pawn wins less quickly, but wins nonetheless. 51...g3 52.\texttt{c2} g2 53.\texttt{xg2} \texttt{xc6} 54.a7 \texttt{a6} 55.\texttt{g8}! White wins the rook and I think we can trust the 8th World Champion to take it from there.

21. Peter Heine Nielsen – Evgeny Postny, Khanty-Mansiysk (1.1) 2011

The game went: 50.a5? \texttt{gxh2} 51.\texttt{h4} \texttt{d3} 52.\texttt{b7} \texttt{b2}+ 53.\texttt{c7} \texttt{c2}+ 54.\texttt{b6} \texttt{b2}+ 55.\texttt{c5} \texttt{c2}+ 56.\texttt{b5} \texttt{b2}+ 57.\texttt{a6} h2 58.\texttt{a7} \texttt{e3} 59.f4 \texttt{f3} 60.f5 \texttt{g3} 61.\texttt{h8} \texttt{b5}= 62.a6 \texttt{xf5} 63.\texttt{b7} \texttt{xf7} 64.\texttt{b6} \texttt{g2} 65.a7 \texttt{a7} 66.\texttt{xe2}+ \texttt{xe2} 67.\texttt{xa7} And somewhere around here we can presume a draw was agreed.

50.\texttt{e3}? would also lead to a draw after 50...\texttt{gxh2} 51.f4 \texttt{f2}! (51...\texttt{h1} 52.\texttt{f3} would still win for White) 52.\texttt{h3} \texttt{xh3} \texttt{xf4}, for example 53.\texttt{b5} \texttt{f5}+ and 53.a5 \texttt{f6}+ both with standard draws.

White wins by working two jobs; defending h2 and supporting the a-pawn. 50.\texttt{e2}+! \texttt{d3} 51.\texttt{a2}! White delays the loss of the h2-pawn as long as possible, and gets time to improve the rook and advance the a-pawn. A possible line would have been: 51.\texttt{g1} White also wins after 51...\texttt{d4} 52.a5 \texttt{g1} 53.\texttt{a4} \texttt{c5} 54.h4 52.\texttt{f4}! This is the point (or with a check on a3 first). Black cannot defend his h-pawn. 52...\texttt{c4} 53.\texttt{a3} \texttt{fl} 54.\texttt{hxh3} \texttt{xf4} 55.\texttt{h5}! and the black king is cut decisively off.


This is the kind of position where it is easy to believe that Black is winning, but just as easy to believe that only a draw is available.

The game went: 56...\texttt{e2}? 57.\texttt{e1} \texttt{xc4} 58.\texttt{xe2}+ \texttt{b4} 59.\texttt{xe2} With a standard draw agreed 19 moves later.

56...f4 57.b6 e2 58.b7 \texttt{b2} also fails to win. Here, the way to a draw for White is quite nice. After 59.\texttt{xb2}! \texttt{g1}+ =\texttt{g1}! 60.\texttt{g1} \texttt{fl} =\texttt{fl}+ 61.\texttt{h2}! Black does not have any meaningful checks and has to content himself with a perpetual check. The direct refutation of 61.\texttt{g2}? is quite nice. The only winner is 61...\texttt{f3}!, when after 62.\texttt{h3} Black can advance the f-pawn – but is better off just winning the rook with: 62...\texttt{e6}+!

The way to approach this kind of position is to find ideas. In this case the correct idea is to win an important tempo. At the moment the rook is well placed for defensive purposes, but not for aggressive purposes. It should be placed so that it can go to the first rank and exploit all those glorious passed pawns. Only one move achieves this. 56...\texttt{f2}!! Once you get the idea it should not be hard to work out that this is the correct move. The immediate threat is ...\texttt{f1}. 
57...\texttt{g}1 57...\texttt{g}1 is a more passive defence, but also one that is a bit less forcing and thus can be harder to put to bed. Black wins with king moves that depart from the g-file and do not go to the 8th rank – both poor places for the king to loiter. The obvious move is 57...\texttt{f}6, after which you could imagine the following line: 58.b6 is the best direct try. Black wins on basic material count here, unless White presses the issue. (58.\texttt{x}xg2 loses to both 58...e2 and to 58...\texttt{d}d2 59.\texttt{g}3 e2 60.\texttt{g}1 \texttt{d}d1.) 58...\texttt{f}4!! The only winning move. If Black is given the time, he will move in with his king and get the rook behind the pawns. An easy win. The critical line is of course: 59.\texttt{x}xg2 \texttt{f}3! (59...e2? 60.b7! should be a draw.) 60.\texttt{xf}2 \texttt{xf}2 and White is mated. 57...\texttt{d}d2!! Winning the extra tempo. After 57...\texttt{f}4? 58.b6 White’s pawn offers counterplay and Black has to find the draw with 58...\texttt{f}3 59.b7 \texttt{e}2! 60.b8=\texttt{g}7 \texttt{e}1\texttt{}} when everything comes off. 58.\texttt{h}2 58.\texttt{e}1 \texttt{f}4 does not improve the white position.

58...\texttt{e}2 Black can also delay this for a move now, but it doesn’t really matter. This is the winning plan. 59.\texttt{e}1 \texttt{d}1 Black wins.

Huy Nguyen H.M. – Vinh Bui, Budapest 2008

Bareev – Grischuk, Khanty-Mansiysk (var) 2007

Van Kampen – Ivanisevic, Wijk aan Zee 2011

Khairullin – Korneev, Loo 2013
Chapter 5 – Challenging Rook Endings

Ipatov – Vajda, Bulgaria 2012

S. Novikov – Jakovenko, Moscow 2007

Khairullin – Timofeev, Belgorod 2010

Wang Yue – Carlsen, Dresden (ol) 2008

Klinova – Krush, Dresden 2008

Amin – Gajewski, Reykjavik 2013
It is apparent that White will soon have to give up his h-pawn to activate his rook. However, it is important to improve the position before this happens.

In the game, White lost instantly after 43.\( \texttt{g3} \)? a2 0–1. What he missed is hard to tell.

White is also lost after 43.\( \texttt{f3}\)?? a2 0–1. What he missed is hard to tell. White is also lost after 43.\( \texttt{e1}\)?? h7 44.\( \texttt{f6}\)\( \texttt{xf6}\) \( \texttt{h4}\) 45.\( \texttt{xf6}\)\( \texttt{xf6}\) \( \texttt{g4}\) 46.\( \texttt{g4}\)\( \texttt{xf6}\) when Black wins as the white king is cut off.) 45...\( \texttt{h4}\)!! An important move. This brings the rook in to challenge the white rook, and cuts off White's king along the 4th rank. 46.\( \texttt{f3}\)\( \texttt{e1}\) 47.\( \texttt{h1}\) 48.\( \texttt{g3}\) 49.\( \texttt{g3}\) \( \texttt{h2}\) 50.\( \texttt{e1}\) a2 51.\( \texttt{h4}\) \( \texttt{f3}\)!! and Black wins by a tempo. 51...\( \texttt{a1}\)?? 52.\( \texttt{xa1}\) \( \texttt{h1}\) 53.\( \texttt{h5}\) and Black wins by a tempo. (5 1. ..\( \texttt{a1}\)?? 52.\( \texttt{xa1}\) \( \texttt{h1}\) 53.\( \texttt{h5}\) would be a draw as the black king is too far away.)

43.\( \texttt{g3}\)!! is the important tempo-gainer. 43...\( \texttt{h1}\) 43...a2 44.\( \texttt{e8}\) is an easy draw. 44.\( \texttt{e8}\) White has won a tempo with the king, so this defence works now. 44...\( \texttt{e6}\) 45.\( \texttt{xb6}\)\( \texttt{f6}\) 46.\( \texttt{b1}\) Notice that Black does not have rook to the 4th anymore. 46...\( \texttt{f5}\) 47.\( \texttt{f4}\)\( \texttt{e6}\) does not offer White a lot of problems. The white king is on the right side of the pawn (to shoulder off the black king) and is not cut off in any way. 47.\( \texttt{f4}\)\( \texttt{b5}\) 48.\( \texttt{a1}\) \( \texttt{f3}\) 49.\( \texttt{b3}\) 50.\( \texttt{g5}\) White draws. The lesson from this game is that the king has to be cut off along the 4th (or 5th if reversed) rank in order for the pawn to be immobilized. Should the pawn get to the 5th, then it cannot go to the 6th without support – it will be picked off by the enemy rook. Of course, this is a different story if we move all the pieces one rank closer to promotion...

60...\( \texttt{xa3}\)? Throwing away the win, by allowing White to coordinate. 61.\( \texttt{g6}\) \( \texttt{a8}\) 62.\( \texttt{h7}\) \( \texttt{a5}\) 63.\( \texttt{h6}\) \( \texttt{f3}\) 64.\( \texttt{h5}\) b2 65.\( \texttt{xe2}\) \( \texttt{b7}\) 66.\( \texttt{g6}\) ½–½

There were a few do to it, but the great idea was 60...\( \texttt{e6}!\) 61.\( \texttt{g7}\) 61.\( \texttt{h5}\) \( \texttt{e5}\) is no better. 61...\( \texttt{e5}\)!! 62.\( \texttt{g6}\) \( \texttt{h5}\) Black is completely in control. He wins after something like: 63.\( \texttt{a4}\) \( \texttt{xe4}\) 64.\( \texttt{g5}\) 65.\( \texttt{a6}\) \( \texttt{g2}\) 66.\( \texttt{f7}\) \( \texttt{h1}\)

60...\( \texttt{e8}\) also wins. The point is that after 61.\( \texttt{g7}\) Black can transpose.

56...\( \texttt{e6}\)!! Shoul dering again. Black would lose after 56...\( \texttt{d5}\) 57.\( \texttt{a4}\)!. It is too late to regret the last move, because of 57...\( \texttt{e6}\)? 58.\( \texttt{a5}\) and the black king will be cut off or be on the wrong side of the e-pawn. And after 57...\( \texttt{f6}\) 58.\( \texttt{a5}\) \( \texttt{xb7}\) 59.\( \texttt{xe4}\) 60.\( \texttt{c6}\) \( \texttt{f6}\) 61.\( \texttt{a4}\) White just wins. 57.\( \texttt{a4}\) \( \texttt{f6}\) 58.\( \texttt{a5}\) 58.\( \texttt{e8}\) \( \texttt{xb7}\) 59.\( \texttt{xe7}\) \( \texttt{d5}\) = 58...\( \texttt{xe7}\) 59.\( \texttt{xe7}\) \( \texttt{f4}\) 60.\( \texttt{c6}\) \( \texttt{f3}\) 61.\( \texttt{c5}\) \( \texttt{xe4}\) 62.\( \texttt{c4}\) \( \texttt{e4}\)! Black draws with shouldering (again).

26. Ildar Khairullin – Oleg Korneev, Loo 2013
White missed a wonderful way to activate his rook and win by one tempo. In the game, a draw was agreed after 54.\( \texttt{e3}\)? \( \texttt{f7}\) 55.\( \texttt{xf6}\)!!

54.\( \texttt{b5}\)? \( \texttt{xb5}\) 55.\( \texttt{xe5}\) 56.\( \texttt{xc6}\) 57.\( \texttt{c5}\) \( \texttt{d7}\) also holds for Black.

The winning line starts with a better coordination of the rooks. 54.\( \texttt{e3}\)!! 54...\( \texttt{xf6}\) 55.\( \texttt{e7}\) \( \texttt{g6}\) 56.\( \texttt{xf6}\) \( \texttt{xf6}\) 57.\( \texttt{c6}\) \( \texttt{g4}\) 58.\( \texttt{b4}\) \( \texttt{g3}\) 59.\( \texttt{a3}\) \( \texttt{h7}\) 60.\( \texttt{xe3}\) leaves the black king too far away from the scene of action. White wins. 55.\( \texttt{xc6}\) \( \texttt{xf6}\) 56.\( \texttt{a7}\) \( \texttt{g6}\) 57.\( \texttt{c4}\) \( \texttt{d5}\) and wins. 58.\( \texttt{b5}\) \( \texttt{h7}\) 59.\( \texttt{b6}\) \( \texttt{g3}\) 60.\( \texttt{a3}\) \( \texttt{h3}\)
61.b7 g2 62.b8=\(\text{w}\) a8 ends in the same four piece ending eventually. 62...\(\text{axa}3\) 63.\(\text{wg}8t\)
White has a theoretically won position, even if Ivanchuk says that this cannot be won against a computer. Actually, when the first tablebases were out in the late 1980s, Anand tried to win this ending against the computer. It took him about an hour to work out how to do it consistently.

Ipatov is an impressive endgame player, but he erred in this position. Almost everyone I have shown the position to has failed to solve it, although the solution is not too difficult in my opinion. Ipatov played: 67.\(\text{xb6?}\) a3 68.\(\text{b5}\) \(\text{b2}\) 69.\(\text{xc5}\) \(\text{xb3}\) 70.\(\text{a5}\) \(\text{d7}\) 71.\(\text{g7}\) \(\text{g3}\)+ 72.\(\text{f7}\) \(\text{c6}\) This position is a draw, though several mistakes were made before this was the result on move 109.

The win is based on the f-pawn and the improvement of the king’s position. 67.\(\text{bxa4}\) \(\text{xa4}\) 68.\(\text{e5}\)! Clearly the difficult move. 68.\(\text{g6}\)? \(\text{d7}\) and Black holds. 68...\(\text{d7}\) 68...\(\text{xc4}\) 69.f6 and White wins. 69.f6 \(\text{a1}\) 70.\(\text{e7t}\) \(\text{d8}\) 71.\(\text{b7}\) \(\text{e8}\) 72.\(\text{xb6}\) White wins.

28. Ildar Khairullin – Artyom Timofeev, Belgorod 2010
Black had a surprising mating idea. White would have had to give up a rook in order to prevent it. However, it was missed in the game. 50.\(\text{f6t}\) Not the most difficult move in the world. 51.\(\text{h3}\) \(\text{g1t}\) But this might be! It is certainly not easy.

In the game, Black played 51...\(\text{h1}\)? but was given a second chance after 52.\(\text{gxh5}\) (52.\(\text{e6t}\)! \(\text{g6}\) 53.\(\text{gxh5}\) \(\text{h8t}\) 54.\(\text{g3}\) would have led straight to a draw on account of 54...\(\text{hxh5}\) 55.\(\text{e8}\) \(\text{h8t}\) 56.\(\text{h3}\) \(\text{h6}\) 57.\(\text{h8t}\) \(\text{h7}\) 58.\(\text{b8}\) and Black has no advantage. The tactical point is that Black cannot hide the king after something like 58...\(\text{xe2}\) 59.\(\text{e7}\), so he has to accept 59...\(\text{f6}\) 60.\(\text{b6t}\) \(\text{h5}\) 61.\(\text{a5t}\) \(\text{b4}\) 62.\(\text{f6t}\) \(\text{e3}\) 63.\(\text{e5t}\) \(\text{d4}\) 64.\(\text{xe2}\) \(\text{xe2}\) 65.\(\text{xe6}\) and the draw is obvious.) 52...\(\text{hxh2t}\) Black had some advantage again and managed to outplay his opponent and win the game on move 75.

52.\(\text{e6t}\) 52.\(\text{xe5}\) \(\text{g6}\) wins a rook as well. There is no defence against 53...\(\text{f5}\) 52...\(\text{e6}\) 53.\(\text{a4}\) \(\text{h4}\)! 53...\(\text{g2}\)? would not work here, as there is no rook pinned on g5. After 54.\(\text{ee4}\) Black cannot make progress. Now there is no defence against 54...\(\text{h1}\). For example: 54.\(\text{e6}\) \(\text{h1}\) 55.\(\text{xe6}\) \(\text{h7}\) 56.\(\text{e6}\) \(\text{g7}\) 57.\(\text{h6}\) \(\text{f7}\) Black wins.

The game went: 45.\(\text{g2}\) 45.\(\text{g1}\)? \(\text{e1}\)+ 46.\(\text{e2}\) \(\text{e2}\) 47.\(\text{g1}\) \(\text{f3}\) would transpose to the game. 45...\(\text{e2t}\) 46.\(\text{g1}\) \(\text{f3}\) 47.\(\text{e5}\) \(\text{g2}\) 48.\(\text{f1}\) \(\text{h2}\) 49.\(\text{g1}\) \(\text{g2}\) 50.\(\text{f1}\) \(\text{h2}\) 51.\(\text{g1}\) \(\text{b2}\) 52.\(\text{e1}\) From here, and for the next seven moves, Black could have won quickly with 52...\(\text{g2}\)? 53.\(\text{d7}\) \(\text{b8}\) with mate on \(\text{h1}\). Instead it ended in a draw. 52...\(\text{g2}\) 53.\(\text{f1}\) \(\text{h2}\) 54.\(\text{g1}\) \(\text{g2}\) 55.\(\text{f1}\) \(\text{h2}\) 56.\(\text{g1}\) \(\text{g2}\) 57.\(\text{f1}\) \(\text{f2}\) 58.\(\text{g1}\) \(\text{g2}\) 59.\(\text{f1}\) \(\text{e2}\)? 59...\(\text{e2}\)? 59...\(\text{e2}\) (or \(\text{b2}\)) 60.\(\text{d7}\) \(\text{g2}\) 61.\(\text{g1}\) \(\text{a8}\) would still have won. 60.\(\text{g1}\) \(\text{g2}\)+ Draw agreed. \(\frac{1}{2}\)–\(\frac{1}{2}\)

45.\(\text{f1}\)! The only move. Here the method of elimination would have solved all problems.
45...\(\text{f3}\)+ 45...\(\text{f3}\) is even worse. White wins with 46.\(\text{g7}\) \(\text{xd3}\) 47.\(\text{e1}\) \(\text{e3}\) 48.\(\text{d7}\) \(\text{a8}\) 49.\(\text{e5}\) and the white pawns are much better than the black ones. 46.\(\text{g1}\) \(\text{xd3}\) 47.\(\text{e5}\) \(\text{d4}\)+ 47...\(\text{f3}\)? 48.\(\text{e1}\) += 48.\(\text{g2}\) \(\text{d3}\) 49.\(\text{d7}\) \(\text{d2}\)+ with a draw.
It is quite surprising that Black is unable to win the game after: 53...g5? 54.b6  •e5 55.b7  •g4+ 56. •e3  •b3+ 57. •f2  •e4 58. •g2! White cannot move the rook yet. He needs to prevent ... •f3 at all costs. 58. •e8? loses to 58... •b2+! 59. •g1  •xb7 60. •e6+  •f3. 58. •h8  •xb7 59. •hx5  •b2+ is little better. 58... •b2+ 59. •f1  e5 60. •g1  •e3 61. •h1! The only move that does not make the white position worse. 61. •f1? •g2+ 62. •g1  •f3 and White would soon have to give up the b-pawn for nothing, or allow the black king to go to f3. 61...e4 62. •g1 White is just waiting. There is nothing else to do. 62... •e2 63. •e4  e3 64. •e1  •b6 65. •e2  b5 66. •e2  •b3 67. •e1  •b2 68. •h1  •f1 Eventually Black will have to play this. 69. •e8  •xb7 70. •e3+  •f2 71. •e2  •e2 72. •g2 73. •b3 Presumably short on time, White is trying not to ruin anything. 73... •e3 74. •b4! Ready to face ...h4. 74... •b2+  •f3 and White loses. 74... •h4 75. •f4+!! Absolutely necessary. White would be lost after 75. •xg4  •h5+ 76. •g3  •f3!! when the king is shielded. e.g. 77. •g8  •f4 78. •a8  •h7+ 79. •g4  •g7+ 80. •h3  •g2 81. •a2+  •f3 82. •g3  •e4 and so on. 75... •f3 76. •xg4  •h5+ 77. •g3 The same position, but with Black to move. Jakovenko tries a few things before accepting the inevitable. 77... •e3 78. •g8  •d3 79. •g7  •f3 80. •g4! •f8 81. •f4+•x4 stalemate. A great finish to a fantastic fight.

It is hard to criticize a strong-looking move such as 53...g5. But after a bit of analysis (which arguably would be hard to carry out at the board) we find that 53... •g5!, with the idea of attacking the g-pawn, would have won. 54. •b6 Other defences offer even less resistance: 54. •e8  •b3+ 55. •f2  •f5! 56. •f8+  •g4 57. •f4+  •g5 58. •e4  •f6 59. •f4+  •e7 and Black wins the b-pawn. 54. •e4  •g4 55. •d4 56. •c3 is an optimistic computer defence. At this point Black needs to be careful, as White has set a fantastic trap: 56... •b1! (56... •g2? is surprisingly a mistake. After 57. •f1! •xg3+ 58. •c2! the black rook cannot get back to stop the white pawn. The e6-pawn is a burden! A draw will arise as soon as the white pawn gets a bit further up the park and Black feels forced to deliver a perpetual.) 57. •c2  •f1! The rook is going for the ideal placement; behind the g7-pawn. The rest is relatively easy. 58. •b6  •f7 59. •b7  •f7 60. •e5  •xg3 61. •h8  •xb7 62. •xh5  •g4 63. •e2  •f7 Black wins. He does not even care about the e6-pawn. 54... •b3! 55. •f2 55. •e4  •g4 would give Black another tempo compared to the line at move 54, securing him the full point. 55... •g4 56. •b7  •g5 White is begging for a move. He has no chance of saving the game after 57. •e2  •xg3 58. •g8  •xb7 59. •xg5+  •h4 60. •e5  •e7 when he can go over and block the h-pawn, only to see the king shift and support the e-pawn...

53... •b3+ 54. •f2  •g5 is similar. The point to understand is that it is the king who needs to go forward, not the pawn.
Chapter 5 - Challenging Rook Endings

31. Wang Yue – Magnus Carlsen, Dresden (ol) 2008
In the game, Carlsen escaped with a fright after: 43.\texttt{Exg4}t? \texttt{h5} 44.\texttt{Exg5}t \texttt{h4} 45.\texttt{Exg7} \texttt{h5} 46.\texttt{Exb7} \texttt{a6} 47.\texttt{Exb5} \texttt{h4}! It is hard to see exactly what Wang Yue overlooked. He probably just did not think about the winning line. 48.\texttt{Qb2} 48.\texttt{Exd5} \texttt{a2}t 49.\texttt{Qf1} \texttt{g3} is also okay for Black, despite the three extra pawns. 48...\texttt{a4} 49.\texttt{Ed2} \texttt{h5} 50.\texttt{g3} \texttt{b4} 51.\texttt{Ed1} \texttt{a4} 52.\texttt{h3} \texttt{a3} 53.\texttt{h1} \texttt{d3} 54.\texttt{g3}t \texttt{g6} 55.\texttt{h4} \texttt{d2} 56.\texttt{g4}t \texttt{f6} 57.f5 \frac{1}{2}–\frac{1}{2}  

Jan Timman pointed out that Wang Yue could have won this endgame in a nice fashion. 43.f5!! \texttt{b4} The other lines do not work either.

43...\texttt{a6} 44.\texttt{Exg4}t \texttt{h5} 45.\texttt{g3} \texttt{b4} 46.\texttt{f4} \texttt{b3} 47.\texttt{g2}! \texttt{h6} 48.\texttt{e5} The supremacy of the white king decides the game. 48...\texttt{a2} (48...\texttt{b6} 49.f6 and the f-pawns sail to the 8th rank) 49.\texttt{g1}! (49.\texttt{g6}t \texttt{h5} 50.\texttt{b6} \texttt{e2}t 51.\texttt{xd5} \texttt{g5} 52.\texttt{f6} also looks winning, but I am hesitant about letting the black king back in the game.) 49...\texttt{f2} 50.\texttt{f6} \texttt{d2} 51.\texttt{f7} \texttt{xf4} 52.\texttt{e6} White is winning here. For example: 54...\texttt{f2} 55.\texttt{e7} \texttt{e2}t 56.\texttt{f6} \texttt{g2} 57.\texttt{e1} \texttt{e2} 58.\texttt{h1}t and White wins.

43...\texttt{c6} 44.\texttt{Exg4}t \texttt{h5} 45.\texttt{g3} \texttt{b4} 46.\texttt{f4} \texttt{b3} 47.\texttt{g7}! \texttt{b5} (47...\texttt{h6} 48.\texttt{xb7} \texttt{e3} 49.\texttt{e5} \texttt{f3} 50.\texttt{xd5} \texttt{xf5}t [50...\texttt{e2} 51.\texttt{e4} \texttt{g5} 52.\texttt{b6} also wins.] 51.\texttt{c4} \texttt{g6} 52.\texttt{xb3} \texttt{h6} 53.\texttt{e3}t) 48.\texttt{h7}t \texttt{h6} 49.\texttt{b7} \texttt{c6} 50.\texttt{e5}! (50.\texttt{xb5} \texttt{c3} 51.\texttt{b7} \texttt{h6} 52.\texttt{f6} \texttt{g6} 53.\texttt{f7} \texttt{g7} does not feel entirely clear, although analysis may discover a white victory somewhere.) 50...\texttt{c3} 51.\texttt{f4} \texttt{d3} 52.\texttt{xd5} \texttt{b2} 52...\texttt{g4} 53.\texttt{f6} \texttt{f3} 54.\texttt{f7} \texttt{xf4} 55.\texttt{e6} White wins.) 53.\texttt{xb5} \texttt{e2} 54.\texttt{d6} \texttt{h6} 55.\texttt{b7}! White wins.

44.\texttt{g6} \texttt{xf3}t 45.\texttt{xf3} \texttt{h5} 46.\texttt{g2} \texttt{a6} 47.\texttt{f4} \texttt{h6} 48.\texttt{e5} \texttt{a1} 49.\texttt{xd5} \texttt{b3} 50.\texttt{f6} \texttt{f1} 51.\texttt{e6} White wins.

32. Bassem Amin – Grzegorz Gajewski, Reykjavik 2013
After spoiling a great position, Bassem could consider himself lucky that his opponent did not find the only defence here.

1...\texttt{d1}t? 2.\texttt{xf2}! \texttt{d7} looks like it should work, but after 3.\texttt{h8}t! \texttt{xf7} 4.\texttt{h7}t White wins in classical style by bringing the king to h4 and h5.

1...\texttt{a3}? was played in the game. White is winning after: 2.\texttt{f2}! 2.g5?? \texttt{a5}! and Black draws. 2...\texttt{a4} 2...\texttt{b3} 3.g5 and now there is no check on g5. 3.\texttt{g3} \texttt{a5} 4.\texttt{h4} \texttt{a4} 5.\texttt{h5} \texttt{e7} 6.\texttt{g5} \texttt{a1} 7.\texttt{g6} \texttt{f1} 8.\texttt{h8} Black resigned on account of 8...\texttt{xf7} 9.\texttt{h7}t. 1–0

1...\texttt{a6}? loses to 2.\texttt{g3}! \texttt{f6} (2...\texttt{a1} 3.\texttt{f4} is an important detail.) 3.\texttt{h4} \texttt{e1} 4.\texttt{h5} and so on.

The drawing line goes: 1...\texttt{e1}!! 2.\texttt{f3}? The only try. 2.g5 \texttt{e5}; 2.\texttt{f2} does not work this time around. The problem is that the king is one square closer to g6 and after 2...\texttt{e7} Black just draws. 2...\texttt{f1}t? 2...\texttt{e7} 3.\texttt{h4} and White wins. 3.\texttt{e4} 3.\texttt{g3} \texttt{xf7} with a direct draw. 3...\texttt{f2}? Black can also put the rook on f6, but the important idea is the waiting strategy. 4.\texttt{e5} \texttt{f1} 5.\texttt{e6} \texttt{f6}t! 6.\texttt{e5} \texttt{f1} White cannot make progress without 7.\texttt{g5}, when Black plays 7...\texttt{xf7} with a draw.
Chapter 5 – Challenging Rook Endings

Pantsulaia – Sanikidze, Tbilisi 2014

Kukov – Abreu Delgado, Torredembarra 2011

Volkov – Polgar, Kallithea 2002

Collins – Daly, Bunratty 2013
33. Evgeny Postny – Romain Edouard, Bastia (rapid) 2013

This ending was very interesting, but the quality was no doubt influenced by the fact that it was a rapid game. 60.a6! 60...b5 f5! would give Black adequate counterplay. 60...Exe4† 61.b5 Exe1 62.a7! Amusingly this is a mistake. It looks so natural. 62...b6!! Exf1 (White also wins after 62...g5 63.a7 and 62...Exa1 63.Exa5 Exd1 64.a7 Exd8 65.a8=Q Exa8 66.Exa8) 63.a7 Exc8 64.Exa5 Exa8 (64...g5 65.a8=Q Exa8 66.Exa8 and White wins) 65.Exb7 Exa7† 66.Exa7† Exf5 67.Exc6 and the white king makes it back in time. 62...Ba1 63.Bb6 Exa7 64.Bxa7 Exf5 65.Bb6 Exg4 66.Ed3 f5 67.Bc5 f4 68.Bxf4 Exf4 69.Bd5 h4 70.Ba3 e4? 70...g4! 71.Bxe4 h3 72.Ba1 h2 73.Bc1 g3 74.Bf5 g2 would have drawn. 71.Bd4 g4 72.Bxe4? Clearly both players are out of time here. White probably won having just missed 72.Bxe3!, winning by shouldering. 1–0

34. Sahaj Grover – Matthew Sadler, Wijk aan Zee 2012

Grover played: 54.Bg5?, when after 54...Bh8 the endgame is a draw. It ended so on move 82, after Black had tried to find a way to exploit his extra pawn for a while. ½–½

54.Bb7?? gives no winning chances either. The game would be drawn after: 54...Exb7 (or 55.Bxb6 h4 56.Bg5 Bh8 57.Bb2 h3 58.Bh2 Bc7 59.Bg4 Bh8! 60.Bxh3 Be4† 61.Bf3 Be5=) 55...h4 56.Ba8† Bc7 and White needs to play 57.Bf8! (not 57.Bg5? h3 and Black wins) 57...h3 58.Bf7† Bd8 59.Bf8†

54.Bf8†! White was nowhere close in the game. 54...Bc7 54...a7 55.c7 is obvious. 55.Be8!! would have won immediately. Black has no way to save his rook as the white king will just go over and take it. A rare case where the rook is inferior to the king. 55.Ba8? would not work. Black is drawing after 55...h4! and White must even be careful because of 56.Bg5? h3! when the h-pawn can no longer be stopped.

35. Aagaard, 2007

This ‘simple’ position does not include any difficult moves as such, but has proven to be tricky for my students.

It is necessary to defend the d3-square, as can be seen by this variation: 1.Bf4? g2 2.Bg8 Bc1! 3.Bc8† Bb2 4.Bb8† Bc3 5.Bc8† Bd3 6.5.B8† Be2 7.Be8† Bf2 and one of the pawns will queen.

White needs to first improve the king: 1.Be4! This is the only move. 1...g2 2.Bg8 Again not a ‘difficult’ move, but the idea – that you first have to stop the g-pawn and can then go to the other side to give perpetual – is apparently very difficult. But the rook is the strongest piece and should be used in full. I am happy with this exercise position as it teaches a lot about rooks in the ending. 2...Bc1 3.Bc8† Bb2 4.Bb8† Bc3 5.Bc8† Bd4 6.Bb8† White draws as Black would lose if the king crosses the fifth rank: 6...Bc5? 7.Bb1 and everything wins. For example: 7...Be4 8.Bc3 Bc3 9.Ed1

36. Sergey Karjakin – Dmitry Jakovenko, Moscow (blitz) 2009

This position was taken from a blitz game, so obviously any comments here should not be taken as criticism of the players, who had no chance of seeing these things with a few seconds on the clock.

Karjakin played: 47.d5? This is the most natural move, but allows Black to draw effortlessly. 47...g5 48.e8 (Or 48.g8 Rxg4 49.xg7† fxg5 50.c7 Bf4 51.d6 f5 52.g8 Bxe3 with
a draw. After 48...\( \text{Bb8} \) \( \text{Bxg4} \) 49.\( \text{Bxb5} \) \( \text{Bxf5} \) 50.\( \text{Bd6} \) \( \text{Bf4} \) 51.\( \text{Bc5} \) \( \text{Bh1} \) 52.\( \text{Bf} \) \( \text{Bh8} \) Black will also survive.) 48...\( \text{Bxg4} \) 49.\( \text{Be4} \) \( \text{Bxf5} \) 50.\( \text{Bc4} \) This is no more than a draw. 50...\( \text{Bd1} \) 51.\( \text{Bd4} \) (51.\( \text{Bc5} \) \( \text{Bd8} \) also gives Black an easy draw.) 51...\( \text{Bc1} \) 52.\( \text{Bd6} \) g5 53.\( \text{Bd5} \) \( \text{Bf4} \) 54.\( \text{Bc5} \) \( \text{Bd1} \) 55.\( \text{Bc7} \) \( \text{Bc1} \) 56.\( \text{Bxf6} \) g4 57.\( \text{c7} \) \( \text{Be8} \) and Black survives. \( \frac{1}{2} - \frac{1}{2} \)

47.\( \text{Be4} \) is also insufficient. 47...\( \text{Bg5} \) (47...g6 48.\( \text{Bxg6} \) \( \text{Bxg6} \) 49.\( \text{Bd5} \) and White wins) 48.\( \text{Bc7} \) \( \text{Bh4} \) 49.\( \text{Bxg7} \) (49.\( \text{Bd5} \) \( \text{Bxg4} \) 50.\( \text{Bxg7} \) \( \text{Bxf5} \) 51.\( \text{Bc7} \) \( \text{Bf4} \) and Black draws) 49...\( \text{Bxc6} \) 50.\( \text{Bg6} \) \( \text{Bxf4} \) 51.\( \text{Bxd5} \) \( \text{Bxg4} \) 52.\( \text{Bxf6} \) \( \text{Bb4} \) Black makes it to a theoretical draw.

47.\( \text{Bc7} \)!! This beautiful prophylactic move prevents Black from activating the king. He can try to wait with 47...\( \text{Bc2} \), though it does not fully work.

47...\( \text{Bh7} \) looks wrong and it is no surprise that White can win in many ways. Even the forcing 48.g5 will win, but simplest is just to improve the king now. 48.\( \text{Bd5} \) \( \text{Bd1} \) 49.\( \text{Bf4} \) \( \text{Bc1} \) 50.\( \text{Bd7} \) \( \text{Bd1} \) 51.\( \text{Bc8} \) 52.\( \text{Bg5} \) 53.\( \text{Bf6} \) the pawn goes to f7 and then queens.

47...g6 leads to a favourable exchange for White. 48.\( \text{Bxg6} \) \( \text{Bxg6} \) 49.\( \text{Bc8} \)! Having done its job on the 7th rank, the rook returns to c8, making space for the king on c7. 49...\( \text{Bf6} \) (49...\( \text{Bg7} \) 50.\( \text{Bc7} \) \( \text{Bg7} \) 51.\( \text{Bf6} \) wins. Next comes f5-f6t and White wins. 49...\( \text{Bf6} \) 50.\( \text{Bc7} \) \( \text{Bf4} \) 51.\( \text{Bd5} \) \( \text{Bg6} \) \( \text{Bxf4} \) 52.\( \text{Bf7} \) \( \text{Bc8} \) \( \text{Bc1} \) 53.\( \text{Bd7} \) \( \text{Bd1} \) 54.\( \text{Bc8} \) \( \text{Bd4} \) 55.\( \text{Bc7} \) \( \text{Bf6} \) 56.\( \text{Bb7} \)

White wins after: 48.\( \text{Bd5} \) \( \text{Bd2} \) 48...g6 49.\( \text{Bxg6} \) \( \text{Bxg6} \) 50.\( \text{Bb7} \) is hopeless. White puts the rook on the 4th rank. 49.\( \text{Bc6} \) \( \text{Bc2} \) Black's defensive idea is to wait. With the rook on the 7th rank the passed pawn cannot advance, and the king will achieve nothing by going to the queenside.

50.\( \text{Bf7} \) \( \text{Bc2} \) 50...\( \text{Bg5} \) 51.\( \text{Bxg7} \) \( \text{Be4} \) 52.\( \text{Bf7} \) 51.\( \text{Bg8} \) \( \text{g6} \) What else? 51...\( \text{Bc2} \) 52.\( \text{Bd7} \) and White wins. 52.\( \text{Bxg6} \) \( \text{Bxg6} \) 53.\( \text{Bg7} \) \( \text{Bh6} \) 54.\( \text{c7} \) \( \text{Bc1} \) 55.\( \text{Bf8} \) \( \text{Bc2} \) 56.\( \text{Bd7} \) \( \text{Bc1} \) 57.\( \text{Bc7} \) \( \text{Bg5} \) 58.\( \text{Bd5} \) \( \text{Bxg4} \) 59.\( \text{Bd6} \) \( \text{Bxc7} \) 60.\( \text{Bc7} \)


White has several ways to get into an ending with an extra pawn on the queenside, but this is balancing on the edge. With the help of FinalGen I have been able to speed up the analysis process, though there are too many pieces on the board for the machine to come to a final conclusion. However, with human help it has been possible to give a very qualified guess: it should be a draw...

Let us start by examining slow play: 50.\( \text{Bd5} \)!! I do not want to completely rule out that White can win here. He might have the chance to perform a great triangle manoeuvre and return to our starting position. 50...\( \text{Bf7} \)?? This waiting move looks a bit paradoxical, as Black is certainly not improving his position. But it appears that White cannot easily improve his either. 50...\( \text{Be2} \) 51.\( \text{g4} \) and White is surprisingly (at least to me) absolutely winning. The key line is rather sweet: 51...\( \text{hxg4} \) 52.\( \text{Bxg4} \) \( \text{Bxa2} \) 53.\( \text{Bf4} \) The crucial move. 53...\( \text{Bc7} \) (53...\( \text{Bf7} \) puts the black king out of action. White wins easily with 54.\( \text{Bc4} \).) 54.\( \text{Bxb4} \) \( \text{Bd7} \) 55.\( \text{Bb7} \) \( \text{Bc8} \) 56.\( \text{Bf7} \) \( \text{Bb2} \) 57.\( \text{Bc6} \) \( \text{Bd8} \) 58.\( \text{Bf3} \) White is in control. He will win slowly. 51.\( \text{Bc5} \) 51.\( g4 \) is now refuted with 51...\( \text{Bg3} \) 52.\( \text{gxh5} \) (52.\( \text{Bxe5} \) \( \text{Be3} \)!) 53.\( \text{Bf4} \) \( \text{Bh3} \)!!) 52...\( \text{Bxg5} \) 53.\( \text{hxg5} \) \( \text{Bxh5} \) 54.\( \text{Bc5} \) \( \text{Bc6} \) 55.\( \text{Bf4} \) \( \text{Bf7} \) (55...\( \text{Bf7} \) 56.\( \text{Be5} \) \( \text{Bg7} \) and White cannot make progress. For example: 57.\( g6 \)?? would be a disaster on account of 57...\( \text{h4} \) 58.\( \text{Bg4} \) \( \text{Bxg6} \) 59.\( \text{Bxh4} \) \( \text{Bf5} \) 60.\( \text{Bg3} \) \( \text{Be4} \) 61.\( \text{Bf2} \) \( \text{d3} \) 62.\( \text{Be1} \) \( \text{Bc2} \) 63.\( \text{Be2} \) \( \text{Bb2} \) 64.\( \text{Bd3} \) \( \text{Bxa2} \) 65.\( \text{Bc4} \) \( \text{Bf3} \) and Black wins.
51...Ec2 52.Ed4 This looks like it could transpose to 50.Ed4 below.
52.Ed4 Ef6 leaves White worse off than where we began.

52.g4 This is a tougher nut to crack; but Black has a way to save the draw: 52...Ec2†! A very important move. The white king needs to be edged away from the b-pawn. Black needs to be in time to both take the a-pawn and threaten the b-pawn. 53.Ff4 Eaxa2 54.gxh5 gxh5 55.Eb5 (55.EXh5 Eh2! 56.Ed4 Eg2† 57.Ed3 Ec2! 58.Ed5† Ed6 59.Ed4 Ec4 White cannot win.) 55...Ed2† 56.Ed3 Eh2 57.Ed3 Ec2 58.EXb4 Ed6 59.Ef4 Ed3 60.Ed6† Ed7 It is very difficult for White to make progress here. For example: 61.b4† Ed4†! 62.Ef5 Ed5† with a perpetual of sorts.

52...Ef6 53.Ed4! A key idea, keeping the king close to the queenside. I am not entirely sure if Black can hold here, or if he should settle for 53...Ec3 once again allowing 54.Ed4†!

Vital for understanding the ending is also 50.Ed4†, when Black must play 50...Ec2! 50...Ed7 51.Eb5 Eaxa2 52.Ed4 I am not sure White can win after 52...Ed2 53.Ed3 Ed4† 54.Ed6† Ed7 55.Ed5† Ed6†. The main reason for this is that after 56.b4 Black makes a draw with 56...Ed4 57.Ed8 Ed5 since White cannot make progress without allowing Black to create substantial counterplay.

Svidler played brilliantly: 50.a4!! This fails to keep the extra pawn, but it does a lot for White's piece activity and Black's passed pawn turns out to be a liability more than anything. 50...Edb3 51.Ed4 Eb1 52.a5 b3 53.Eb3! Keeping the pawn under control. 53...Ed7 54.Ed5 Ed1 55.Ed4 Eb1 55...Ed3† does not offer any resistance. 56.Ed2 Ed2† 57.Ed3 Ed3 58.Ed4 and White wins. 56.Ed6 Ed5 57.Eh5 Ed1 58.Ed7 Eh2 59.Ed6 Ed6 60.Ed2 Eb6 61.Ed6† Ed6 and Black makes a draw.

52.Ed2!! A brilliant move. It allows the rook to be sacrificed while the black pawns are still on the third rank, which wins time. 52...Ed5 53.Ed2† This has to be the point. White would lose after 53.Ed3 Exc7 54.Ed7 g2 55.Ed1 Exf4 56.Ed1 e5 in much the same way as in the line with 52.Ed1?. 53...Exf4 54.Ed3 Exc7 55.Ed7 g2 56.Ed1 White makes a draw.
The game was agreed a draw after: 45...\texttt{g}e2 46.\texttt{f}1 \texttt{g}f2 ½–½
Instead Black had a beautiful winning idea: 45...\texttt{f}8! 46.\texttt{d}7 The principled approach and surely what Black was reluctant about. White can try something like 46.\texttt{e}5 \texttt{e}xa7 47.\texttt{e}xe4, but it would be very surprising if Black was not able to win the game after 47...\texttt{d}7 followed by pushing the pawn to d2. 46...\texttt{d}2 47.\texttt{b}b7 Otherwise the e-pawn finishes the game immediately.
47...\texttt{d}7!! The surprising point of Black’s play. The reason such a move can be hard to see is that the rook first goes to f8 and only afterwards to f7. This kind of apparent time-wasting does not fit with most people’s thinking.
48.\texttt{b}b7
47 ... \texttt{g}f7!! The surprising point of Black’s play. The reason such a move can be hard to see is that the rook first goes to f8 and only afterwards to f7. This kind of apparent time-wasting does not fit with most people’s thinking. 48.\texttt{b}b8+ \texttt{g}7 and Black wins.

48...\texttt{f}4!! This is a fantastic move that shows deep understanding of the endgame.
48...\texttt{e}xe4? 49.\texttt{e}7† (49.f7 \texttt{f}8! would still allow Black to win.) 49...\texttt{f}5 50.h7! To me this is the surprising move. (50.f7 \texttt{x}h6! 51.\texttt{e}8 \texttt{h}8 would win for Black.) 50...\texttt{d}3 (50...\texttt{x}f6 51.\texttt{c}7 and the rook cannot make it back to the 8th rank because of 51...\texttt{d}3 52.\texttt{h}8=\texttt{f}7 \texttt{x}h8 53.\texttt{e}8 with a draw.) 51.\texttt{c}7 \texttt{d}d8 (51...\texttt{x}f6 52.\texttt{h}8=\texttt{f}7† 52.\texttt{g}3 \texttt{x}f6 53.\texttt{x}g4 \texttt{g}6 54.\texttt{h}4 \texttt{h}8 55.\texttt{h}5† \texttt{h}6 56.\texttt{h}4 Amazingly Black cannot improve her position. 56...\texttt{x}h7 allows a perpetual check: 57.\texttt{c}6† \texttt{g}7 58.\texttt{c}7†= 49.f7 49.\texttt{c}7 \texttt{x}h6 50.\texttt{f}7 \texttt{h}h8 51.\texttt{e}7 \texttt{h}f8 leaves Black in complete control. The king returns and the pawns are slowly dismantled. 49...\texttt{b}3! In the game, Judit erred and had to settle for a draw after: 49...\texttt{x}e4? 50.\texttt{f}8=\texttt{f}7! \texttt{x}f8 51.\texttt{e}7† \texttt{d}4 52.\texttt{h}7 The poor woman must have been cursing herself at this point. There is no good way to deal with \texttt{g}7-g8. 52...\texttt{h}5 53.\texttt{g}7 \texttt{b}8 54.\texttt{g}8 ½–½. 49...\texttt{f}8! would also have won. For example: 50.\texttt{g}7 \texttt{b}3 51.\texttt{h}7 \texttt{b}2† 52.\texttt{f}1 \texttt{f}3 53.\texttt{e}1 \texttt{d}8! 54.\texttt{f}8=\texttt{f}7† \texttt{x}f8 55.\texttt{g}8 \texttt{e}3†! with mate. 50.\texttt{g}7 does not work this time. Black can block the f-pawn with 50...\texttt{f}8 as in the previous note, but also force direct mate. 50.\texttt{f}8=\texttt{f}7 is just resignation. It is not a surprise that Black wins after 50...\texttt{x}f8 51.\texttt{d}7 \texttt{b}2† 52.\texttt{g}1 \texttt{f}3 53.\texttt{d}3† \texttt{xe}4 54.\texttt{d}7 \texttt{f}3 55.\texttt{d}3† \texttt{f}4 56.\texttt{d}7 \texttt{e}8 57.\texttt{f}1 \texttt{h}2 58.\texttt{h}7 \texttt{g}3 and so on... 50...\texttt{b}2† 51.\texttt{f}1 \texttt{f}3 52.\texttt{e}1 \texttt{e}3 53.\texttt{d}1 53.\texttt{f}1 \texttt{d}8 is mate on the next move. 53...\texttt{d}3 54.\texttt{c}1 \texttt{xb}7 55.\texttt{f}8=\texttt{f}7 \texttt{b}1#
41. Velislav Kukov – Aryam Abreu Delgado, Torredembarra 2011
43.d6?  bxf4 44.exa6  bxb2 did not pose Black any problems, practical or otherwise. The game was drawn on move 66. ½–½

43.f5!! wins as the rook cannot get all the way down to the 4th rank for the defence. The 5th turns out to be too close. 43...b8! The only defence, but the active white rook means that it is not enough. 43...xf5 44.c6 b8 45.b7 c8 46.e7 d8 47.a7 and White queens the pawn. 44.e7 xf5 45.c6 f2 46.d6 c2 47.d7! This seems a bit counter-intuitive, but after 47...b6? c8! the white king is cut off. 47...d2 48...h2 50.e7 e2 51.e5 The d-pawn queens. 48.h3!! A brilliant detail. The following line is rather surprising: 48...xf7? h3! 49.c6 c2 50.b6 c8 51.xc7 xc7 52.xc7 b4 53.xa6 xc7 54.b5 d6 55.xb4 d5!! 56.a4 c6 and White queens the pawn.

44.xe7 xf5 45.xc6 f2 46.d6 c2 47.d7! This seems a bit counter-intuitive, but after 47...b6? c8! the white king is cut off. 47...d2 48...h2 50.e7 e2 51.e5 The d-pawn queens. 48.h3!! A brilliant detail. The following line is rather surprising: 48...xf7? h3! 49.c6 c2 50.b6 c8 51.xc7 xc7 52.xc7 b4 53.xa6 xc7 54.b5 d6 55.xb4 d5!! 56.a4 c6 and White makes a surprising draw.

48...xa2 49.e8 eg2 50.xf7 e2 51.e7 e2 52.e1 and White wins.

42. Sam Collins – Colm Daly, Bunratty 2013
White misplayed his promising position by making the most obvious move possible. 54.b7? c5 55.c7 e7 56.b8=wb xxb8 57.xb8 d6 58.h4?! Simpler was 58.b4 c5 59.b5 e4 (59...c4? 60.b6+--) 60.e1 e3 61.b6 e2 62.b1! d3 63.b7 d2 64.a7 d1=wb 65.b8=wb! and Black only has a draw. 58...d5 59.xf3 f5 Continues on page 221.

Instead he should have fought to dominate the rook, something you can only work out with bare-knuckled calculation. 54.g6! was the right move. The rook cannot go behind the pawn, as White wins the rook on the 6th and not 8th rank. 54...a5 Encouraging White to advance the b-pawn, but he is smarter than that. 54...c8 55.b7 d8! is the most logical defence.

56.a7? does not work because of a nice trick: 56.e7 57.b4 e4! The idea with this move is that 58.xd4? loses to 58..exd4 59.b8=wb c4! After the more sensible 58.b8=wb dxb8 59.xd4 h8 Black holds the ending with 60.xe4 f6 61.b5 xh2 62.b6 c2 63.d6 d2.

56.e6!! is one of the fabulous points of the exercise. After 56...e8 57.b4 58.b5 e7 59.e3 and wins.) 59.e5 60.h4 Black has no way to improve his position. White will play f6, a3-a8 and so on.

55.e6!! a8 56.b7 d8 57.e7 58.a3 b8 and now either 59.a5! or 59.b5 e4 60.a4! wins for White.

54.h4?! f6! 55.d6 b8 56.b7 d8 57.c7 e7 58.ed1! also wins, but unless you saw all of this I will not credit you with a 'solved' for it.
Chapter 5 – Challenging Rook Endings

Dominguez – Topalov, Thessaloniki 2013

Teplyi – Melkumyan, Helsingor 2013

Grischuk – Ivanchuk, Moscow 2008

Smeets – Vachier-Lagrave, Wijk aan Zee 2011
43. Leinier Dominguez – Veselin Topalov, Thessaloniki 2013

I am not really sure what went wrong for Dominguez here, but he was lucky to win the game after his handling of the endgame. 53.\texttt{h7}\texttt{c8} 54.\texttt{c5} \texttt{e2}\texttt{d6} 56.\texttt{xe6} White’s position looks very promising, but maybe he missed Black’s next move? 56...\texttt{g2}! 57.\texttt{e5} \texttt{g3} 58.\texttt{hxh2} \texttt{b3}?! 58...\texttt{b7} was maybe simpler. 59.\texttt{b2} \texttt{e3}\texttt{d5} 61.\texttt{f4} \texttt{f1} 62.\texttt{g2} \texttt{xb6} 63.\texttt{xe6} \texttt{c7} with an easy draw. 59.\texttt{h8}\texttt{b3} 60.\texttt{h7}\texttt{h7} 60.\texttt{f6}?! another try. Black has to defend well. 60...\texttt{b3}! (60...\texttt{xb6} 61.\texttt{g5} and White wins.) 61.\texttt{h4} \texttt{g3} 62.\texttt{f7} \texttt{b8}! (62...\texttt{xb6} 63.\texttt{g7} wins for White, on account of 63...\texttt{g4} 64.\texttt{xe6} 65.\texttt{g5}.) 63.\texttt{g7} \texttt{g4} 64.\texttt{e5} \texttt{g1} and White does not appear to have any way to make progress. 60...\texttt{xb6}?? The king belonged on the 8th rank: 60...\texttt{b8}! 61.\texttt{f6} :\texttt{b6}t 62.\texttt{g5} \texttt{d8} 63.\texttt{g7} \texttt{e8} with an easy draw.) 61...\texttt{b8} 62.\texttt{g7} (62.\texttt{f6} \texttt{g3} 63.\texttt{h6} \texttt{g4} and Black draws.) 62...\texttt{e3}! 63.\texttt{f6} \texttt{b3}! 64.\texttt{g5} \texttt{g3} 65.\texttt{h4} \texttt{g1} Black holds. 61.\texttt{f6} \texttt{b4} 62.\texttt{g5}! Topalov must have forgotten about this option. White just wins. 62...\texttt{c6} 63.\texttt{h7} \texttt{d5} 64.\texttt{g6} \texttt{e6}t 65.\texttt{g5} \texttt{b8} 66.\texttt{f5} \texttt{g8}t 67.\texttt{f6} \texttt{e4} 68.\texttt{a7} \texttt{f8}t 69.\texttt{g6} \texttt{g8}t 70.\texttt{h7} \texttt{h8} 71.\texttt{g7} 1–0

White needed to immediately dominate matters: 53.\texttt{b7} \texttt{b2} 54.\texttt{c3}! 54.\texttt{c5} \texttt{h2} 55.\texttt{h7} \texttt{b7} 56.\texttt{h2} \texttt{b3} and Black is coasting. 54...\texttt{b1} 55.\texttt{h7} \texttt{h2} I do not see any other attempts. 56.\texttt{xe6} \texttt{c7} 56...\texttt{b7} 57.\texttt{h8}t and the pawn ending is won. 57.\texttt{h7}t 58.\texttt{f5} White is in complete control. It is not hard to guess that he is winning. 58...\texttt{g1} 59.\texttt{xe6} \texttt{xb7} 60.\texttt{xe6} \texttt{xe6} \texttt{e6} 61.\texttt{d4} with a theoretically won position.

44. Alexander Grischuk – Vassily Ivanchuk, Moscow (blitz) 2008

In a rook endgame you must strike a careful balance between material and activity. In this blitz game Grischuk had no chance to do so, but the position is interesting nonetheless.

60.\texttt{f3}?? 61.\texttt{c1} \texttt{d4} 62.\texttt{b1} \texttt{c4} 63.\texttt{c1} \texttt{d3} 64.\texttt{b1} \texttt{b6} and Black won after another ten moves. 0–1

60.\texttt{d3}!! It is important that the king comes to deal with the b-pawn, which will otherwise become too powerful with the support of the black king. 60...\texttt{g4} 60...\texttt{c6} 61.\texttt{h1}! makes things difficult for Black. For example: 61...\texttt{b4} 62.\texttt{h5}t \texttt{b3} 63.\texttt{d2}t \texttt{b2} 64.\texttt{h1} and White makes a draw. 61.\texttt{h1} \texttt{g6} 61...\texttt{c4} 62.\texttt{h6} \texttt{a5} 63.\texttt{h1}! is drawn by a tempo. The black rook would be much better placed on \texttt{c8}. 62.\texttt{c3}! White should not allow 62.\texttt{f5}t \texttt{c6}t, when his king is cut off decisively. 62...\texttt{f6} 63.\texttt{b4} Despite having a two-pawn advantage, Black is not able to make meaningful progress.

45. Igor Teplyi – Hrant Melkumyan, Helsingor 2013

Black is threatening counterplay, and achieved it after: 45.\texttt{a6} \texttt{c1}! Black has enough for a draw. 46.\texttt{b2} \texttt{d1} 47.\texttt{e2}?? A horrible end. 47...\texttt{f1} 48.\texttt{f4}t 49.\texttt{e4} \texttt{d5} 50.\texttt{a7} \texttt{f1} White is mated. 0–1

Instead White could have won the game with: 45.\texttt{f2}!! \texttt{a1}! The only try. Exchanging the rooks with 45...\texttt{d2}t? 46.\texttt{d2} \texttt{c2}t 47.\texttt{f1} \texttt{a2} should be hopeless. It is not too difficult to imagine the following variation: 48.\texttt{a6} \texttt{e5} 49.\texttt{b4} \texttt{d5} 50.\texttt{b5} \texttt{c6} 51.\texttt{a5} \texttt{a5} 52.\texttt{a5} \texttt{c7} 53.\texttt{e2} and White wins the pawn ending. 46.\texttt{e2}! I think this is the most practical. 46.b4 \texttt{d1} can quickly become very complicated. 47.\texttt{e2} \texttt{e5} 48.\texttt{a6} \texttt{f4} 49.\texttt{a2} and White is probably still winning, but it is all very uncertain. 46...\texttt{xa5} 47.\texttt{bxe6}t \texttt{f7} 48.\texttt{e7} 49.\texttt{h7} I prefer this move. White should obviously dominate the black king, given the chance. 49.b4?? \texttt{b5} 50.\texttt{d5} \texttt{d8} 51.\texttt{b5} \texttt{a5} 52.\texttt{e7} 53.\texttt{e3} \texttt{d6} 54.\texttt{d4} and White should win this ending, though obstacles remain. 49...\texttt{d5} 50.\texttt{b4} \texttt{a5} 51.\texttt{c2} \texttt{g8} 52.\texttt{a7} \texttt{d8} 53.\texttt{a5}! and Black has no good options.
46. Jan Smeets – Maxim Vachier-Lagrave, Wijk aan Zee 2011
The game went: 46...\textit{\textbf{d}d5}? The more technical move, but White can now escape with a draw.
47.\textit{\textbf{b}b2}? This is just horrible.
47.\textit{\textbf{f}f7}! seems to draw. Black’s winning attempt is 47...\textit{\textbf{e}e4} 48.\textit{\textbf{e}e7}+ \textit{\textbf{e}e5}, but this is met with 49.\textit{\textbf{c}c7}!! The idea is quite fantastic. 49...\textit{\textbf{e}e3} 50.\textit{\textbf{e}e5} \textit{\textbf{e}e4} 51.\textit{\textbf{e}e5} f3 52.\textit{\textbf{h}h5} (52.\textit{\textbf{f}f5} f2 and the king is cut off, Black wins.) 52...f2 53.\textit{\textbf{h}h1} At this point I do not see a winning plan for Black. 53...\textit{\textbf{f}f3} 54.\textit{\textbf{f}f1} \textit{\textbf{e}e2} 55.\textit{\textbf{h}h1} \textit{\textbf{e}e4} 56.\textit{\textbf{a}a1} \textit{\textbf{g}g4} 57.\textit{\textbf{h}h1} and White survives.
47...f3 48.\textit{\textbf{c}c4} \textit{\textbf{b}bxc4} 49.\textit{\textbf{f}f7} \textit{\textbf{f}f5} 50.\textit{\textbf{h}h7} \textit{\textbf{f}f5} 51.\textit{\textbf{h}h1} f2 52.\textit{\textbf{f}f1} \textit{\textbf{d}d5} 53.\textit{\textbf{b}b5} \textit{\textbf{c}c5} 54.\textit{\textbf{b}b6} \textit{\textbf{f}f3}+ 55.\textit{\textbf{d}d2} \textit{\textbf{b}b6} 56.\textit{\textbf{e}e2} \textit{\textbf{f}f5} 57.\textit{\textbf{x}xf2} \textit{\textbf{xf2}}+ 58.\textit{\textbf{x}xf2} \textit{\textbf{c}c5} 59.\textit{\textbf{e}e3} \textit{\textbf{b}b4} 60.\textit{\textbf{d}d2} \textit{\textbf{b}b3} 0–1
Black had a direct tactical win with 46...\textit{\textbf{f}f3}!! 47.\textit{\textbf{e}e5} \textit{\textbf{d}d1}!, when the pawn queens and White is too slow on the queenside to secure a draw.
I analysed this game for the tournament book on the 2008 Olympiad and always intended to return to it when this book was finished. It is interesting to see how much technology has changed in just over five years; and with it quite a few of the things I thought I knew about this ending. But this is a book for the active player and not the chess historian, so I shall limit myself to commenting on the realities of the ending; and use a few positions from my original analysis as exercises, without linking them to the game.

44.\textbf{E}h7\textsuperscript{?} A very natural-looking move, but Black has a stunning riposte. 44...\textbf{D}d5! Jakovenko must have underestimated this option, focussing his efforts mainly on 44...h5\textsuperscript{?}, when he would have played 45.g4!, with the following main line 45...hxg4 46.\textbf{E}g3 \textbf{d}d4 47.\textbf{E}xg4 \textbf{e}e3 48.g3 \textbf{f}f2 49.\textbf{E}h2+ \textbf{e}e3 50.\textbf{E}g5 and it is quickly all over. 45.\textbf{E}xh6\textsuperscript{?} This constitutes a surprising lack of judgement from the Russian star. White was still winning, but it is nowhere near as easy as it was one move ago. 45...\textbf{E}e4! The king will arrive at f5/g4, from where it blockades the advance of the white pawns. 46.\textbf{E}g1 \textbf{f}f5 47.\textbf{E}h2 \textbf{g}g4 48.\textbf{E}h4+ \textbf{f}f5 49.\textbf{E}h8 \textbf{g}g4 50.\textbf{E}e8 \textbf{a}a7 51.\textbf{E}e3 \textbf{h}h7+ 52.\textbf{E}g1 \textbf{a}a7 53.\textbf{E}d3 \textbf{a}a2 54.\textbf{E}h2 1/2–1/2

Let us backtrack a bit and show what correct play looks like. We shall start at the point where the evaluation of the game changed.
Other moves still win, but best is clearly $45.\texttt{xe7!}$ to cut off the black king. The main line leads us straight to the first exercise: $45...\texttt{a4}$ $46.\texttt{e8}$ Not an easy move to see. Black is set in a mini zugzwang. $46.\texttt{a3}$ $47.\texttt{g8}$ $g5$ There are other moves, but this is the most resilient. White can only win in one way:

47.

After having provoked a weakness, White again looks to dominate the black king: $48.\texttt{e8!}$ $g4$

The last try. After $48...\texttt{d4}$ $49.\texttt{e6}$ White just wins. And the waiting strategy with $48...\texttt{b3}$ is equally insufficient: $49.\texttt{e3}$ $\texttt{b6}$ $50.\texttt{f3}$ $\texttt{g6}$ $51.\texttt{e7}$ $g4\uparrow$ $52.\texttt{e3}$ $\texttt{a6}$ $53.\texttt{e5}\uparrow$ $\texttt{d6}$ $54.\texttt{e4}$ $\texttt{a2}$ $55.\texttt{f5}$ $h5$ $56.\texttt{g5}$ $\texttt{xg2}$ $57.\texttt{e3!}$ and White wins. $49.\texttt{g8}$ $\texttt{e4}$ $50.\texttt{gxg4}$ $\texttt{f5}$

I do not expect you to have foreseen this position, or to have spotted that after $51.\texttt{g8}\uparrow$ White is no longer winning: $51...\texttt{a1!!}$ $52.\texttt{h8}$ $\texttt{g4!}$ and miraculously Black makes a draw.

But White does not have to fall for this. He can win with extremely slow play: $51.\texttt{h4!}$ $\texttt{a6}$ $52.\texttt{g1}$ $\texttt{f6}$ $53.\texttt{h2}$ $\texttt{g6}$ $54.\texttt{g4}\uparrow$ $\texttt{h7}$ $55.\texttt{g1!}$ $\texttt{h8}$ $56.\texttt{f2}$ $\texttt{h7}$ $57.\texttt{h4!}$ $\texttt{g6}$ $58.\texttt{h1}$ $h5$ $59.\texttt{g1!}$ $\texttt{h6}$ $60.\texttt{h2}$ $\texttt{g7}$ $61.\texttt{h3}$ $\texttt{g6}$ $62.\texttt{a1}$ $\texttt{g4}$ $63.\texttt{a6}$ $\texttt{h7}$ $64.\texttt{e6}$ $\texttt{g7}$ $65.\texttt{f5}$ $\texttt{h7}$ $66.\texttt{g6}$ $\texttt{b4}$ $67.\texttt{g4}$ and wins.

48.

This position arose in my old analysis after $44.\texttt{d7}$ $h5$ $45.\texttt{g4}$ $h4$ $46.\texttt{g5}$ $\texttt{a3}$ $47.\texttt{g4}$ $\texttt{hxg3}\uparrow$ $48.\texttt{g2}$ $\texttt{b3}$. Not every move here is best play, as we shall see in Exercise 50. But from here on we have some lovely stuff! $49.\texttt{d8!!}$ Another absolutely fantastic move discovered by John Shaw. The point is that the rook needs to be on the 8th rank in the following line: $49...\texttt{a3}$ $50.\texttt{g8}$ $\texttt{a6}$ $51.\texttt{f5!}$ $\texttt{gxg5}$ $52.\texttt{g6}$ Black is quickly running out of time. After $52...\texttt{c6}$ $53.\texttt{g7}$ $\texttt{c7}$ Black cannot improve his position and the white king can stroll up the board to $h8$, taking the two pawns on the way. Instead the prophylactic $49...\texttt{b6!}$ offers Black the best defence, but it is not sufficient to save the game. The point is that if White plays $50.\texttt{g8}$, Black wins a tempo. White is in no hurry though, and thus improves his king's position. $50.\texttt{g3}$ $\texttt{c6}$ Black uses the chance to get the king past the 6th rank. $51.\texttt{f3!}$ Slowly does it. $51.\texttt{f5?}$ $\texttt{b5!}$ $52.\texttt{g8}$ $\texttt{gxg5}$ $53.\texttt{g6}$ $\texttt{b4!!}$ is a draw. The white king is cut off. $51...\texttt{c7}$
52.\(\text{d5!!}\) Again only this move wins. The point is that the king needs shelter to be able to cross the 5th rank. 52...\(\text{c6}\) 53.\(\text{e4}\) \(\text{b1}\) 54.\(\text{d8}\) \(\text{e1}\)† 55.\(\text{f3}\) Okay, so the king did not manage to cross the 5th rank, but the black rook is worse off than before and White can win with his old tricks. 55...\(\text{e6}\) No other moves work either. 56.\(\text{f5!}\) \(\text{e5!}\) Again the best try. 57.\(\text{g5!}\) \(\text{f5t}\) 57...\(\text{xf5}\) 58.\(\text{g6}\) \(\text{d7}\) 59.\(\text{g7}\) \(\text{e7}\) 60.\(\text{a8}\) is a nice piece of trivia. 58.\(\text{g4}\) \(\text{f1}\) 59.\(\text{xg6}\)† \(\text{d7}\) 60.\(\text{g7}\)† Once again accuracy is needed. White simply needs g6 for the king. 60...\(\text{e8}\) 61.\(\text{h5}\) \(\text{h8}\) 62.\(\text{g6}\) and White wins. Black has no time for passive defence: 62...\(\text{e1}\) 63.\(\text{a7}\) \(\text{e8}\) 64.\(\text{h7}\) and White is combining the \(\text{a8}\)† idea with the simple g6-g7 advance.

49.
This arises in a long variation which is rather irrelevant to the game. However, it still holds an instructive point.

1.\(\text{g7}\) is surprisingly inadequate. After 1...\(\text{xf6}\) 2.\(\text{g5}\) \(\text{f3}\) 3.\(\text{h4}\) \(\text{h3}\) Black draws after both 4.\(\text{g6}\) \(\text{h4}\) and 4.\(\text{h7}\) \(\text{b3}\) 5.\(\text{c2}\) 6.\(\text{b2}\)† \(\text{c3}\).

But with the rook on the 8th rank, White can quickly push his pawn. 1.\(\text{g8!}\) \(\text{xf6}\) 2.\(\text{g5}\) \(\text{f3}\) 3.\(\text{g6}\) \(\text{b3}\) 4.\(\text{b8}\)† \(\text{c2}\) 5.\(\text{a2}\) \(\text{g3}\) 6.\(\text{c8}\)† \(\text{d3}\) 7.\(\text{g8}\) \(\text{xh3}\) 8.\(\text{g7}\) and White wins.

1.\(\text{b1}\) allows Black to repeat the position, but does not yet fail to win. Still, it is not making progress and is thus not a solution.

When I analysed the ending in 2008 I believed that White was only winning after 44.\(\text{d7}\)†. I have quite elaborate analysis here. The move that gave me the most problems was 44...\(\text{h5}\)†. 45.\(\text{g4}\) \(\text{h4}\)! 45...\(\text{hxg4}\) 46.\(\text{g3}\) \(\text{e2}\) 47.\(\text{g7}\) offered less resistance. Actually, my analysis was even wrong at this point. White wins with: 46.\(\text{f3!}\) \(\text{a3}\)† 47.\(\text{e4}\) \(\text{g3}\) 48.\(\text{d5}\)† \(\text{c6}\) 49.\(\text{g5}\) and it is all easy.

Instead I had 46.\(\text{g5}\)†, which leaves us with the last exercise of this chapter.
50.
The solution here is less difficult to find, as there are a lack of alternatives. Black has to fight against White’s g2-g4 ideas. 46...\texttt{a3!} 47.g4! John’s great move from 2008. 47...\texttt{g3!} My old main line 47...hxg3\texttt{t}? 48.c;\texttt{t>g2 \texttt{a3}} leads us to Exercise 48, as most will have noticed. This line was rejected previously on account of 48.\texttt{h7}, but here Black has 48...\texttt{d5!!} (or to \texttt{d4}), which we missed entirely. A draw is achieved after 49.\texttt{xh4 \texttt{a3} 50.\texttt{h8 \texttt{e4} 51.f5 \texttt{f4!}} and it finally becomes easy to understand!

Finally, let us have a look at what best play from the initial position in this endgame looks like:

\texttt{44.g7! \texttt{a2}\texttt{t}} A highly relevant line is 44...\texttt{d4} 45.g4! \texttt{e4} 46.\texttt{g3 \texttt{a3} 47.h4}, where White wins in traditional style with 47...\texttt{xf4} 48.\texttt{exd4 \texttt{a1} 49.d6f6 \texttt{e5} 50.\texttt{xh6 \texttt{h1} 51.\texttt{g5 \texttt{g1} \texttt{a6} \texttt{exd4 53.\texttt{e6} 54.f1 and the black king is cut off, leaving us in a 101 training session. This line is especially relevant as 44.g4! \texttt{d4} 45.g7! wins in exactly the same way.} 45.\texttt{f3 \texttt{a6} 46.g4 \texttt{d5 47.g3}} The human way to do it. White is also winning quickly after 47.g5 hxg5 48.\texttt{g4!! 47.e4} 48.\texttt{e7f5 \texttt{d5} 49.h4 \texttt{a2} 50.\texttt{g7 \texttt{exg2} 51.\texttt{exg6 \texttt{h2} 52.\texttt{g3 \texttt{h1} 53.g6 \texttt{g1} 54.\texttt{f3 \texttt{h1} 55.\texttt{f5} 56.\texttt{h5} and White wins.
Black has a big advantage, but with only seconds left to make the time control he failed to make the move that would have won the game. What would you play?
Even though this chapter includes a few pure queen endings, the net is thrown much wider than that. We will see a lot of different positions with only two common denominators: there are queens on the board and they are endings.

This leads to an obvious question. What actually defines an endgame? No clear-cut answer exists. Just as the transition from the opening to the middlegame is a grey zone, so is the transition from the middlegame to the endgame.

One of the better-known attempts uses king safety as a parameter. Indeed, the king is generally a lot safer in the endgame than it is in the middlegame. But there are, of course, exceptions. Who would have said that this position does not revolve around king safety?

Andreas Skytte Hagen –
Brian Jorgen Jorgensen

Borup 2012

Instead Black played:

38...\textit{f8}?

This gives White a fantastic chance to equalize. The majority of his current problems are also with king safety.

By exchanging rooks he could have saved the game. Simply 39.\textit{d8}! should hold the position.

39.\textit{g2}?! 

Clearly both players are in time trouble. The end is not pretty.

39...\textit{g6}?! 

39...\textit{b7}?! 

40.\textit{h5}?! \textit{f5}! 41.\textit{d8}+ \textit{g7} 42.\textit{hxg6} \textit{h5}+ 43.\textit{g1} \textit{xe3}+ 44.\textit{f2} \textit{e1}+ 45.\textit{g2} \textit{h1}+ 46.\textit{g3} \textit{h3}+ 47.\textit{f4} \textit{h4}+ 

0–1

The argument that this is not an ending has merit. But it is certainly not a middlegame. Nor does it come under what Romanovsky called “the 4th phase” – positions with queens and rooks, with both passed pawns and attacking possibilities.

I have spent a bit too long thinking about this issue; with the only half-insight being that the pawn play we usually see in the opening and middlegame is quite different from what we see in the endgame. The pawn structure is most often decided by the time we get to the ending. It can be either closed and controlled, as in the previous position, or it can be entirely out of control, as in the next example. However, the key point is that its nature has been decided already. Obviously there are exceptions to this as well, but I’m sure there are still one or two people out there who will find it to be an interesting observation.
Endgames with queens have a tendency to be more tactical than other endings, mainly because of the permanent threat of perpetual check. Also queens are not so easy to control.

The following diagram is just one example of a position where Black would resign without hesitation were the queens not on the board. But they are there, making White's job a bit difficult despite the extra rook!

Levon Aronian – Fabiano Caruana
Wijk aan Zee 2012

38...Wa2±

Black can still resist. Objectively the position is lost, but a few more moves can at least be made...

39.g4?!

Aronian was described as “the witty tactician” in Champions of the New Millennium. Here he tricks his usually resourceful opponent.

39...hxg4?!  
A blunder. The win was not automatic after 39...hxg4 with the idea of ...f5, though you would expect Aronian to find a way eventually. Now White just wins.

A nice finish. Essentially the same win was available just a few moves earlier: 38...b7!! Wxe2 39.e7 White wins the piece back, this time with a decisive attack. 39...xc4 40.xf6+ g8 41.b1! and so on. By the way, 38.b8 Wxe2 39.e5 wins in the same way.
Bromann – A. Smith, Odense 2012

Pashikian – Strelnikov, Plovdiv 2010

Hebden – A. Fox, Dublin 2007

Khismatullin – Borisenko, Moscow 2012

Shaw – A. Hunt, Isle of Man 1993

Stefansson – Sundar Shyam, Chennai (var) 2011
1. Thorbjorn Bromann – Axel Smith, Odense 2012
This position is not fully serious, even though it happened in a serious game. Both players found themselves living on 30 seconds for each move. 48.\textit{\texttt{xf3? c2}} 49.\textit{\texttt{h8=\texttt{W}}} Despite having two extra queens, White is nowhere close to winning the game. 49...d1=\texttt{W} 50.\textit{\texttt{e4 g4}} 51.\textit{\texttt{xd3}} After 51.\texttt{xe5 d4} 52.\texttt{e6 \texttt{W}xh8} White should feel lucky that he has 53.\texttt{d5} with a draw. 51...\texttt{c1} 51...\texttt{d1} 52.\texttt{e4 g4} would force a draw immediately but after having been on the back foot for so long, it is understandable that Black wants to see if White can deliver the correct checks.

52.\textit{\texttt{e2 \texttt{xb3}}} 53.\textit{\texttt{Wf8}}

White escapes with a perpetual. Draw on move 73. ½–½

The winning line was: 48.\textit{\texttt{e4}} c2 49.\textit{\texttt{d5}} \texttt{b6} 50.\texttt{h8=\texttt{W}} and so on.

2. Mark Hebden – Anthony Fox, Dublin 2007
Quite a nice little game. Black lost after what looked like reasonable moves. We have an accelerated version of a well-known theme. 61...\texttt{g3?} 62.\textit{\texttt{e3! \texttt{h7}}} The point arises after 62...\texttt{h1=\texttt{W}} 63.\texttt{g7}\texttt{h2} 64.\texttt{f2!}, when the threat of mate in one is hard to meet. Black can give up his queen to try and defend rook against queen, but objectively it is lost. And after 64...\texttt{h3} 65.\texttt{c7} he is mated on the next move. 63.\texttt{b8}\texttt{W!} White wins. In the game Black tried two more moves before resigning.

63...\texttt{h3} 64.\texttt{c8}\texttt{W} \texttt{g2} 65.\texttt{g8} 1–0

61...\texttt{xf3!} on the other hand, would have secured a draw easily. The threat of...\texttt{h1=\texttt{W}} dominates the game. 62.\texttt{b7}\texttt{W} 63.\texttt{h1} \texttt{f2} 64.\texttt{e4 \texttt{h3}} 65.\texttt{f4 \texttt{h4}} 66.\texttt{g5 \texttt{h8}} and White cannot improve his position.

3. John Shaw – Adam Hunt, Isle of Man 1993
The game went: 33.\texttt{f3?? \texttt{d2}} 34.\texttt{h3 \texttt{d7}} 35.\texttt{g4 \texttt{d1}}!! 36.\texttt{xc8\texttt{W}} 37.\texttt{g8}\texttt{W} 38.\texttt{g2}\texttt{W} draw agreed. ½–½

The winning move was: 33.\texttt{e4!} This is a necessary diversion of the black queen. Now White can win in two ways. 33...\texttt{xe4}\texttt{W} 34.\texttt{f1} Simplest. The win the players looked at after the game was also clear cut: 34.\texttt{f3!} The black queen is tied to c8 and there is no counterplay. 34...\texttt{e2} 35.\texttt{xe6 xc8} 36.\texttt{xc8} 37.\texttt{b6} and the c-pawn queens. 34...\texttt{h1} 35.\texttt{e2} White wins. There is not a shadow of a perpetual check.

4. Arman Pashikian – Sergey Strelnikov, Plovdiv 2010
In a seemingly drawish ending, White had a surprising mating option. 48.\texttt{h4}\texttt{W} 48...\texttt{h6} 49.h5 e5 is technically best, but White is winning after, say, 50.\texttt{e8 xf4} 51.\texttt{h4 g7} 52.\texttt{g6} \texttt{g8} 53.\texttt{xf6} \texttt{g8} 54.\texttt{h6} \texttt{b7} 55.\texttt{g7}. 49.\texttt{h5}\texttt{W} Black resigned in view of 49...\texttt{h6} 50.\texttt{f7}. 1–0

5. Denis Khismatullin – Andrei Borisenko, Moscow 2012
Black is completely winning, but to translate this into a full point is not so easy! In the end White found a nice trick to save half a point – and when Black ‘avoided it’ he was instantly mated. So, to save you from tears, find the direct win at this point instead.

The game went: 63...\texttt{d5?!} 64.\texttt{a8} \texttt{f5} 65.\texttt{c8}\texttt{e4} 66.\texttt{e8}\texttt{f3} 67.\texttt{c1 b5} 68.\texttt{f1}\texttt{g4} 69.\texttt{gl} \texttt{f5} 70.\texttt{f2}\texttt{e6} 71.\texttt{f8} 72.\texttt{g7}\texttt{c7} 73.\texttt{g8} \texttt{b7} 74.\texttt{e8 c6} 75.\texttt{f7}\texttt{a6} 76.\texttt{b2 \texttt{g2}} 77.\texttt{a3 d5} 78.\texttt{e8 b7} 79.\texttt{a8} \texttt{b6} 80.\texttt{d8}\texttt{a7} 81.\texttt{d4}\texttt{a6} 82.\texttt{a8}\texttt{t} 1–0

The direct win comes about after: 63...\texttt{f1}\texttt{W} 64.\texttt{c2} Trying to avoid Black’s idea, but it is not possible. 64...\texttt{d3}\texttt{W} 65.\texttt{b2 \texttt{xb4}} 66.\texttt{xb4}\texttt{c3}\texttt{t}
6. Hannes Stefansson – Sundar Shyam, Chennai (variation) 2011

Analysing this game I came across a nice little combination.

49...Ei:f7t? does not work. 49...gxf7 50.d5t Ee7 51.Ee8t Ee8d7 52.EXe2 Ef1t 53.EXg2 Ee3d3t→ 50...Ef7 51.d8=Ef Eh6t 52.Eh4 Ef2t and Black wins.

The solution is: 49.EXg8t Ef6 50.EXf5t!! This imaginative try, with the threat of g4-g5t, is the only saving move. 50.d8=Ef fails to 50...Ef1h7 51.EXg3 Ef2h2#. And 50.EXf6? Ef2d2 51.d8=Ef is refuted with: 51...EXd8 52.EXd8 Ef3t 53.EXf3 Efxc6 with a technically winning position for Black. It would take some time to convert it, but it is winning nonetheless. 50.EXf7t Ef2d2 51.d8=Ef EXd8 52.EXd8 Efxc6 is a better version of that line. 50...Ef3t! The simplest draw. 50...gxf5? would lose to 51.g5t, because of 51...Ef5 52.EXf3#. 50...Ef3t?! would give White the advantage after 51.EXf3 Ef2h2t 52.EXh2 Ef2a2t 53.EXg3 Ef2xg8 54.g5t Ef2g7 55.EXf7t!! although it is not decisive yet. 50...Exd8 51.EXf3 gxf5 52.g5t Ef2g5 53.EXg5 Ef2d2 54.EXf5 EXd7 would also lead to a draw. 51.EXf3 Ef2h1t 52.EXg3 Ef2g1t 53.EXf4 Ef2f3t With a perpetual check.


White has a winning position no matter what, for example after 62.c6 or 62.h5. The latter move was played in the game after a repetition of moves, which was a decent decision from a practical viewpoint, especially with the fast time controls we have these days. However, White later went astray and eventually Black even managed to steal the full point ...

Although the above two moves should suffice, it is interesting for us in a training environment to spot the direct win with: 62.EXh6t! gxfx6 63.EXg8t Ef2h7 64.EXh8t Ef2g6 65.h5t! The important move, that brings the queen back with check. 65...EXh5 65...Ef5 66.EXe5t transposes. 66.EXe5t Ef2g6 67.EXe4t White wins after 67...Ef5 or 67...Ef5, in both cases with 68.g4.

8. Alexey Solovchuk – Anastasiya Rakhmangulova, Yuzhny 2011

In the game Black lost instantly after 54...Ef4?? 55.EXe5t Ef2h7 56.EXg7# 1–0.

She could have drawn by a tempo, because of a nice little trick. 54...Ef7t! This is the only solution. 55.EXf1 Efxf1 Everything is forced from here. 56.d6 Ef2h3 57.a5 Ef2e3 58.a6 Ef2e2 59.a7 Ef2e6t! The point. Without this the game would be lost. 60.EXg6 Ef2e1=Ef 61.a8=Ef Ef2g8= Ef2f1 Just in time.


White missed a direct win and drifted into a lost position. Time trouble was most certainly the cause! 69.EXg3 Ef8? Black in turn misses a nice defence. 69...Ef3t! 70.EXe3 Ef2t Black can draw with perfect play, for example: 71.EXf3 Ef2g3t 72.EXe4 Ef2g7 and despite practical problems, the position is an objective draw. 70.EXf5t Ef2e1 71.EXa5t EXf1 72.EXf5t Ef2e1 73.EXf2t Ef2f3! and Black would not have lasted many moves. 73...Ef2d1 White’s advantage is gone. 74.EXd4t Ef2c1 75.EXc3t Ef2d1 75...Ef2b1 76.EXe1t Ef2xb2 should also lead to a draw, but at this moment Black is not feeling adventurous. 76.EXd3t Ef2c1 77.EXe4t?? 77.EXc3t was necessary. 77...Ef2b1! But now he is! 78.EXd3t Ef2a1 0–1

69.b4? gives Black some practical chances of survival: 69...Ef6t 70.EXg3 Ef8 and although White is probably close to winning, it is clear that he has missed a great chance.

69.EXf5t! was the winning move. Promoting the pawn loses immediately, so Black has to retreat.

69...Ef8 69...Ef7 70.EXh3t wins even faster. There is a check on d6. 70.EXh3t Ef2e1 71.EXh4t Ef2d2 72.EXf4t Ef2d3 73.EXd6t and White wins.

The game went: 40...\text{a}b8? \text{\textit{a}5} 41...\text{b}b5 41...\text{b}b2\textit{?? c}c7 42...\text{b}b3 d3 43...\text{b}b5 \text{a}6 44...\textit{xf}6 \text{xc}4 45...\textit{xb}6 White would keep an advantage, but the result would still be in doubt. 41...\textit{c}3! 42...\text{b}8 \text{a}5 43...\text{b}4 d3 At this point White lost the remains of his advantage (and the game was drawn on move 76). He should have played: 44...\text{b}5! \text{d}2 45...\text{b}8 \text{a}5 46...\textit{b}2! in order to return to the variation on move 41, with one addition. Black still has drawing chances after 46...d2 47...\text{c}8 \text{b}7 48...\textit{dx}d4 \text{b}6\textit{??}, but White’s winning chances are higher.

40.a5! would have won directly. The point is simple enough, White is threatening \text{a}a6\textit{??} and mate on b6. 40...\textit{xa}5 40...\textit{xc}4 41...\textit{c}6 just wins. 41...\textit{b}2! and White wins the queen.


The game continued: 30...d2? 31...\text{xb}7 \textit{d}1=\textit{w} 32...\textit{f}1! This is the move Vocaturo must have missed. The exchange of queens is necessary to protect the white king. 32...\text{h}2? \textit{e}1 transposes to 31...\text{h}2? in the solution. 32...\textit{f}1 also gives the white king big problems. 32...\textit{f}3 33...\textit{b}8=\textit{w} 34...\textit{xb}8 34...\textit{xb}8 \textit{e}4 White needs to hope that Black cannot find a way to break his fortress after 35...\textit{xe}4 36...\textit{f}4. He may not succeed, but he would not run any risks if he tried. 32...\textit{b}3 33...\textit{c}6 The pawns and bishops are superior to the queen. White is just winning. 33...\textit{d}8 34...\textit{f}4 \textit{db}6 35...\textit{b}8=\textit{w} 36...\textit{xb}8 \textit{xb}8 37...\textit{e}1 \textit{f}5 38...\textit{e}7 \textit{f}6 39...\textit{d}5\textit{?? h}8 40...\textit{c}7 \textit{b}1\textit{?? 41...\textit{h}2 1–0

30...\textit{e}1\textit{?? 31...\textit{f}1} 31...\textit{h}2? d2 32...\text{xb}7 \textit{d}1=\textit{w} 33...\textit{b}8=\textit{w} 34...\textit{h}7 is very dangerous. The only defence is 34...\textit{f}1! \textit{xf}1 35...\textit{xf}1 \textit{f}1 36...\textit{a}8 \textit{xf}2\textit{?? 37...\textit{g}2 \textit{d}4\textit{??, where Black will be able to play on for a very long time. White’s defence is joyless. 31...\textit{xc}6 It is possible that Vocaturo did not fully appreciate that he would win back the piece here, but personally I think he was just hoping he would win the game as played. White has to play 32...\textit{f}4 d2 33...\textit{xd}2 \textit{b}2, when a draw is almost certain.

12. Anatoly Karpov – Ulf Andersson, Milan 1975

This is from the first game Karpov lost after getting the title of World Champion. The main trap is that 79...\textit{xe}2? fails. White is not going to allow 80...\textit{xe}2 \textit{g}1\textit{??, but will instead play 80...\textit{h}8\textit{?? \textit{h}x}8 81...\textit{d}8=\textit{w} \textit{h}7 82...\textit{g}6\textit{?? \textit{g}6 83...\textit{g}5\textit{?? when Black can only escape the checks by stalemating his opponent: 83...\textit{h}7 84...\textit{f}5\textit{?? g}8 85...\textit{g}5\textit{??.

After 79...\textit{h}1\textit{?? 80...\textit{f}2 \textit{xe}2! 81...\textit{xe}2 \textit{h}2\textit{?? 82...\textit{e}3 \textit{e}5\textit{?? 83...\textit{f}3 \textit{f}6\textit{?? 84...\textit{e}3 \textit{e}6\textit{?? 85...\textit{f}3 \textit{xe}2 86...\textit{xe}2 \textit{xd}7 Black is doing very well, but a lot of practical challenges remain.

Andersson played with care: 79...\textit{a}1\textit{?? This is the accurate move. 80...\textit{d}2 \textit{xe}2 81...\textit{xe}2 \textit{g}1 The threats against the white king are too strong. 82...\textit{b}3 \textit{d}4\textit{?? 83...\textit{c}2 \textit{d}1\textit{?? 83...\textit{xd}7 exists as well, of course, but the text is better. 84...\textit{c}3 \textit{c}1\textit{?? 85...\textit{c}2 \textit{f}3\textit{?? 86...\textit{b}2 \textit{b}1\textit{?? Black wins. 0–1}}
A curious position where Black only has one move that both holds on to the h-pawn and avoids exchanging queens at the same time. 73...\textit{Wb5}? 74.\textit{Gf3}+ \textit{Gg1} 75...\textit{Gc5}+ 76.\textit{Gd1}+ 77.\textit{Gxh5} and White wins in the long run. 76.\textit{Gd1}# 1–0

73...\textit{a5}? loses to 74.\textit{Gxg3}! with the point 74...\textit{Gc7}+ 75.\textit{Gf4}+ \textit{Gxf4}+ 76.\textit{Gxf4} \textit{Gg2} 77.\textit{Gg5} \textit{Gg3} 78.\textit{Gh5} \textit{Gf4} 79.\textit{Gg6} and so on...

73...\textit{h7}!! was therefore the only move. White has practical chances, but with good play the draw should be achieved.

Despite having the same surname, I did not know Gert in advance of the training weekend in Odense, where I looked at games from almost all the participants. Although there were some mistakes in this game, I still found it highly instructive and have included two positions in this book. 31.\textit{Wf3}? \textit{Gg1}? 31...\textit{h2}? with reasonable play was right here. One point would be that after 32.\textit{c4} \textit{Gc6}! White would have to find 33.\textit{We4!} (or e3) 33...\textit{Gxb4} 34.\textit{Gd4!} to keep even chances. The game should end with a perpetual check. 32.\textit{Gc4} \textit{Gh2} 33.\textit{Gc1} \textit{Gd5} 34.\textit{Gxd5} \textit{exd5} 35.\textit{Gd1} 35.\textit{Gc3}! \textit{Gh1}+ 36.\textit{Gd2}+ was stronger. 35...\textit{d4}? 36.\textit{Gxd4} \textit{Gg1} 37.\textit{Gc2} \textit{xd4} At this point in the game White has a slight edge, but Black should make a draw with accurate play. However, there were more horror stories to come! 38.\textit{Gc3} \textit{Gg1} 39.\textit{Gf1} \textit{Gb1}+ 40.\textit{Gc4} \textit{Gc2}? Black misses an immediate draw with 40...\textit{Gd2}+! 41.\textit{Gf5} \textit{Gc7}+ when White will not escape the checks on account of 42.\textit{Gd6??} \textit{Gc7}+ and Black wins. 41.\textit{Gc3} 42.\textit{Gc5} 42.\textit{Gc6} 42.\textit{Gc7}+ 37.\textit{Gc7}+ 42.\textit{Gc7} to hold the king out does not work. 43.\textit{b5}! \textit{Gxg4} 44.\textit{b6}+ \textit{Gd8} (44...\textit{Gd8} 45.\textit{Gd6} and mate is near) 45.\textit{Gd4}+ and the pawn ending wins. 43.\textit{Gd4} \textit{Gg2} 44.\textit{e6}! \textit{Gxg4}+ We will continue this game in Exercise 23.

White could have won by forcing a minor piece ending with: 31.\textit{Gd4!} \textit{Gxd4}+ In practice Black has no choice. 31...\textit{Gd4} is the only alternative (unless Black wants to play for stalemate, starting with giving up the knight!). But after 32.\textit{Gd4}+ \textit{Gd8} White has several wins; 33.\textit{Gf4}, 33.\textit{c4} and the forcing 33.\textit{b5} \textit{axb5} 34.\textit{Gxb6}+ \textit{Gd8} 35.\textit{Gf3}+ \textit{Gc5}+ 36.\textit{Gd6} when the black queen has to continue to defend the knight and thus cannot come to the rescue. 36.\textit{Gd6} 37.\textit{Gxb5}+ \textit{Gd8} 38.\textit{Gc6}+ \textit{Gd8} 39.\textit{Gd6}+ \textit{Gd8} 40.\textit{Gf4}+ \textit{Gd8} 41.\textit{Gd4}+ \textit{Gd8} 42.\textit{Gd5} White wins. His next move is likely to be \textit{Gf5}. 32.\textit{Gxd4} \textit{Gd5} The only reason to stop White exchanging queens, and thus our main line. 33.\textit{Gf5} \textit{Gxb4} 34.\textit{Gf3}! This domination move is better than the active-looking 34.\textit{Gc4}. Also possible is the tactical shortcut 34.\textit{Gf6!} \textit{Gxf6} 35.\textit{Gf6}! \textit{Gf2} 36.\textit{Gg5} and White queens. However, as I do not like unnecessary tactics, this is not my main line. Call it a personal thing. 34...\textit{Gf6} Forced again. 34...\textit{Gd7} is met by 35.\textit{Gf6} with \textit{Gg5} and \textit{h6} to follow. 35.\textit{Gxg6} \textit{Gc7} 36.\textit{Gf6} \textit{Gd8} 37.\textit{Gf6} \textit{Gd6} 38.\textit{Gf6} gives us a bizarre-looking pawn ending, where equal material gains a new meaning! 37.\textit{Gd6} \textit{Gc6} 38.\textit{Gc6} \textit{Gc1} At this point it is obvious that White is winning, but there is no reason not to include the logical finish. 38.\textit{Gxg2} 39.\textit{Gf6} 40.\textit{Gxb7} 41.\textit{Gxa6} 42.\textit{Gc8}+ \textit{Gd6} 43.\textit{Gf6} The knight can make it back via \textit{f4-d5-c7}, but it will have to die to stop the a-pawn.

31.\textit{f5}! \textit{Gxf5} 32.\textit{Gxf5} 33.\textit{Gf3} 34.\textit{Gxf3} also gives White great winning chances, but you cannot escape the feeling that this is a worse version of the main solution.
15. Fabiano Caruana – Sergey Karjakin, Zug 2013
White has a strong initiative, but he failed to find the quick way to win the game and subsequently found it very difficult to make the most of his advantage. 35.\textit{ex}e6\textit{!} \textit{d}7± The game was drawn by move 60.
35.\textit{ex}h5\textit{!}\textit{e}7 is also incorrect.
The winning line was 35.\textit{ex}e7\textit{!} \textit{exe7} 36.\textit{ex}e6\textit{!} \textit{f}8 37.\textit{d}6 \textit{d}8 38.\textit{d}7 \textit{e}7 39.\textit{d}6\textit{!} and White ends with an extra piece. This is not a new theme, but somehow Caruana missed it.

1. \textit{W}b6\textit{!} \textit{f}2 2.\textit{d}4 does not work. Black escapes with a check on \textit{f}5. 2...\textit{f}5\textit{!} 3.\textit{g}7 \textit{f}1 4.\textit{a}6\textit{!} \textit{g}1 5.\textit{d}1\textit{!} \textit{f}2 6.\textit{d}2\textit{!} \textit{g}1 7.\textit{a}1\textit{!} \textit{h}2 8.\textit{d}4\textit{!} \textit{f}3 with a draw.
1. \textit{e}3\textit{!} The only winning move. 1...\textit{f}2 2.\textit{c}1\textit{!} \textit{f}1 3.\textit{c}5\textit{!} \textit{f}2 White has positioned the queen on the right square and now ends the game with: 4.\textit{d}4\textit{!} \textit{h}1 5.\textit{h}5\textit{!} \textit{g}1 6.\textit{d}1\textit{!} \textit{f}1 7.\textit{f}3 White wins.

17. Jens Ramsdal – Igor Teplyi, Aarhus (variation) 2012
27.\textit{xf}5 \textit{xf}5 28.\textit{d}7 \textit{d}5 looks promising, but the problem is that 29.\textit{c}8\textit{?} will be met with ...\textit{e}3\textit{!}. Now White has to play 30.\textit{f}1 to avoid a direct loss. After 30...\textit{xd}7 31.\textit{c}3 \textit{e}7 it will be Black who plays for a win.
27.\textit{xf}5 \textit{xf}5 28.\textit{d}7 \textit{d}5\textit{!} also leads nowhere. White can make a draw in many ways here, but he cannot win. And after 29.\textit{xc}8 \textit{d}4\textit{!} 30.\textit{h}1\textit{e}3 he should not fall for 31.\textit{xd}8?? \textit{g}8 32.\textit{c}8\textit{!} \textit{f}7 33.\textit{d}8\textit{!} \textit{xd}8 34.\textit{xd}8\textit{e}2, when the pawn cannot be stopped.
27.\textit{c}1\textit{!}\textit{?} is also reasonable. Black had to play 27...\textit{xc}5\textit{!} (27...\textit{xc}5 28.\textit{b}8\textit{!} h6 29.\textit{f}8 leads to a winning attack), when the strongest move is still: 28.g4! \textit{d}5 29.\textit{xc}5 \textit{xc}5 30.d7 \textit{d}5 31.\textit{f}7\textit{±} Converting this to a win is not trivial, but obviously White has real chances.
27.g4\textit{!} The winning move for several reasons. First of all it is a useful tempo. 27...\textit{g}5 28.\textit{xa}5 \textit{xa}5 29.d7! This is the win most people would find based on the 27.\textit{xa}5 line given above. The air-hole for the king is most useful. But one student found a different idea here: 29.\textit{f}5\textit{!} The exchange of rooks is immediately decisive. 29...\textit{xd}5 30.\textit{xc}8 \textit{xd}7 30...\textit{e}3 does not achieve much now. White wins after 31.\textit{ff}8 and Black is mated. 31.\textit{ff}8 White wins a rook and the game.

In this non-standard position, White found a humorous win. 41.\textit{ff}8\textit{!} 41...\textit{a}1 \textit{c}1=\textit{=} 42.\textit{xc}1 \textit{xc}1 43.\textit{h}1 and White is better, but it is not conclusive. 41...\textit{g}6 41...\textit{xf}8 42.\textit{xe}3\textit{!} and White wins. 42.\textit{f}7\textit{!?} \textit{xf}7 Forced. 42...\textit{f}6 43.\textit{xd}4\textit{!} wins everything with check. 43.\textit{xd}6\textit{!} \textit{h}5 44.g4\textit{!} Black resigned. He is mated with: 44...\textit{fxg}4 45.\textit{fxg}4\textit{!} \textit{g}5 46.h4#
S.B. Hansen – R. Akesson, Bangkok 2013

Pira – Le Roux, Mulhouse 2011

Asgarizadeh – Papaioannou, Nakhchivan 2013

G. Aagaard – Aaskov, Vejle 2012

Motylev – Wojtaszek, Rogaska Slatina 2011

Zhao Xue – Munguntuul, Shenzhen 2011

58...\texttt{Rb1}?? would be horrible. After 58...\texttt{Bxe4} 59.\texttt{Rg1} \texttt{d5}+ Black will soon find a check to win the rook.

58.f5? also misses the moment. 58...\texttt{Rg7}! 59.\texttt{Bxg7}+ \texttt{Rxg7} 60.\texttt{Bb1} \texttt{c5} and it will be White who is lucky to escape with a draw.

58.\texttt{Bxf8}+! \texttt{Bxf8} 59.\texttt{Bd8}?? A horrible mistake so close to the goal. White wins after 59.f5!, when Black's longest defence starts with 59...\texttt{exf5} 60.e6! and mate in five. 59...\texttt{g7}+! 60.\texttt{f6}+ \texttt{g8}! The king is better placed and White needs to give the perpetual check now. 61.\texttt{d8}+ \texttt{g7} \frac{1}{2}-\frac{1}{2}


Black missed a glorious chance to 'pin and win'. 45.\texttt{Ba4}! 46.\texttt{Bf1}! \texttt{Bxd4} 47.\texttt{Bxh3} \texttt{Bd3} 48.\texttt{Bg3} The game ended in a draw on move 70.

45...\texttt{Bb2} 46.\texttt{Bxb2} \texttt{Bxb2} 47.\texttt{Bg3} \texttt{Bxd4}+ 48.\texttt{Bf1}+ Black's winning chances are very limited as he cannot defend the h3-pawn in any natural way.

The winning move was: 45...\texttt{e5}! 46.\texttt{Bxe5} This allows us to see the main idea.

46.\texttt{Bxa2} \texttt{Bxa2} 47.\texttt{Bf2} does not work. Black does not enter the drawn pawn ending, but plays 47...\texttt{Bf1}! 48.\texttt{Bxd4} 49.\texttt{Bh1} e4! with an easily winning position. White has to stop the e-pawn, but after 50.\texttt{fxe4} \texttt{Bxe4}+ there is no hope. Of course Black can exchange queens and win the pawn ending, but after 51.\texttt{Bg1} \texttt{Bxg4}+ 52.\texttt{Bh1} f6 White is simply in zugzwang.

On 46.\texttt{Be2} then 46...\texttt{Bc4} will transpose to the previous line.

46.d5 also loses to 46.\texttt{Bb6}. Here a fun line is: 47.d6? \texttt{Bd4}! There are other good moves, but this is simple. 48.d7 \texttt{Bf3} 49.d8=\texttt{B}+ \texttt{Bxd8} 50.\texttt{Bf1} (50.\texttt{Bxe5} \texttt{Bb6} and the pin is re-established) 50...\texttt{Bd4}+ 51.\texttt{Bh1} e4! Again not the only move, but sometimes we are allowed to play around a bit with our food. White only has one move worth debating, 52.\texttt{Bxe4} \texttt{Bb2} 53.\texttt{Bg1} \texttt{Bc6} 54.\texttt{Bf4} \texttt{Bc1}! 55.\texttt{Bxe8}+ \texttt{Bf7} 56.\texttt{Bxe7} \texttt{Bxh5} 57.\texttt{Bxe4} \texttt{Bxe4}+ 58.\texttt{Bc2} \texttt{Bxg2}# 46...\texttt{Bb6}! Black wins with ...\texttt{Bb2}-b1. 47.\texttt{Bf1} \texttt{Bf6}+ does not help.


This is what Romanovsky called the 4th phase. 52...\texttt{Bf4}? 53.\texttt{Bc3}! White is now fine. 53...\texttt{Bc4} 53...\texttt{Bxe4} 54.\texttt{Bd3}+ \texttt{Bh8} 55.\texttt{Bxb5} \texttt{Bxe4} was Black's best chance. But after 56.\texttt{Bc5}! he is struggling to make progress. 54.\texttt{Bb3} \texttt{Bh3} 55.\texttt{Bf5}! \texttt{Bxf5} 56.\texttt{Bxe3} White drew on move 68, but he is already out of danger here.

Combining an attack on the king with pushing the e-pawn would have secured the full point. Black's queen had to stay on the 5th so as to move from d5-d1. 52...\texttt{Bf5}! 53.\texttt{Bc2} Other moves are possible, but they all transpose. 53.\texttt{Bf1} 54.\texttt{Bc3} 54.\texttt{Bd5}+ \texttt{Bh8} 55.\texttt{Bxe5} \texttt{Bxe5}+ and wins. 54...\texttt{Bd5}+ 55.\texttt{Bc2} 55.\texttt{Bd1} 56.\texttt{Bc3}+ \texttt{Bxd3} 57.\texttt{Bf2} and the e-pawn queens. 55...\texttt{Bf1}+ 56.\texttt{Bxa1} \texttt{Bf1} 57.\texttt{Bc2} \texttt{Bxc2} Black wins. There is no defence against ...\texttt{Bc4}, exchanging the queens and allowing the e-pawn to promote.


43.\texttt{Bd6}?? A horrible blunder. 43...\texttt{e1=Q} Maybe White missed 44.\texttt{Bb8}+ \texttt{Bc8}. 44.\texttt{Bxe5} \texttt{Bxb4} 45.\texttt{Bxd4} \texttt{Bxd4} 46.\texttt{Bb4} \texttt{Bc5} 47.\texttt{Bf4}+ \texttt{Bf8} 48.\texttt{Bd2} \texttt{Bc7} 49.\texttt{Bf2} \texttt{Bd5}+ 50.\texttt{Bg1} \texttt{f5} 51.\texttt{Bf4} \texttt{g6} 52.\texttt{Bh4} \texttt{e5} 53.\texttt{Bf4} \texttt{d2} 54.\texttt{Bh6} \texttt{h6} 55.\texttt{Bf1} \texttt{f4} 56.\texttt{Bg1} \texttt{e4} 57.\texttt{Bf1} \texttt{e3} 0–1
43. \( \text{b7} \)!

This was the winning move. Black has no choice but to downgrade his expectations for his passed pawn with: 43... \( e1=\text{\#} \)\! 44. \( a8=\text{\#} \) gives White a winning attack. Even with a queen less you don't need variations to understand this. 44. \( \text{xf3} \) 45. \( a8=\text{\#} \) \( g7 \\
46. \( \text{f8}=\text{\#} \) 47. \( \text{xf3} \) \( \text{xc5} \) 46. \( g4=\text{\#} \) \( h6= \) 46. \( g6 \) White has managed to save all the soldiers and is in time to win back the piece. 47. \( \text{xf3} \) would have led to a winning position, although there is still some work left. 47... \( \text{xc5} \) 48. \( \text{c6}=\text{\#} \) drops a piece, so White can take it easy for the time being.

43. \( \text{xf4} \)! also gave some winning chances. The forced line runs like this: 43... \( h5= \) 44. \( \text{g4}=\text{\#} \) \( Wh8 \) 45. \( \text{f6}=\text{\#} \) with instant mate) 44. \( \text{b7} \) \( \text{xf4} \)! (44... \( e1=\text{\#} \) 45. \( a8=\text{\#} \) \( h7 \) 47. \( \text{f3} \) \( \text{xe7} \) 48. \( d3=\text{f} \) 49. \( \text{xd4} \) \( e2=\text{\#} \) 50. \( \text{f2} \) \( g4=\text{\#} \) 51. \( g3 \) \( e2=\text{\#} \) 52. \( h3 \) \( e4 \) 53. \( f2 \) and Black has not managed to force an immediate draw. Of course there is no guarantee that White will be able to convert with his passed pawn. Queen endings are notoriously tricky.


45. \( \text{c5} \) \( \text{f6} \) Black misses a brilliant defence. After 45... \( \text{g5} \)! 46. \( \text{d4} \) \( \text{a8} \)!! he continues to be under pressure, but White does not have an obvious path to a big advantage. 46. \( \text{xe6} \! \)

Obviously. 46. \( \text{fxe6} \) \( \text{g5} \) would have led to an immediate draw. 46... \( \text{g5} \) Other moves are no better. 46... \( \text{hxh5} \) 47. \( \text{gxg7} \) \( \text{e8} \) 48. \( \text{e7} \) \( \text{c8} \) 49. \( \text{e6} \) \( h5 \) 50. \( \text{e5} \) \( \text{a8} \) 51. \( \text{a7} \) \( \text{c7} \) and White wins. 46... \( \text{a7} \) 47. \( \text{c5} \) \( \text{a8} \) 48. \( \text{f7} \) and White wins the g7-pawn again, clearing the way for the f-pawn. 47. \( \text{e5} \) \( \text{c8} \) 47... \( \text{a8} \) 48. \( \text{f7} \) \( \text{hxh5} \) 49. \( \text{gxg7} \) \( \text{g5} \) 50. \( \text{h7} \) \( h5 \) 51. \( \text{h8} \) \( \text{a7} \) 52. \( \text{d4} \) \( \text{b8} \) 53. \( \text{f5} \) \( \text{f5} \) 54. \( \text{g7} \) \( g5 \) 55. \( \text{f8} \) also leads to a win for White. There are now very few problems left to solve. 48. \( \text{c5} \) \( \text{b8} \) White is winning, although the game eventually ended in a draw after he fell for a stalemate trick.

Aagaard missed the chance to play 45. \( \text{d5} \)!!, when Black is just lost. 45... \( \text{d1} \) 46. \( \text{c5} \) \( \text{f6} \) 47. \( \text{fxe6} \) \( \text{hxh5} \) 48. \( \text{d6} \) would allow White to escort the e-pawn to the 8th rank. 45... \( \text{fxe6} \) now can be met with 46. \( \text{f6} \), but White can also transpose to the winning lines in the game. And the pawn ending after 45... \( \text{xf5} \) 46. \( \text{e5} \) \( \text{xe5} \) 47. \( \text{xe5} \) \( \text{fxe6} \) 48. \( \text{xe6} \) wins easily. Activity rules.

24. Zhao Xue – Batkhuyag Munguntuul, Shenzhen 2011

30. \( \text{xa5} \) 30 \( \text{d6} \) \( \text{b3} \) 31. \( \text{xd8} \) \( \text{xc4} \) 32. \( \text{xc4} \) 33. \( \text{xb2} \) \( \text{xa4} \) is a draw. Black will always have enough counterplay through the power of his a-pawn. 30... \( \text{xd1} \)

In the game, White erred with 31. \( \text{b5} \) although she was better after 31... \( \text{xb5} \) 32. \( \text{xd1} \) \( \text{b6} \) 33. \( \text{xb3} \) 34. \( \text{xc4} \) \( \text{d2} \) and won on move 67. Yet this whole line is inadequate on account of 31... \( \text{d8} \) 32. \( \text{b7} \) \( \text{f8} \), where White has to avoid 33. \( \text{xb2} \)?? \( \text{d3} \)!! (when Black wins) and find 33. \( \text{c2} \) \( \text{c1} \) 34. \( \text{xb2} \) 35. \( \text{h2} \) \( \text{xf1} \) 36. \( \text{xf7} \) with a perpetual check.

31. \( \text{a7} \) would result in an extra pawn after 31... \( \text{xa7} \) 32. \( \text{xd1} \) \( \text{b7} \) 33. \( \text{b1} \) \( \text{b3} \) 34. \( \text{xc4} \) \( \text{d4} \) \( \text{f2} \) \( \text{f2} \) 36. \( \text{b7} \) \( \text{c8} \) 37. \( \text{c8} \) \( \text{g7} \) 38. \( \text{xc5} \) \( \text{xe4} \), but this does not mean that White is close to victory. Pushing this pawn will prove quite difficult.

31. \( \text{xd1} \) \( \text{b1} \) At this point 32. \( \text{xb1} \) \( \text{xb1} \) 33. \( \text{xc5} \) might favour White, but a draw would still be the most likely outcome. There is a far more impressive solution. 32. \( \text{f3} \)!! To in accurately quote Viktor Korchnoi: “The chess board is not big enough for the presence of two queens.” In this case Black is unable to defend against the power of \( \text{b5} \) in a satisfying way. White wins in all lines, one of them being: 32... \( \text{e8} \) 33. \( \text{f6} \) \( \text{d7} \) 34. \( \text{a7} \) \( \text{c6} \) 35. \( \text{e7} \) \( \text{c8} \) 36. \( \text{xf7} \) followed by 37. \( \text{xe6} \)!!.
25. Alexei Shirov – Alexey Dreev, Loo 2013

A typical scenario for the 4th phase. Passed pawns, queens and rooks, and plenty of reasons to fear an attack on the king. On top of this, both players were no doubt in time trouble.

38...\texttt{Exg5}? Quite a natural move, but unfortunately it loses. 39.\texttt{Exg3 Exe5!} 39...\texttt{Exe7} would have offered better resistance, but White wins anyway: 40.\texttt{Exg5 Exe1t} 41.\texttt{£h2 Exh4t} 42.\texttt{£h3 Exg5} 43.\texttt{£d7t Exa6!} (43...\texttt{£b8} 44.\texttt{£g7t} also prevents a perpetual) 44.\texttt{£h7t}. This wins in quite a nice way. 44...\texttt{£e5t} (44...\texttt{£f4t} 45.\texttt{£h3 £f3t} 46.\texttt{£h4 £f4t} 47.\texttt{£h5 £e5t} 48.\texttt{£g6} also ends with White winning.) 45.\texttt{£h3 Exh5t} 46.\texttt{£g3 £g5t} (46...\texttt{£g6t} 47.\texttt{£h2 £c2t} 48.\texttt{£h3t} is the start of the king walking all the way to a8, where it will be safe.) 47.\texttt{£g4t}. The first step. The queen is preparing to come back to e2. 47...\texttt{£e3t} 48.\texttt{£g2 £d2t} 49.\texttt{£f1 £c1t} 50.\texttt{£f2 £c5t} 51.\texttt{£e1 £f8} (51...\texttt{£c1t} 52.\texttt{£d1} is even worse.) 52.\texttt{a4t} 53.\texttt{£b7} 53.\texttt{£d7t} 54.\texttt{£e2} White dominates the position. He will slowly get his king into the game. 40.\texttt{£g7t} 55.\texttt{£c6} 41.\texttt{£c2t} 56.\texttt{£d6} 42.\texttt{£g6t} 57.\texttt{£e6} 43.\texttt{£h2t} 58.\texttt{£c5} 44.\texttt{£xe6 £g8t} 45.\texttt{£f1 1–0}

Black misses his chance: 38...\texttt{£c7t}! 39.\texttt{£g3} 39.\texttt{£g3t} is quite a funny try, but after 39...\texttt{£c1t} 40.\texttt{£h2 £f1} 41.\texttt{£e7t} 42.\texttt{£a8} 42.\texttt{£h7 £f2t} 43.\texttt{£xf2 £xf2t} 44.\texttt{£h3 £f3t} 45.\texttt{£h4 £f4t} 46.\texttt{£h5 £f8} White cannot make progress. For example: 47.\texttt{£g6} d4! with an easy draw, though a human would still be nervous with both colours! 39...\texttt{£e5t}! with adequate defence. 40.\texttt{£h7} 40.\texttt{£g6 £e1t} 41.\texttt{£h2 £f2t} and after winning the queen it will be possible to deliver perpetual check. 40...\texttt{£e1t} 41.\texttt{£h2 £e5!} White cannot improve his position, as odd as it might look...

26. Alexei Shirov – Alexey Dreev, Loo (variation) 2013

39...\texttt{d4t}! 40.\texttt{£d3 £d5t}! Black is teetering on the edge, but is capable of keeping his balance. This line is rather impressive: 41.\texttt{£f3} There are a few other points you need to discover to solve this position. 41.\texttt{£h2 £xg3} 42.\texttt{£xg3 £h5t} with a draw. 41.\texttt{£h7 £c5t}! 42.\texttt{£g8=£e1t} 43.\texttt{£h2 £e2t} with a perpetual, as 44.\texttt{£h3??} loses to 44...\texttt{£h5t} 45.\texttt{£h4 £xd3t}. 41...\texttt{£d3} 42.\texttt{£f7t} 43.\texttt{£a6} 43.\texttt{£g8=£xg3t} 44.\texttt{£xg3 £d2} and almost perversely, White does not have a way to win here. A plausible end could be 45.\texttt{£f1} d1=\texttt{£} 46.\texttt{£xd1} £xd1t 47.\texttt{£h2 £d2t} with material equality.

27. Nidjat Mamedov – Alexander Onischuk, Antalya 2013

A persistent feature of any type of ending is that resulting pawn endings should frequently be considered and evaluated. In this case Black felt that the pawn ending was the way to go, but he did not find the right path. 44...\texttt{£c2t}! 45.\texttt{£xg6} 45.\texttt{d6 d2} and Black wins immediately. 45...\texttt{£f5t} 45...\texttt{£xg6t} 46.\texttt{d6 d2} allows White several ways to give a perpetual; the easiest being with 47.\texttt{£f5t}. 46.\texttt{£xf5} d2 47.\texttt{£f6t}! £xg6 48.\texttt{£g3t}! White escapes with a perpetual. 48...\texttt{£xf6} 49.\texttt{£d6t} £g5 50.\texttt{£g3t} £h6 51.\texttt{£f4t} £g6 ½–½

45...\texttt{£f6t} was the winning move. It looks very artificial, but it manages to keep the kingside closed long enough for the d-pawn to queen. 46.\texttt{£e5 £f5t} 47.\texttt{£g3 d2} 48.\texttt{£xc5 £d3t} 49.\texttt{£f2 d1=£} 50.\texttt{£e7t} £xg6 51.\texttt{£f6t} £h5 52.\texttt{£h8t} £g4 The dream of a perpetual is gone and Black wins.
28. Eugenio Torre – Oleg Romanishin, Biel 1988

Torre won the game quickly, and in some books you can find it as an example of excellent play. Even though this was not entirely the case, Torre played well. It should also be noted that most of my students trying to solve this position played like Torre.

The game went: 43.\texttt{We5?} a3 44.d7 \texttt{Wc6?} A tactical oversight that loses immediately. Instead Black could have saved the game with 44...\texttt{Wd8!} 45.\texttt{Wf6} a2 46.\texttt{Wxf7} \texttt{Wxf6} 47.\texttt{Wxf6} \texttt{Ed8} 48.\texttt{Ea6 Exd7} 49.\texttt{Exa2}, when any inconvenience he might suffer in the endgame would be symbolic.

45.f5! \texttt{gx5} 45...a2 is met with 46.f6!, when there is no good defence against \texttt{Exf7!} on the next move. 46.\texttt{Ee8} 1–0

Only one of my students found the winning line: 43.h4!! a3 43...h5 would be refuted with 44.f5! (44.\texttt{Wxe5?} a3 45.d7 \texttt{Wd8} and Black holds.) 44...\texttt{Wf2} 45.\texttt{Wg5} \texttt{Ed4} 46.d7 \texttt{Wd6†} 47.\texttt{Wxh3! Wd3†} 48.\texttt{Wg3! Wxf5†} 49.\texttt{Wh2}. Black has no moves and White is preparing \texttt{Wc7!} with all kinds of threats. 44.h5 \texttt{Wc5} There is nothing else. 44...\texttt{Wf5} 45.\texttt{Ee5} is deadly. 45.h6!! 45.\texttt{Wxe6? Wh5†} and Black draws. 45...\texttt{Wf5†} 46.\texttt{Wg3 Wxf6} 47.d7 \texttt{Wg7} Again the only move. 47...a2 48.\texttt{Wxe8} just does not work. 48.\texttt{Wxe7†} 48...\texttt{Wd6} would fail here at the end. After 48...a2 49.\texttt{Wxe8} a1=\texttt{W} 50.d8=\texttt{W} \texttt{Wac3†} 51.\texttt{Wf2} \texttt{Wb2†} Black draws. 48...\texttt{Wf6} 49.\texttt{Wf5} a1=\texttt{W} 50.\texttt{Exf8} \texttt{Wf5} The big point. Black cannot prevent White from getting the queen. Black can still win all the white pawns, but he cannot save the game. 51.\texttt{Wa4†} 52.Wh2 \texttt{Wd6} 53.d8=\texttt{W} \texttt{Wxf4†} 54.\texttt{Wg1 Wc1†} 55.\texttt{Wf2 Wf4†} 56.\texttt{Wf3 Wg4†} 57.\texttt{Wd3 Wg3†} 58.\texttt{Wc4} and Black will not give perpetual or hold any rook vs. pawns endings.

Anna Muzychuk – Bartosz Socko, Antwerp 2009

29.

This game appeared to be quite simple when I saw it in \textit{Chess Today} with Alexander Baburin’s annotations. However, the more I studied it, the more confused I became. I now think I know more or less what is going on!

In the game, a draw was reached after: 45...\texttt{Wh8?} 46.\texttt{Ec7! b5} 46...\texttt{Ee8†} 47.\texttt{Ed3 Ed8†} 48.\texttt{Wxe2! Ed7} does not work now. After 49.\texttt{Exd7 cl=W} 50.\texttt{Exb7† Wa4} 51.\texttt{g7} White draws easily. 47.\texttt{f4 b4} 48.\texttt{f5 Eh2†} 49.\texttt{Ed3 Eh3†} 50.\texttt{Ed2 Eh2†} 51.\texttt{Ed3 Eh3†} 52.\texttt{Ed2 Eh2†} \textsc{½–½}

The correct move was: 45...\texttt{Ec7†} 45...\texttt{Wg7} 46.\texttt{Ed3 Ed7†} transposes. 46.\texttt{Ed3 Ed7†} 47.\texttt{Wxe4} The best chance. 47.\texttt{Wxe3 Wb2} 48.\texttt{f4 Ed1†} 49.\texttt{f5 Wg1} kills all counterplay and wins easily.
Chapter 6 – Endings with Queens

47...圣经d8! This is the correct move. 47...圣经d1? would be faulty, as 48.g7圣经g1 49.圣经d3! would secure a draw. Black now wins 'relatively' easily after 48.圣经xd8 c1=圣经 49.圣经d3†圣经c4 50.圣经g3, although this is by no means simple. The black king plays an important part in this line (a crucial difference to those analysed after 47...b5) 50...圣经c1† 51.圣经f3圣经c3† 52.圣经g2圣经g7 53.f4圣经d5! and Black wins after the king comes over to block/take the pawns.

The next exercises all arise from the variation starting with: 47...b5!?

48.圣经f5 Instead 48.f4 b4 49.f5 leads to Exercise 30.

30.
This allows Black to display a very important resource: 49...圣经d8!! 50.圣经xd8 (50.圣经c7圣经b2 51.f6 c1=圣经 52.圣经xc1圣经xc1 53.圣经g7 b3 54.圣经f7 b2 55.圣经f8=圣经 b1=圣经† 56.圣经f3圣经d3† with a decisive attack) 50...c1=圣经 51.圣经d3†圣经c2 52.圣经g3圣经e1† 53.圣经f4圣经f2† 54.圣经g4圣经d4† 55.圣经f3 b3 (55...圣经g7 56.圣经g2 b3 is also sufficient of course, and more human at the same time.) 56.g7 b2 57.g8=圣经 b1=圣经 58.圣经c8†圣经d1 and Black wins.

48...圣经b4 48...圣经b2!? most likely leads to a transposition. However, 48...圣经d1? 49.g7 would be a draw. 49.f4† 49.圣经f6?!圣经d6†! 50.圣经g5圣经b2 51.g7圣经d1 wins quite clearly for Black. 49...圣经b2 50.圣经e6圣经d8 50...圣经a7? 51.f5圣经a8 52.圣经xa8 c1=圣经 53.圣经f6圣经c6† 54.圣经f7圣经xa8 55.圣经g7 and White draws. 50...圣经g7? 51.f5 b3 52.圣经f6圣经g8 53.圣经xg8 c1=圣经 54.g7圣经c6† 55.圣经g5 and Black cannot make serious progress. 51.圣经xd8 c1=圣经 52.圣经f5圣经c4† 53.圣经d5 53.圣经f6 was not easy for me to understand. However, it is good to have a World Championship solver in the office who can quickly explain these things! After 53...圣经h4† 54.圣经f7圣经xd8 55.圣经f6

31.
This position is winning for Black, but only after a very difficult manoeuvre. Colin McNab pointed out (after just two minutes of checking) that you would want to play ...圣经a1 and should look out for checks. So a6 was the right square for the queen. This is how a top endgame player thinks! 55...圣经d5† 56.圣经g7圣经d4 57.圣经f7圣经a7†! 58.圣经f8圣经a6 59.圣经f7 b3 60.g7圣经a1 61.g8=圣经 b2 Black wins by a tempo.
53...b3 54.g7! A cool trick. 54.f6 \(\text{W}e\text{f}4\) 55.\(\text{W}e\)e5 \(\text{W}xg6\) 56.\(\text{W}e\text{e}7\) \(\text{W}g3!\) 57.\(\text{B}b5\) \(\text{h}4!\) is a perhaps simpler win for Black.

\[\text{Diagram}\]

54...\(\text{W}c8\)\! 54...\(\text{W}c6\)? 55.\(\text{B}d6\) \(\text{W}c8\) 56.\(\text{W}e7\) \(\text{W}c7\) 57.\(\text{B}d7\) \(\text{e}5\) 58.\(\text{B}d8\) seems to be a draw according to my analysis. The long and spectacular variation goes like this: 58...\(\text{W}a2\) 59.\(\text{B}a7\) \(\text{b}1\) 60.\(\text{B}c7\)! \(\text{d}5\) 61.\(\text{W}e7\) \(b2\) 62.\(\text{f}6\) \(\text{e}5\) 63.\(\text{d}d7\) \(\text{b}5\) 64.\(\text{W}e7\) \(\text{b}4\) 65.\(\text{f}f7\) \(\text{b}3\) 66.\(\text{e}7\) \(\text{b}8\) 67.\(\text{e}c3\) \(\text{b}4\) 68.\(\text{f}f7\) \(\text{b}7\) 69.\(\text{g}8\) \(\text{a}8\) 70.\(\text{f}f7\) \(\text{a}1\) 71.\(\text{g}8=\text{W}\) \(\text{a}7\) 72.\(\text{f}f8\) \(b1=\text{W}\) 73.\(\text{B}b3!!\) \(\text{W}a8\) 74.\(\text{g}g7\) \(\text{g}1\) 75.\(\text{B}g3\) \(\text{g}a7\) 76.\(\text{W}f7\) \(\text{b}8\) 77.\(\text{g}g1\) \(\text{b}2\) 78.\(\text{g}g4!!\) The only move. This kind of thing is impossible for a human to do consistently. 78...\(\text{W}c8\)

32.
79.\(\text{B}b4\) \(\text{a}1\) 80.\(\text{B}b1\)!! (80.\(\text{B}b7\) \(\text{g}4\) 81.\(\text{h}h7\) \(\text{e}4\) 82.\(\text{g}g7\) \(\text{g}2\)! 83.\(\text{h}h7\) \(\text{a}xb7\) and Black wins) 80...\(\text{xb}1\) 81.\(\text{B}b3\) \(\text{W}8\) White achieves a draw, as the exchange of queens would lead to a theoretically dead position.

Now after 55.\(\text{W}e7\) the trap leading to the final exercise was the tempting: 55...\(\text{W}g8?\)

33.
After 56.\(\text{B}d2?\) \(\text{a}3!\) 57.\(\text{B}g2\) \(b2\) 58.\(\text{g}g1\) \(b1=\text{W}\) 59.\(\text{f}x\text{b}1\) \(\text{xg7}\) \(\text{W}h\) White will lose the pawn, then the rook, and finally his will to live...

But after 56.f6!! \(\text{xc}5\) 57.\(\text{B}c8!\) (not 57.\(\text{f}7?\) \(\text{g}5\)! 58.\(\text{f}f8\) \(\text{d}8\)! Black cannot win. Fritz 13 gives an amazing −9.69 evaluation, but cannot make anything out of it.

Instead: 55...\(\text{xc}1!\) 56.\(\text{B}b5\) \(\text{c}7\) 57.\(\text{B}f8\) \(\text{d}8\) 58.\(\text{f}f7\) \(\text{d}7\) 59.\(\text{f}f8\) \(\text{xb}5\) 60.\(\text{g}8=\text{W}\) \(\text{xf}5\) 61.\(\text{e}7\) \(\text{e}5\) 62.\(\text{d}7\) \(\text{b}2\) and Black wins.
Though White has a lot of obvious advantages, converting them into a full point is by no means easy. It can only be done with accurate play.
Having had a very general look at various types of minor piece endings in Chapters 2 and 4, it is now time to look at some more complex ideas and examples. The first example is rather famous, but I love it so much that I have planned to include it in a book for years.

Vladimir Kramnik – DEEP FRITZ
Bonn 2006

Many analysts had a go at solving this endgame but all failed. Except, that is, for Garry Kasparov, who revealed the following sensational winning line in his column in *New in Chess*.

34.\textit{c7}!

Preparing a way in for the white king; by forcing the b-pawn to b4. This is good technique, but the greatness comes a bit further down the line.

34...b4 35.\textit{d5} g5 36.h3 h6 37.f4 d6 38.c2 h5 39.g2!!

This is the great man’s point. White is fianchettoing the knight, holding the black forces at bay and allowing the king to penetrate undisturbed on the queenside.

39...e7 40.b3 d6 41.c4 e7 42.d5

White is winning. I could provide plenty of long lines here, but I think the position speaks for itself.

42...f8 43.c6 e7 44.d7 c5 45.e8 f6 46.f4

White wins.

Having shown this, no one can say that knights have not been fairly represented in this chapter. So, with this potential criticism curbed, let’s move on...
Bishop endings – a few observations

A lot can be said about bishop endings, but in this article I want to draw attention to some conceptual aspects that are not always associated with this type of endgame: fortresses and zugzwang.

One phenomenon which we often see in bishop endings is that the board is closed off - the pawns and bishop can together create a fortress. Even a position such as the following, where five of the pawns are on the same colour of squares as the bishop, can be a dead draw. However we must still be careful.

In the following game, played a couple of months before this book was going to the printer, Black showed excellent patience and creativity in order to create chances in an otherwise hopelessly drawn position. He really cannot be commended enough for this, despite the fact that it was his opponent's carelessness that ultimately decided the game.

Tania Sachdev – Surya Shekhar Ganguly
Gibraltar 2014

34...\textit{d7}
Ganguly starts out by shuffling his bishop around, searching for a slight chance to apply some pressure. This is a common technique, as the constant search for traps is wearing for the defender. It is not uncommon for them to lose concentration and make an inaccuracy. This can lead to the creation of real problems, which might not be easy to solve. In this game it even goes beyond this, and the problems become unsolvable.

35.\textit{g2} \textit{e6}

The main reason why White is okay here is that 35...\textit{c6??} would blunder a piece to 36.f4†.

36.\textit{f1} \textit{f5} 37.\textit{g2} \textit{b1}

Ganguly is looking for White to make some sort of concession.

38.a3

It is natural to put the pawn on the dark square but, as the main defensive method here is the fortress, it makes sense to put the pawn on a4 immediately, preventing any...a4 ideas.

38...\textit{f5} 39.\textit{f1} \textit{c8} 40.\textit{g2} \textit{d7} 41.\textit{d3} \textit{e6}

Shuffle, shuffle.
47.\textit{\textit{\textit{\textit{\textit{h1}}}?}}

This nonchalant and provocative move is a sure sign that there has been a lapse in concentration.

A simple version of the defence is: 47.a4 f5

48.\textit{\textit{\textit{\textit{\textit{f1}}}}}

Followed by \textit{\textit{\textit{\textit{\textit{e2}}} and there is no way for Black to break through. None of the pawn sacrifices with ...g4 justify the risk.

47...f5!

Black grabs his chance. By pushing the pawn to f4 Black eliminates the f3-f4 option, and can now enter the long diagonal with his bishop. This puts White under real pressure.

48.\textit{\textit{\textit{\textit{g2}}}}

48.h4 f4! and Black has gained space by exchanging pawns. The king will penetrate White's position and it will only be a matter of time before material is lost.

48...f4! 49.g4 \textit{\textit{\textit{\textit{b7}}}!}

White is seriously limited. Her fortress is facing the common problem for such creatures: impending zugzwang.

50.\textit{\textit{\textit{d3}}}

It is too late for White to go for a fortress with 50.a4. Black will play 50...d5 51.\textit{\textit{h1 a6}}! winning. For example: 52.\textit{g2 dxc4 53.bxc4 b7 and White cannot defend the a4-pawn.

50...\textit{c6 51.c3 a8}

Black times his actions perfectly.

52.\textit{\textit{h1 b7 53.g2 d5!}}

54.\textit{\textit{h1}}
54.cxd5 is met with 54...a6! which dominates the white bishop. 55.h1 will be met with 55...f1, and eventually zugzwang will allow the black king to walk in through the middle.

54.d3 a4! 55.bxa4 a6 is even worse.

54...a6!!

This is what Black was aiming for. It is important that White does not have f1 at this point.

55.g2

White can of course try 55.cxd5 f1 56.b4, but Black is winning here as well: 56...cxb4 57.axb4 a4 58.b2 xd5 59.a3 b5 60.g2 d4 and the king penetrates.

55...a4!

The white position is undermined and destroyed. Black's technique makes it all look effortless, though it is anything but.

56.f1

After 56.cxd5 axb3 57.xb3 xd5 58.c3 b5 White is in zugzwang. Her outlook is entirely bleak: 59.h1 f1 60.a4 e5 61.a5 d5 and a big concession is required.

56...xb3 57.d3

57.xb3 d4 and wins.

57...xc4 58.xg6 e2

Everything falls.

0–1

I find Ganguly’s play in this game really impressive. He patiently waited for a chance; then when Sachdev fumbled, he showed great attention to detail and left her with no chance to repent.

The next example is closely related. The position is more open and the c5-square is available for the white king, so the chance of achieving a fortress would seemingly fall under the realm of a dark dream. But it is important for us to understand what nature such a fortress might take. Here are some examples:
In both cases White has a big space advantage, and a superficial look might suggest that he has real winning chances. But in reality there is no way to make progress.

An important detail in both diagrams is that the black bishop occupies an important position, defending the weak pawn on b7. In the second case it is also preventing an invasion on the a4-e8 diagonal. Sure, he can go on vacation to h1 or e8, but he must be ready to return quickly to his post on c6.

White can still change the position slightly in both cases, but I see no way through. The lack of a potential zugzwang position is key to the stability of these fortresses.

Let us see how the game turned out.

Michael Adams – Markus Ragger
Solin gen 2011

As indicated, White is trying to win this ending because of his good versus bad bishop. However, even an excellent endgame player such as Michael Adams found it difficult in practice (probably not helped by the fast-approaching time control).

38.\text{\textit{f3}}!

White’s winning plan looked like this:

38.\text{\textit{d4}}?
38...\textit{h3}

Clearly a waiting move. Black can also play the king to the back rank, but it will have to return and will transpose back to our main lines.

39.\textit{c4}!

This is the accurate move order. The king should be as active as possible, though I cannot say that I have found a hole after 39.a5?!?, which was originally my preferred move. A little point there is that 39...b6 does not rid Black of his weakness, but simply transfers it from b7 to a6. White wins quickly with 40.\textit{e2} \textit{b7} 41.b5! when f7 and h7 will fall.

39...\textit{f5} 40.a5

In a tournament game we would have been quite happy to reach this position with White; and the feeling is that Michael Adams, a man with excellent technique, would have won the game from this position with a fresh bucket of thinking time. White has a simple plan. He should play b4-b5, in order to get a passed pawn later on. The king comes to c5 and the bishop is sacrificed on b7. If you think in plans then this is possible to work out in a few minutes – underlining the strength of schematic thinking.

On the other hand, if you are like the stupid author (so stupid he forgets to follow his own advice even), and try to find the solution through analysis and a move-by-move approach, it can all become very confusing.

Luckily, confusing can be both instructive and entertaining, as can be seen in variation a1) below.

Before we get to the specifics, I want to briefly give an overview. The three lines analysed below are a) 40...\textit{c2}, b) 40...\textit{h3} and c) 40...\textit{b6}. With regards to assessing the stem game, it should not be necessary to calculate these variations out to the end. However, it is my feeling that there are many instructive points hidden within the less important lines. These should help the reader make better decisions in such endgames in the future.

a) 40...\textit{c2}
As mentioned, White wants to make sure he has a passed pawn after he sacrifices his bishop, meaning that a2) 41. b5! is the correct move here. But let us look at a much more complicated line. If the players are unsure of what to aim for, this could easily appear on the board.

a1) 41. c5?
Nothing looks more natural than this move, but it actually throws away the win.

It is important to understand what White is trying to do in order to find the best defensive move for Black. Not only does White want to play b4-b5 and to sacrifice his bishop on b7, he also has ideas with f4-f5 later on.

41... a4?
Therefore this is a mistake. Black could present a much more effective defence with 41... d3!. It is shaky, but seems to hold. The bishop can quickly make it to c6 if needed. But for the time being it just waits.

42. xh7!
This looks very tempting, but the win is in no way certain. Actually, it takes some time for the engine to understand that White can play for a win here!

42... xh7 43. d6 c8
Another typical line, putting slightly less pressure on White to find the best moves, goes like this: 43... c2 44. e7 c7 45. xf7 d7 46. g7 e7 47. b5 axb5 48. xh7 f7 49. a6 e4 50. a7 b4

51. f5! The bishop has obligations on two diagonals; always uncomfortable. 51... b3 52. a8= w x a8 53. fx g6+ e7 54. g7 White wins eventually.

44. d7!

The following lines which arise if Black puts the bishop on the wrong diagonal are entirely fascinating. I would suggest that any ambitious player should try to play them against a computer and/or friend, to see if they can find all the right moves.
This is the most instructive point in the analysis, though not necessarily the most spectacular. Black is unable to lose a tempo; but White can!

45...f8!!
Not losing a tempo – gaining one! At the moment the bishop is guarding both b5 and f5; now Black will have to put the bishop on a lesser square.

45...xf7? ends in a draw after 45...d8 46.g7 e7 47.xh7 f7, where White has only one attempt: 48.b5! xb5 49.f5!.

But Black makes a draw after very accurate defence. 49...exf5 50.e6† f8! 51.xg6 f4 52.f6 g8! 53.g6 e8 54.h7† h8 55.g7† xh7 56.e7 xg7 57.xe8 f3 and the queen ending is equal.

45...d8 46.xf7!
The point was simply to draw the black king closer before taking the pawn. Black now has to play a move that makes his position worse.

46...c8!
The only try. 46...xb5 47.g7 e7 48.xh7 f7 49.f5! would effectively exploit the fact that the bishop has left the c8-h3 diagonal.

47.b5!

This is a race and this is the starting pistol.

47...axb5 48.a6! c7!
48...xa6? is met strongly with: 49.f5! White queens one of his pawns.

49.a7! b7 50.g7 b4 51.xh7 b3

52.xg6?!
A spectacular move. Black not only queens first; he also queens with check. But the black bishop on c8 is so poorly placed that White has time to create real threats, as well as steal the g6-pawn.

Having said this, putting the king on g7 should also win and is maybe a bit easier. This is just more fun!
52...b2 53.h7 b1=\=\=t 54.\=f7 a7 55.h8=\=f7 b7 56.\=f8 d1 57.\=g6 g4 58.\=f6 e4 59.\=g5 h3 60.\=f7 a6 61.g7 h7

62.f5!
The long-awaited breakthrough on the kingside. Amusingly, Black is struggling to find a good way to take the pawn, even though he is covering the square three times over.

62...exf5 63.e6 f4 64.\=f6 b7 65.\=f8 a3+t 66.e7 f3 67.g8=\=f7 xg8 68.xg8 e3 69.\=f7 b3+t 70.\=f8 a3 71.\=d4!

Black has no moves! He either has to give up his pawn, transposing into a theoretically lost ending, or he will lose after:

71.\=a6 72.\=c4+t \=b6 73.\=f7
There are no checks. White wins quickly.

But all of this was a result of stupid move-by-move analysis. Understanding the objectives, in a strategic sense, allows White to improve his position greatly without unnecessary complications:

a2) 41.b5!
This is a good deal simpler and requires no real calculation.

41...axb5+ 42.\=xb5

After something like 42...\=f5 43.\=c5 \=a6 White has already guaranteed that the a-pawn will be passed. There is now no defence against \=xb7 and an invasion with the king on the kingside.

42.\=d3+t 43.\=c5 a6
This can of course be tried. But as is often the case, White wins with a break on the other side:

44.f5!
The pawn cannot be taken, and the alternatives are not pleasant either.

44.\=d3 45.f6 a6
Let us try another defensive idea.

**b) 40...\textit{h}3 41.\textit{c}5 \textit{f}1**

Black has prevented the b4-b5 push.

42.\textit{xe}4

Followed by \textit{xg}6 on the next move. White wins.

But there is also the chance to break through on the other flank. The move is not hard to find, but it is spectacular nonetheless.

**42.f5!! \textit{b}5**

Taking the pawn back will allow White to take on f7, after which the defence falls away.

42...\textit{d}3 43.f6! and White wins with the bishop sacrifice on b7. As soon as f7 falls, the f6-pawn will march to glory.

Now White can win with 43.f6, when Black quickly faces zugzwang. But simpler is:

**43.fxg6 fxg6 44.e4 e8 45.xb7!**

White wins.

The final line has an air of desperation to it, which is entirely fair.

**c) 40...b6**

This is a big concession. White wins by threatening to push b4-b5:

**41.c3! b1**

There are no other squares on the diagonal.

At this point 42.e2! b7 43.b5! is the clean and simple win; the one I hope you would choose at the board. But if you were heading for a more tactical solution, things would still work out for you:

**42.b5!? bxa5 43.bxa6 \textit{b}6 44.a7 \textit{xa}7**
Black has managed to stop the bleeding on the kingside, but this is the equivalent of putting a finger in a dyke. It does not really have the desired effect. First the a5-pawn is eliminated; then zugzwang is established.

50.\texttt{\textit{b}3} \texttt{\textit{d}3} 51.\texttt{\textit{a}4} \texttt{\textit{b}1} 52.\texttt{\textit{x}a}5 \texttt{\textit{c}2} 53.\texttt{\textit{b}6} \texttt{\textit{d}3} 54.\texttt{\textit{c}7} \texttt{\textit{c}2} 55.\texttt{\textit{d}7} \texttt{\textit{f}5} 56.\texttt{\textit{d}6}

Finally, Zugzwang.

56...\texttt{\textit{g}4} 56...\texttt{\textit{d}3} 57.\texttt{\textit{g}8\dagger} is equally hopeless.

57.\texttt{\textit{x}g}6\dagger \texttt{\textit{x}g}6 58.\texttt{\textit{e}7} \texttt{\textit{h}3} 59.\texttt{\textit{f}8}

Threatening to go to g8 and assist the h-pawn promoting. Black has to play passively.

59...\texttt{\textit{h}7} 60.\texttt{\textit{f}7} \texttt{\textit{f}5} 61.\texttt{\textit{f}6}

And it's zugzwang again. White will soon have four unassailable passed pawns. If this was a tournament game, we would expect Black to resign.

Though bishops are better at losing moves than knights, they are more easily restricted by pawns. This is one of the reasons fortresses are so relevant for bishop endings; and why they can be shaky – likely to fall at the first sign of zugzwang (more about fortresses and zugzwang can be found in Chapter 11).

The fortress feature runs so deep that even on a relatively open board they are relevant. Once again it is the zugzwang issue that decides the day.

Magnus Carlsen – Peter Svidler

Kallithea 2008

This endgame is 'a bit' more strategic than most of positions in this chapter. Black has to get ...a6 and ...b5 in quickly so as to bring the king in. In the game Svidler started with...
36...\texttt{d}d7? 37.\texttt{e}e2 \texttt{d}d6
37...\texttt{a}6 no longer works. White plays 38.\texttt{b}7 and holds.

38.\texttt{b}7!\
38.\texttt{g}8? \texttt{e}5 39.\texttt{e}3 \texttt{g}6! will quickly bring about zugzwang.

38.\texttt{g}2? \texttt{f}7 39.\texttt{d}3 \texttt{b}5 also looks very dangerous for White, though the win is not entirely obvious.

38...\texttt{b}5!\
Black has to try to make something out of his extra pawn.

38...\texttt{f}7 39.\texttt{a}6 \texttt{e}5 40.\texttt{e}3 \texttt{e}6 41.\texttt{a}3 makes it hard for Black to improve his position.

39.\texttt{c}xb5 \texttt{f}7 40.\texttt{a}3 \texttt{c}4† 41.\texttt{d}2 \texttt{xb}5

42.\texttt{c}3
White will hold.

42...\texttt{c}6 43.\texttt{c}8 \texttt{d}7 44.\texttt{b}7 \texttt{e}6 45.\texttt{e}4 \texttt{e}5 46.\texttt{c}6 \texttt{c}4 47.\texttt{b}7 \texttt{h}5 48.\texttt{c}6 \texttt{f}7 49.\texttt{g}2!

Accurate play.

49.\texttt{a}4? would be a big mistake.

After 49...a5! Black is winning. 50.\texttt{b}5 (50.\texttt{g}2 \texttt{e}8! also does the job) 50...\texttt{e}4 51.\texttt{x}c4 \texttt{xc}4 52.\texttt{xc}4 \texttt{f}3 53.\texttt{b}5 \texttt{g}2 54.\texttt{x}a5 \texttt{x}h2 55.\texttt{b}5 \texttt{h}4!

49...\texttt{d}5\
49...\texttt{g}8 50.\texttt{c}6! gives Black no way to improve his position, because of the threat of \texttt{e}8.

50.\texttt{f}1 \texttt{e}4 51.\texttt{g}2† \texttt{e}5 52.\texttt{f}1 a6 53.\texttt{a}4! a5 54.\texttt{x}c4 \texttt{c}6 55.\texttt{f}7 \texttt{xa}4
\frac{1}{2}-\frac{1}{2}
Let us return to the starting position. The win is far more complicated than Svidler imagined when he wrote his annotations; it is also far more attractive. Personally I find this kind of chess at least as fascinating as the tactical stuff – partly because I find it much more difficult as well.

36...a6!
This would have won the game, as Svidler pointed out in his notes. Black secures the unity of his pawn chain. This was not the difficult part, though at the onset of time trouble it was possible for Peter the Great to falter.

36...c7 37.e2 a6! simply transposes.

37.e2 b5

41...b4!
The cleanest move. There are other ways to play for a win, but they go round the houses. There is only one winning strategy.

It is even possible to falter here, allowing White to make a draw. Svidler gave the wrong king move.

41...d5?
White is suddenly drawing:

42.d3!
Svidler only gave the mysterious 42.d2?, where Black wins in a very nice way:

42...d4 43.d7 b4 44.axb4 cxb4 45.c2 e3 46.b3 f2 47.h3 gxh3 48.xhx3 xg3 49.d7 d1!

An important tempo, which prevents f7.

40.a6 xB5 a5 42.c3 a4 43.b2
Black is not making progress.

41.c8
This is the closest we get to a defence. But Black wins with accurate play.
It does not make sense for White to allow the black king to come to d4.

42...b4

42...g6 ♕43.c3 h5 was potentially the reason why Svidler did not consider the king move to d3. But actually this does not work out. White draws with: 44.d7! b4† 45.axb4 cxb4† 46.xb4 ♕e4 47.c5 ♕f3 48.d4 ♕g2 49.e5 ♕xh2 50.f6 ♕e4 51.e8! and so on.

43.axb4 cxb4 44.f5 ♕c5 45.♕c2 White scrapes home with a draw. It is not pretty, but it is half a point.

42.axb4 cxb4 43.d3

Black only has one winning method here.

43...♕c5!!

We already know that putting the king on d5 leads to a draw. But the win is tricky.

43...♕e5 would win if it was not for 44.d7†, when the only way forward is backwards; to repeat with 44...d6 45.c8 and then play 45...c5!.

44.f5!

The best defence. Actually this position is really close to a draw. If it was White to play he would make a draw with c2. Black only wins through a very fine manoeuvre.

44.e6 g6† 45.e3 d6! 46.b3 (46.xg4 b3→) 46...e5 and White is in zugzwang.

44.d2 also offers resistance, but it can be overcome. 44.d4 45.f5 White is perfectly placed for his defensive responsibilities. But Black can manipulate the position to his advantage. 45.e5 46.d7 ♕e4 47.c6† d4 48.d7 The bishop is attacking g4, but not controlling the vital b1-h7 diagonal. 48.g6! 49.e6 ♕d3 Black wins the piece. For example: 50.b3 c4 51.d1 b3 52.xg4 ♕d3 and Black wins.

44...♕d5

White is in zugzwang, again and again.

45.e4† e5 46.g2 f7 47.b7 ♕e6!

48.c6 48.a8 ♕d5 and wins.

48.g2 ♕d5 49.f1 is also poor. The best line is probably 49...h5 50.e2 f7 51.f1 ♕d5 52.g2† c5 53.e4 ♕b5 and Black wins.

48...d6 49.e4 c5 50.g6 e4† 51.c2 ♕d6 52.h5 e6 53.d3 ♕d5
Black has made great progress compared to the position at move 44.

54.\textit{g6} \textit{c5}
White is in zugzwang again.

55.\textit{e4}
55.\textit{h5} \textit{f5} wins for Black.

55...\textit{b5} 56.\textit{d4} \textit{a4} 57.\textit{e5} \textit{f7} 58.\textit{f6} \textit{c4}

59.\textit{c2}\dagger \textit{a3} 60.\textit{d1} \textit{b5} 61.\textit{xg4} b3 62.\textit{f5} \textit{b4}!

In the last two examples, two of the best players in the world were quite a bit away from finding the best moves. This again reiterates how difficult chess can be. We all make mistakes, even in our computer-assisted analysis.

In both games, mistakes were made just before the time control. With more time Adams would definitely have won the game, while Svidler would have had a good shot at it. The fact that some of his later analysis was inaccurate is more of a curiosity than anything else. I am sure that Svidler cared more about allowing 38.\textit{b7}!, thereby missing the big chance to organize his pieces, than about the details of the resulting ending. And I think, to some extent, that this is the correct attitude. Therefore, I would like to suggest that you aim to make more out of the following exercises than from the analyses of these bishop endings; no matter how fascinating they may have been.
Chapter 7 – Complex Minor Piece Endings

Aagaard, 2007

Grigoriants – Shaposhnikov, Moscow 2007

Lubbe – Huschenbeth, Bad Liebenzell 2010

Battaglini – Fressinet, Bastia (rapid) 2011
1. Aagaard, 2007
A silly little exercise, with two solutions, both based on the same idea. 1...c4? is bad, as White has 2.d5! f5 3.b7, winning, as White will have 8.a6† winning the queen on f1.

For this reason Black should play: 1..d2! 1...d2! also works, so the ‘study’ is far from profound, even if a tiny bit instructive. 2.b7 d4 3.d7 White can also try to manoeuvre, but after 3.e4 g1 4.d6 f6 5.e4 d3 6.xf6, winning the pawn has not been such a great achievement, as after 61.c4 62.d7 b5 Black controls b6 and thus draws. 3.f5 4.b6 xxb6 5.xb6 f6 6.a7 f3 7.a8=wb f2 The king is now well-placed on e2 (or d2), and we have a draw.

2. Nikolas Lubbe – Niclas Huschenbeth, Bad Liebenzell 2010
White lost after: 61.e4?! g3! 62.f5! b3! 63.h2† g2 64.g4 g3! White is in zugzwang and has to give up the a-pawn. 65.a5 xa5 66.e3 f2 67.g4† b3! 68.g5 g3 69.h5 d2! Zugzwang again. 70.b4 xb4 71.e3 d2 72.f1† g2 73.g4 g5 A nice final move. 0–1

White’s only chance to save the game was 61.g6! to get the king to a more stable square. But Black can create some real problems for him: 61...f3! 61...g3 62.h5 is certainly a shortcut to the draw. 62.h5 g3 White is apparently in zugzwang. Luckily he has two pawns to play with. 63.b4! xb4 64.e3 c5 65.f1† g2 66.g4! Black has made progress, but White still has one bullet left in his gun. 66..f2 67.a5 a7 68.a6 f2 Zugzwang again. This time it looks as if the h-pawn cannot be stopped, but White has 69.f4! xf1 70.a7! with an immediate draw. A funny thing to add is that the ridiculous-looking 70..h2?? 71.a8=wb g1 also draws. White has no way to make progress.

Beginners are often taught that we should use all our pieces and that the king is a strong piece in the endgame. It is amazing how even we grandmasters can forget about such things. 78..f3? 79.e6 Now White wins. 79..d4 80.e7 f5 81.e8=wb g7† 82.g6 xe8 83.h5 Knights are not good against flank pawns, and this one finds itself completely dominated. 83..c7 84.f7 b5 85.h6 d6† 86.g6 1–0

Moving the king to the third rank draws, though not easily. 78..e3 79.g5 e4 80.f6 d5 Arguably easier is 80..f5! 81.h5 f4 82.e6 g4, but still not simple. 81.h5 e6 82.h6 f8 83.f7 h7 84.g7 g5 85.g6 e6= White is not getting anywhere.

4. Gabriel Battaglini – Laurent Fressinet, Bastia (rapid) 2011
A nice case of reciprocal zugzwang. White missed the chance to take out his famous opponent. 51.d4? d6 The knight comes back into the game and Black escapes. 52.g8 c6† 53.c4 c7 54.h7 c6 55.d4 d6 56.c4 c6† 57.c3 c7 58.d4 c6† 59.c3 c7 60.d4 c6† ½–½

51.d3! was the winning move. The threat is c2 followed by c3-c4, c3 and b4. 51...d6 is forced, but after 52.d4 Black is in zugzwang. 52.c7 53.c5 Going for the f-pawn also works. 53..d7 54.b4 White wins.
5. John Shaw – Andrew Muir, Edinburgh (variation) 2013
1.d4! 1...hxh6?? is a big blunder in view of 1...hxh6 2.AXB6 a|l 3.c5 a|e3! and Black draws. 1...h5 2.Af2! The most practical move, leading to an easy win. 2.Axb6 also wins after 2...h4 3.g1 h3 4.b6 A|f5 5.c5! A|e3 6.c6!, but this is way too tactical for my taste. Why calculate variations and leave space for mistakes? 2.Axb6? does not work. After 2...h4 3.g1 h3 4.a6 A|d6 we can see that the bishop is ideally placed on the b8-h2 diagonal, controlling both the important squares. 2...g5 3.Axb6 This is much cleaner this time around. 3...h4 4.d8 A|g4 5.Axh4 A|xh4 6.b6 A|e3 7.A6 A|g5 8.b7 A|f4 9.Ab6 A|f5 10.c5 White wins.

6. John Shaw – Andrew Muir, Edinburgh (variation) 2013
This exercise is about knowing your endgames, not about calculation. 1.Axb6? Axb6t 2.Axb6 h4 3.c5 h3 4.c6 h2 5.c7 h1=|=W 6.c8=|=W leads to a drawn ending. Is this easy to determine? Of course not! But in chess we need to make decisions based on the information we have available. In this position it is that this type of ending is a draw if the black king makes it to the far corner (here h1 ideally) or at least close enough so that the white queen cannot defend the king from checks and threaten the black king at the same time.

For this reason 1.d8t!! is the correct move, as can be verified with a tablebase. 1...A|f4 1...g6 would put the king one step further away from the safe corner. White is winning after 2.Axb6 (2.Ab7 A|f2 transposes as White now has to take on b6) 2...Axb6t 3.Axb6 h4 4.c5 h3 5.c6 h2 6.c7 h1=|=W 7.c8=|=W with mate in 69 moves! Obviously human imperfection would come into play here, but it is still better to start off in a winning position than in a drawn one! 2.Axb6 A|xb6t 3.Axb6 h4 4.Aa7! 4.c5? h3 5.c6 h2 6.c7 h1=|=W 7.c8=|=W would allow Black to escape with a draw. 4...h3 5.b6 h2 6.b7 h1=|=W 7.b8=|=Wt White wins the ending, although a lot of accurate moves are still required.

7. Peter Svidler – Alexander Morozevich, San Luis 2005
After a fairly uneventful game (Petroff) where White was better all the way, we have reached an endgame that looks winning. Here it becomes all too apparent that we are talking about a long game at the end of a long tournament, where the level of concentration is no longer the same, and cannot be. 60...A|e2? 61.Ac6! Now White wins in a very nice way. 61.Ae3 62.Ac3 Af2 63.Ae2! Preparing the advance of pawns on the kingside. Black is in zugzwang and cannot keep control over the g4-square. 63.Aa6 Ag4 64.g5 h3 66.f6 Ag6 67.gxf6 Ab5 68.Ae4 Ae8 69.f4 Ag6 70.Ag6 Yes, it was really free! 1-0

Shipov illustrates how Black could have defended: 60...A|b7! 61.Ad1 Ac3 62Af4 Af2 63.Axh5 A|xg3 64.Ad1 The best try, stopping the black bishop from coming to e4. 64...Axf4 65.Ac2 Ac5 66.Ac3 Ad5 67.Ab4 Ae8 68.Aa4 Ac6 69.Ac5 Ab7 White will not be able to make any progress. The black king will wait at a7 or b7, and when the white king is far enough away, he will take on f5 with the bishop and eliminate the a-pawn with the king.
8. Tamas Banusz – Oleg Romanishin, Porto San Giorgio 2011

35...\textit{d}e8? A horrible blunder. 36.\textit{d}b3! Black is not well placed to face this invasion. 36...e4 37.\textit{a}a4! a6 38.\textit{a}a5 axb5 39.\textit{xb}b5 \textit{f}f7 39...\textit{xb}5 40.\textit{xb}5 leads to a lost pawn ending. 40.\textit{c}c4 exd3 41.exd3 \textit{d}e8 42.\textit{b}b6 Resistance is futile, so Black resigned. 1–0

Black would have made a draw after 35...e4! based on the following variations: 36.d4? The best try. Instead after 36.\textit{b}b3 exd3 37.exd3 \textit{e}e7! 38.\textit{a}a4 a6 39.\textit{a}a5 axb5 40.\textit{xb}b5 \textit{xb}5 41.\textit{xb}b5 \textit{d}d6 Black is in time. 36...\textit{xd}d4† 37.\textit{xd}d4 \textit{e}e7 38.\textit{c}c5 \textit{d}d8 White’s position might look promising, but it is an illusion; Black has managed to set up a fortress. 39.\textit{b}b4 just has to be met with 39...\textit{d}d7 40.\textit{a}a5 \textit{d}c8 and White cannot make progress.


We will avoid the temptation to analyse this blitz game too deeply. Black erred with 47...\textit{c}c6?, when after 48.\textit{g}g6, the position would be equal. White eventually won on move 66 after bad moves from both sides... 1–0

47...g3! would have won in a very nice way: 48.\textit{e}e2 a5! This is the main point. 48...\textit{d}xe4? 49.\textit{d}dxe5 a5 would be the wrong move order due to 50.\textit{d}dxe5 when Black will have to play accurately to make the draw. 49.\textit{b}b5 49.\textit{b}xa5† would lose both of the a-pawns, and the game. 49...\textit{d}xe4! 50.\textit{d}xe4 \textit{d}c3 transposes. 50...\textit{d}c3† 51.\textit{d}d1 The toughest defence. 51.\textit{d}d2 \textit{d}xe4 52.\textit{d}dxe4 \textit{f}3 wins easily for Black. 51.\textit{d}xe4 52.\textit{d}d5 52.\textit{f}f3 \textit{d}c5 53.\textit{h}5 \textit{d}d7 54.\textit{h}6 \textit{d}d6 restores full control on the kingside, giving the black king peace to win on the queenside. 52...\textit{d}c5 53.\textit{h}5 \textit{a}a6 54.\textit{g}g6 \textit{d}d6! 55.\textit{h}h5 \textit{g}g5† 56.\textit{d}d4 \textit{d}d7 57.\textit{d}d6 \textit{d}d8 Black wins easily.

47...a5?? 48.\textit{b}b5 g3! transposes, and is arguably a slightly more logical move order.


White needs to break through on the queenside if she is to make any use of her space advantage, but this takes accurate calculation. 33.\textit{d}xb6! \textit{d}xb6 34.\textit{d}c5 \textit{d}d7† 35.\textit{d}d6 \textit{d}b6 36.\textit{d}c6 \textit{d}c4 37.\textit{f}f4! 37.b6?? leads to disaster: 37...\textit{d}xe5† 38.\textit{d}d6 \textit{d}c4† 39.\textit{d}d7 \textit{d}b6 40.\textit{d}xa4 a4! 41.\textit{f}f4! The best try, but still not enough. (Without going into excessive detail, I will mention that 41.\textit{d}b5 loses to 41...\textit{f}f1!, for instance 42.\textit{d}xe4 \textit{f}f1 42...\textit{f}f1 43.\textit{f}f5! and Black is winning.) 41...a3!! 42.\textit{d}c5 \textit{d}f6 43.\textit{d}b4 \textit{f}f5 44.\textit{d}d3 \textit{d}f2 51.\textit{d}e6 f5 52.\textit{d}f7 \textit{d}f5 53.\textit{a}7 \textit{d}d8=\textit{d}d5. Compared with the alternative line on move 37, here it was Black who needed to win a pawn to equalize the material, and White who has time to create a breakthrough on the kingside. 44...\textit{h}4 45.\textit{g}6 \textit{f}f6 46.\textit{f}f6 \textit{h}3 47.\textit{g}7 1–0
Kopylov – Bezgodov, Salekhard 2006

Fridman – Anand, Baden-Baden 2013

Kramnik – Deep Fritz, Bonn (var) 2006

Meier – Ding Liren, St Louis 2012

Z. Fekete, Magyar Sakkelet 1976

Batkovskyte – Sikorova, Warsaw 2013
Chapter 7 – Complex Minor Piece Endings

Solodovnichenko – Meier, Mulhouse 2011

Bacrot – Tiviakov, Schwetzingen 2013

Onischuk – Timoshenko, Tallinn 2007

Aagaard, 2007

Bacrot – Rapport, Deizisau 2012
11. Mihail Kopylov – Alexei Bezgodov, Salekhard 2006
There are many tempting moves in this example, which makes it all the more tricky. However, if you realize that you need to activate your king and to attack all of the white weaknesses, then you should have a good chance of solving it. 39...c3? One of many moves that lead to a draw. 40.\textbf{d}3 e4 Black is trying hard to win, but it is already too late. After 40...\textbf{c}4 41.\textbf{b}5 \textbf{a}3 42.\textbf{b}6 e4 White has both 43.\textbf{c}2 transposing to the game, and 43.\textbf{b}1! which also draws. 41.\textbf{c}2 41.\textbf{b}1 is also okay. 41...\textbf{c}4 42.\textbf{b}5 \textbf{a}3 43.\textbf{b}6 \textbf{x}c2? Black plays ambitiously, rather than settling for 43...\textbf{c}4 with a handshake. 44.\textbf{a}6 \textbf{x}e3?! After 44...\textbf{b}4 45.\textbf{a}7 c2 46.\textbf{a}8=\textbf{e}t \textbf{c}4 47.\textbf{c}8=\textbf{e}t \textbf{b}3 White only holds with 48.\textbf{e}6=\textbf{e}t. 45.\textbf{a}7 c2 46.\textbf{a}8=\textbf{e}t \textbf{d}4 47.\textbf{a}1=\textbf{e} 48.\textbf{c}5 \textbf{f}5 48...\textbf{d}2 is a simple draw. 49.\textbf{b}4 \textbf{d}2 50.\textbf{c}3=\textbf{e} 51=\textbf{e}2?? Unbelievable. After 50...\textbf{d}1 51.\textbf{b}3 \textbf{d}4! 52.\textbf{a}4 \textbf{d}2 White again needs to prove the draw. Now he just wins.

Kramnik could have reached this endgame – not with best play, but with best play by himself and the mistake Deep Fritz 10 was going to make, according to my computer and many others. This could be seen as a comparison exercise.

The point is that after 40.\textbf{a}5? \textbf{h}6 41.\textbf{d}5 \textbf{x}e3 42.\textbf{xe}3 \textbf{xe}3 43.\textbf{a}6 \textbf{d}6 44.\textbf{a}7 \textbf{d}5 45.\textbf{a}5 \textbf{c}7 46.\textbf{b}4 and White survives.

13. Z. Fekete, Magyar Sakkelet 1976
1.\textbf{d}4 Trapping the bishop and apparently it is all over? 1...\textbf{x}d4 2.\textbf{x}d4 \textbf{d}6! Not so fast! Black still has a great trick up his sleeve. 3.\textbf{c}5!! 3.\textbf{xb}6? allows Black to draw. 3...\textbf{d}xe5 4.\textbf{a}5 \textbf{d}7 5.\textbf{a}6 \textbf{c}8 6.\textbf{a}7 Black would lose if White was to round up all the pawns and get the king to c6, but after 6...\textbf{e}4! 7.\textbf{c}2 e3 8.\textbf{d}1 c3 White cannot avoid taking the e3-pawn with the bishop, allowing the king to creep into the corner. 3...\textbf{d}c5 3...\textbf{b}c5 4.\textbf{a}5 wins. 4.\textbf{c}3 \textbf{f}7 4...\textbf{d}7 5.\textbf{x}c4 \textbf{c}6 6.\textbf{a}3 leaves Black in zugzwang. 5.\textbf{xc}4 \textbf{g}6 6.\textbf{a}5! White has to destroy the passer. 6...\textbf{bx}a5 7.\textbf{xc}5 \textbf{g}5 8.\textbf{d}6 \textbf{f}5 9.\textbf{a}4 White wins.

49.\textbf{a}2! The only move, but good enough. 49...\textbf{a}4 After 49...\textbf{e}2 50.\textbf{b}3=\textbf{b}6 51.\textbf{d}2 Black is not making progress. 50.\textbf{b}3! \textbf{b}xa3 51.\textbf{c}5=\textbf{b}4 52.\textbf{a}7 The knight creates sufficient counterplay by itself. 52...\textbf{f}7 53.\textbf{f}6 \textbf{xc}4 54.\textbf{a}1 \textbf{c}3 55.\textbf{g}4 \textbf{d}4 56.\textbf{h}6 \textbf{e}4 57.\textbf{g}4 \textbf{f}4 58.\textbf{e}5 ½–½
15. Georg Meier – Ding Liren, St Louis 2012

Black is clearly in trouble, but he had a chance to save the game by avoiding facing a distant a-pawn, a well-known enemy of knights. 48...g3? 49.c2 b6 50.axb4 It is always possible to include variations, but the main point here is conceptual: the a-pawn wins. 50...a5 51.b3 a5 52.a2 f6 53.e1 b6 54.d3 c6 55.f4 d6 Desperation, but White also wins after 55...b6 56.h5 g4 57.b4 followed by d6-d4. 56.b4 e5 57.e2 f5 58.axb5 g4 59.a4 d5 60.c5 c7 61.c3 xh4 62.d5 a6† 63.b5 b8 64.b4 1–0

The drawing line was: 48...b3!! 49.axb3 g3 50.b4† 50.c3 b6 51.b4 e5 52.axb5 g4 59.a4 d5 60.c5 c7 61.c3 xh4 62.d5 a6† 63.b5 b8 64.b4 1–0

The position remains uncomfortable for Black, but it is still drawing.


Black played a rather normal plan of trying to get first to the queenside, which unfortunately was not enough. 56.h5! 57.g3† 57.h2! leads to a quick draw. 57.g6 58.xg4 xf6 59.xh3 e5 60.g4 e6 61.f5? 61.e5 would have made a draw on account of: 61...d4† (After 61...d4 62.f5† c3 63.e4! White will easily draw with her active king.) 62.e3 c2† Black wins a pawn, but White will get the king to the queenside and defend. 61...d4 62.e7 e4? Black had an extra chance to win the game with 62...e6! 63.g6 c2 64.f4† e5 65.g6† d6 when in the long run White is a lot more dead than her opponent. 63.e8 a6 64.e7?! 64.cb6 d3 65.d7 was the accurate route to a draw. 64...c2?! Dominating the white pieces with 64...e5! still gives a few practical chances, although White should hold with correct play. 65.c6 xa3 66.cb8 a5 67.bxa5 b4 68.a6 c4 ½–½

Black had a simple but rather elegant win: 56.g6† 57.f5 h8! Controlling the f-pawn. 58.f4 a6 White is caught in a fatal zugzwang.

17. Yuri Solodovnichenko – Georg Meier, Mulhouse 2011

It looks as though White will have to settle for a draw, but in fact he is winning through a brilliant combination.

36.c5? is too rushed. 36...bxc5 37.d5 c4 38.a5 c3 39.b4 e3! The best of several good options. 40.fxe3 d5 41.b6 axb6 42.axb6 e4 The bishop is obviously better than the knight here. Black emerges with an extra pawn, although it is not clear if it will be enough to win. Still, for our discussion it is quite irrelevant.

36.c6! The non-surprising starting move. 36.xc4 37.xa7 b3 38.a5! 38.c8† would allow White to fight for a draw at best. 38.bxa5 39.c6!! The great point. The geometry is exceptional; the black bishop cannot easily stop the pawn. 39...c4 Black is out of luck. 39...d5 40.e7† and 39...a4 40.e7† f8 41.b6! are both devastating. 40.b6 a6 41.xa5 White won the game on move 52. 1–0


54.d4† this throws away the win, but only because of an ingenious defence. 54...g3 55.d5 b5! 56.e5 b6 57.e6! 57.e6 c7 is a trivial draw. 57...c7 58.f7 f5! 59.h5 59.e6 xh4 60.e7 f5 is standard stuff. 59...b6†! This is the surprising part. The white king was dominating its counterpart, so Black drives it away from the ideal f7-square.
60.\texttt{e7} 60.\texttt{g6} \texttt{g4} 61.\texttt{e6} \texttt{d6} is a draw. 60...\texttt{c6} 61.\texttt{e6} \texttt{d5} 62.\texttt{d7} \texttt{g8}! 63.\texttt{e7} \texttt{f6}†
64.\texttt{d8} \texttt{e6} 65.\texttt{h6} \texttt{f7} 66.\texttt{h7} \texttt{g7} ½−½

54.\texttt{d5}? \texttt{f6}† 55.\texttt{e5} \texttt{h5} makes no progress.

The counterintuitive 54.\texttt{e6}!! would have won. 54...\texttt{b5} 54...\texttt{f4}† 55.\texttt{d6}! enables the e-pawn to advance. The theme here is domination. 55.\texttt{e5} \texttt{c6} 56.\texttt{f7} Once again the king is dominating the knight. White wins.

19. 

Etienne Bacrot – Richard Rapport, Deizisau 2012

White has an advantage after both 43.\texttt{a7} and 43.\texttt{g1}, but in both cases Black can draw with accurate defence. Bacrot solves this with a prophylactic move that brings the king away from checks on the first rank.

43.\texttt{a7} b2 44.\texttt{c2} \texttt{e8} 45.\texttt{h2} \texttt{d7} allows Black to eliminate the f6-pawn, and 43.\texttt{g1} \texttt{e8} 44.\texttt{a7} b2 45.\texttt{c2} \texttt{d7} is similar. White keeps the advantage, but the win is not there.

The important point is not to push the pawn to \texttt{a7} unless it is deadly. This way, White wins a vital tempo and safeguards his f6-pawn. 43.\texttt{h2}!! b2 43...\texttt{e8} 44.\texttt{a7} b2 would have allowed Bacrot to show his brilliant point: 45.\texttt{f3}! \texttt{xf3} (45...\texttt{b1} = 46.\texttt{xd5}++) 46.\texttt{gxf3} \texttt{b1} = 47.\texttt{a8} = \texttt{xd7} 48.\texttt{d5}† \texttt{e8} 49.\texttt{c6}† \texttt{d8} 50.\texttt{d6}† and White will win with a passed f-pawn. 44.\texttt{c2} \texttt{e8} 45.\texttt{g4} \texttt{d7} 46.\texttt{h4} \texttt{d6} 47.\texttt{a7} \texttt{e5} 48.\texttt{g5} \texttt{hxg5} 49.\texttt{hxg5} \texttt{b7} 49...\texttt{f4} 50.\texttt{g6}− 50.\texttt{b1} Black resigned. The white king can take its time to pick up the b2-pawn, followed by a stroll towards \texttt{g7}.

20. 

Etienne Bacrot – Sergei Tiviakov, Schwetzingen 2013

53.\texttt{a5! \texttt{c2}} 54.\texttt{f4} \texttt{f6} 55.\texttt{b5}!! This breakthrough is the way to create weaknesses. 55...\texttt{xb5} 55...\texttt{xb5} 56.\texttt{xb5} \texttt{f5} is a slightly weaker defence. White wins after: 57.\texttt{c4!} Preparing the zugzwang. 57...\texttt{d7} (57...\texttt{e6} is hopeless. Once the king comes to \texttt{g5}, White rolls the f-pawn up the board and wins the h5-pawn.) 58.\texttt{f3} \texttt{c6} 59.\texttt{b3} \texttt{b5} (59...\texttt{g7} 60.\texttt{g5}! followed by \texttt{c2} wins.) 60.\texttt{d5} \texttt{c6} 61.\texttt{a4}! Black is in zugzwang and would have to resign. 56.\texttt{xb5} \texttt{f5}

Oh yes, just to clear the formalities: after 56...\texttt{xb5} 57.\texttt{c6} White promotes a pawn. 57.\texttt{f1} \texttt{d7} 58.\texttt{a6} \texttt{xa6} 59.\texttt{xa6} \texttt{e6} 60.\texttt{f1} \texttt{c8} 61.\texttt{g2} \texttt{d7} 62.\texttt{f3} \texttt{e8} 63.\texttt{e4} \texttt{d7} 64.\texttt{g2} \texttt{e8} 65.\texttt{h3}! Black will soon end up in zugzwang. 65...\texttt{f7} 66.\texttt{e7} \texttt{d5} 67.\texttt{e8} Things are getting worse and worse. 67...\texttt{g7} 68.\texttt{g5} \texttt{e4} 69.\texttt{f4} \texttt{h7} 70.\texttt{f6} \texttt{h6} 71.\texttt{e5} \texttt{g2} 72.\texttt{d6} 1−0

21. 

Aagaard, 2007

Maybe this position is too subtle for an exercise, but then again I am not pretending it is easy. Black cannot force a draw as such, though he can keep it, so it is maybe not fair to ask for the reader to try to find a draw here either. For that I am truly sorry. To defend well, you first have to discover that against which you are defending. What White would like to do is to put his knight on \texttt{c6} and play \texttt{a4−a5−a6−a7}, forcing Black to rid himself of his bishop. At the moment this is not possible, so the short-term plan is to play \texttt{f4−f5}, when winning the piece becomes absolutely possible. Therefore Black would like to keep the bishop on \texttt{c7}, where it restrains the white king and prevents \texttt{a4−a5}.

Unfortunately, the only way to keep the bishop on \texttt{c7} is with 1...\texttt{h3}, which loses to 2.\texttt{c5!}, as Black can no longer respond with ...\texttt{h5}. White will follow up with 3.\texttt{e6} when the knight controls the \texttt{c7}-square as well as \texttt{g5}. The conclusion is that Black must allow one of White's
wishes, and since the aforementioned line loses immediately, the only option is to allow the king to advance.

1...\texttt{d8!!} is the only move, relying on tactics to prevent the king advance. 2.\texttt{f4} This allows Black to demonstrate his main point. 2.e5?! is the best winning attempt, but Black draws with 2...a5! 3.e6 a3!! Now White can only prevent ...h5 by playing 4.g7 g5 5.h5, but it is clear that this will never win. For example: 5...a5 6.g3 c7 7.e4 f4 and White has not made any progress. 3.h5! 4.g5 xg5f! 5.xg5 Stalemate.

\textbf{Jablonski – Brynell, Cappelle la Grande 2011}

\textbf{Ipatov – Ter-Sahakyan, Athens 2012}

\textbf{Molina – Marrero Lopez, Prol Santos 2012}
White has just tried the only move, 55.f5-f6!, when Black has a complicated task ahead of him.

55...g6? In practice this turned out to be an excellent solution, as White resigned only two moves later. But objectively it is a mistake that throws the winning position away. White could have made a miraculous draw with: 56.h4!! $\text{h}6!$ Definitely the most testing. (56...$\text{g}x\text{h}4$ 57.$\text{d}5$ e2 58.$\text{f}4$ is an easy draw. 56...$\text{g}4$ 57.$\text{d}5$ e2 58.$\text{e}3$+ $\text{h}x\text{h}4$ 59.$\text{c}2$ g5 60.$\text{e}7$ g4 61.$\text{x}f7$ $\text{h}3!!$ is another simple draw. I will mention in passing that 61...$\text{g}3$? 62.$\text{d}4!$ e1=\text{w} 63.$\text{e}8$ g2 64.$\text{e}2$ $\text{d}3$ 65.$\text{f}7$ $\text{f}4$ 66.$\text{f}8=\text{w}$ $\text{xe}2$ also enables Black to draw by the skin of his teeth.) 57.$\text{h}5!!$ $\text{x}h5$ This places the king on an unfavourable square, but other moves are no better: 57...e2 58.$\text{hx}g6$ e1=\text{w} 59.$\text{g}7$! The pawn is caught in the nick of time. 56.$\text{c}6?!$ $\text{xf}6!$ 57.$\text{d}4$ $\text{e}5$ With the f-pawn coming in, Black wins. 0–1

55...gxf6! is the best move. After the following excellent defence for White: 56.$\text{c}6$ $\text{f}4$ 57.$\text{d}4$ $\text{f}5$ 58.$\text{h}4$! $\text{e}4$ 59.$\text{c}2$ $\text{f}4$ 60.$\text{h}5$ $\text{f}3$ 61.$\text{h}6$ $\text{f}2$ 62.$\text{xe}3!!$ $\text{xe}3$ 63.$\text{h}7$ $\text{f}1=\text{w}$ 64.$\text{h}8=\text{w}$ Black still has a won queen ending. It will require a lot of good moves to win, but this is how chess works. You will go for this only if you spot 56.$\text{h}4!!$.

67.$\text{xf}6!$ $\text{xf}6$ 68.$\text{c}6$ $\text{g}5$ 69.$\text{f}6?!$ A normal move, but it throws half a point away. 69.$\text{e}5!!$ would have won the game, and no further variations are needed. We are back to the good old shouldering idea; the black king cannot come back to the defence. 69...$\text{e}4!!$ The king comes in and secures the draw. 70.$\text{f}7$ $\text{h}6$ 71.$\text{f}6$ $\text{f}4$ 72.$\text{g}6$ $\text{f}8$ 73.$\text{g}5$ $\text{e}7$ 74.$\text{h}5$ $\text{f}5$ 75.$\text{g}6$ $\text{f}8$ ½–½

60...$\text{b}2$? After this the position is a draw. The main point is that it will not be possible to dislodge the white king from a4. 61.$\text{b}4$ $\text{b}7$ 62.$\text{a}4$ $\text{a}2$ 62...$\text{c}3$ 63.$\text{a}3$ allows White to reach the corner and secure a draw. 63.$\text{b}4$ $\text{c}8$ 64.$\text{a}4$ $\text{a}6$ 65.$\text{a}5$ $\text{b}7$ 66.$\text{b}4$ $\text{a}6$ 67.$\text{a}4$ $\text{c}8$ 68.$\text{b}4$ $\text{a}1$ 69.$\text{a}4$ $\text{b}1$ 70.$\text{b}4$ $\text{b}2$ 71.$\text{a}4$ $\text{c}3$ 72.$\text{a}3$ $\text{e}6$ 73.$\text{c}8=\text{w}$ $\text{xe}8$ 74.$\text{a}2$ $\text{e}6$ 75.$\text{a}1$ a5 76.$\text{b}1$ a4 77.$\text{a}1$ a3 78.$\text{b}1$ $\text{b}3$ 79.$\text{a}1$ $\text{f}5$ ½–½

60...$\text{a}3$! would have taken an important square from the white king. 61.$\text{b}5$ White cannot fight for the a1-square. With the assistance of the bishop, Black can always create zugzwang: 61.$\text{c}3$ a5 62.$\text{c}2$ $\text{a}2$ 63.$\text{c}3$ a4 64.$\text{c}2$ a3 65.$\text{c}1$ $\text{f}5$–+ 61...$\text{b}3$ 62.$\text{a}5$ a6! White is unable to keep the fortress on the 5th rank because of the assistance of the a-pawn. 63.$\text{b}6$ $\text{b}4$ The pawn will run through unopposed.
In this very complicated endgame, White wins with a long series of accurate moves. Can you outdo the master and find the win all the way to the end?
Having debated a few of the standard ideas in rook endings, both concrete and abstract, previously in this book, I have a few final general points I want to make before taking the reader's innocence away with deceptive, seductive exercises.

**Escape to a theoretical draw**

As argued in the introduction of this book, it is essential for the ambitious tournament player to get his theoretical endgames under control. The advantages to knowing the important theoretical endgames and to having practised them with short time controls is quite large. Not only does it mean that you will know what to do when they arise in your games, but you will also learn a lot about the mechanics of so-called simple positions and thus, about technique in chess generally.

The following example has been chosen to illustrate this theme. Black is worse, but on several occasions he could have made the draw, if only he felt comfortable defending the rook endgame against f- and h-pawns.

At the moment where we join the game, Black has defended well, but is still under some pressure. There is no way for him to avoid losing a pawn; but on the other hand, rook endings are not won on points alone. As so often, the game does not go from drawn to lost, but rather transitions through a grey zone of accumulating difficulties for Black, before the position becomes untenable.

33...<:\b1†?!

The rook is perfectly placed, so this check does not make any sense.

Better was 33...h5! immediately. 34.<:\f6 g5 35.<:\xe6† <:\f5 36.<:\h6 <:\g4 and Black draws effortlessly.

34.<:\e2 <:\b2†?!

This check is, if anything, even more pointless than the previous one. The correct course of action was still to save the h-pawn: 34...h5 35.<:\f6 g5

Though still the way to play, the drawing method is more complicated with the white king on e2.

36.<:\xe6†

The most challenging move.

36.h4? <:\b2† 37.<:\f1 gxh4 38.<:\f4† <:\d3! 39.<:\xh4 <:\b5 looks like a draw too.

36...<:\f5 37.<:\h6 h4! 38.gxh4
Now Black would either have to prove his defensive technique after 38...gxh4, which is a theoretical draw, or find the much simpler defence 38...g4!, when a subsequent ...Exh1 will generate enough counterplay to save the game.

35.£f1 £e5?

Only here can we talk about a serious mistake. After this point Black no longer has a clear escape to a theoretical draw.

35...h5! 36.£xh5 £e6 37.£xe6† £f5 38.£h6 h4 39.gxh4 £g4 40.£g2 no longer works, but Black could still have relied on his theoretical knowledge with 39...gxh4 when the endgame is a draw. Sure, you need to know what you are doing – but you do, don’t you?

36.£xh7±

36...£f6 is also dangerous for Black. White is threatening £g2, and h2-h4, intending to meet ...gxh4 then g3-g4! followed by £h3xh4. Black could try 37...£b8 as deep prophylaxis against this plan, but then White will play 38.£g2 intending 39.f4†, leading to another winning ending.

36...£g6

36...g5 37.£f7! is also dangerous for Black. White is threatening £g2, and h2-h4, intending to meet ...gxh4 then g3-g4! followed by £h3xh4. Black could try 37...£b8 as deep prophylaxis against this plan, but then White will play 38.£g2 intending 39.f4†, leading to another winning ending.

37.h4 £b5 38.£g2

38...£a5?

Not surprisingly, Black fails to spot his opponent’s threat and thus does not know what to do to counter it.

38...£e5! is the best defence. White might respond with 39.£a7 with a big pull, but no clear outcome. (Maybe it is even a draw, as the majority vote has it.) The main point of Black’s last move is that 39.g4?! is met by
39...\text{\#b4!}, when most of White's advantage is evaporating. 40.\text{\#g3 \#b3t} gets nowhere, while after 40.f3 e4! 41.g5t \text{\#e6!} the draw is only a few moves away.

39.g4! e5

40.f3!?

It being move 40, it is easy to understand why Giri did not want to force matters. Even if it was only his opponent who was short of time (the moves indicate that this might have been the case), he did not want to give his opponent an obvious decision on the last move before the time control. However, he could have won by force with: 40.g5t! \text{\#e6 41.\#g7 \#f5 42.f3! e4 43.\#f7t \#e5 44.f4t \#d4 45.h5!} The g-pawn will decide the game.

40...e4?!

Desperation, but it is also highly unlikely that Black will hold after 40...\text{\#e6 41.g5! \#d5 42.\#d7t \#c5 43.\#g3}, when his king is cut off and he remains a pawn down with no counterplay.

41.g5t \text{\#e6 42.fxe4 \#e5 43.\#g7 \#xe4 43...\#a6 44.\#f3 wins.}

44.\text{\#xg6}

Now it is mate in 53, though the game did not last quite that long:

1-0

Patience

Though it is important to act with urgency if we have a dynamic advantage (think of pawn races in rook endings), we need to use the Rubinstein maxim of do not hurry, if our advantage includes domination. Finding the right moment to do something active is not easy, especially when a player has been calculating a lot. It is quite hard to move from “he goes there, I go there” thinking to “can I improve my position even more without giving my opponent counterplay?” This is especially true when the real goal is to avoid calculation, and thus avoid the possibility of missing something – which was incidentally what happened in the following game.

Etienne Bacrot – Maxime Vachier-Lagrave

Biel 2013
Black is of course completely winning. White is reduced to limited movements with the king and can only wait. An extreme case perhaps, but in endings, the lack of active options occurs quite frequently and should be exploited by the player with the advantage.

In the game Vachier-Lagrave rushed in like a fool; which is odd, as he clearly is anything but. Then again, factoring in the demands of intensive pre-game preparation, a tense game and possible time trouble, and it is clear that one's energy reserves can become depleted at chess tournaments. Once this happen, we often cannot recognize ourselves in the decisions we have made. The best remedy for this is, in my opinion, to have trained varied types of positions and techniques in advance, so that they are second nature when we really need them.

54...\texttt{xg}4?

Allowing White to start active counterplay with the h-pawn, without having it fully under control.

55.\texttt{h}6! \texttt{g}3\texttt{t}  
55...\texttt{a}8 56.\texttt{h}7 \texttt{f}4 57.\texttt{g}1! The king needs to go to the first rank so that there is no check in reply to \texttt{x}a2.

56.\texttt{f}1 \texttt{f}3  
56...\texttt{f}3\texttt{t}?! was a bit more challenging, 57.\texttt{g}1 \texttt{h}3 58.\texttt{x}a2 \texttt{x}h6 59.\texttt{f}2 \texttt{g}3 60.\texttt{f}5 \texttt{h}4 61.\texttt{x}f6 \texttt{x}e4 62.\texttt{g}6\texttt{t}! The only move to make a draw. 62...\texttt{f}3 63.\texttt{f}6\texttt{t} \texttt{f}4 64.\texttt{e}e6 e4 65.\texttt{f}1 White escapes.

57.\texttt{x}a2 \texttt{x}e4 58.\texttt{f}2 \texttt{f}5 59.\texttt{e}2\texttt{t} \texttt{d}5 60.\texttt{h}2 \texttt{g}8 61.\texttt{h}7 \texttt{h}8 62.\texttt{f}2 \texttt{e}6 63.\texttt{h}6\texttt{t} \texttt{f}7 64.\texttt{g}3  

As said, my preference when dealing with such a scenario is always to minimize the amount of calculation. I have blundered too often, or seen my friends and students do the same. A win without calculation is always preferable in my book.

In the above case, the goal would be to exchange the a-pawn for all of White's kingside pawns. The simplest way to achieve this is through zugzwang. Already White can only move his king, so it makes sense to time our aggression correctly: 54...\texttt{a}8 55.\texttt{g}3 \texttt{a}6 56.\texttt{f}3 \texttt{a}4!
White is struggling to find a good square for the king.

The easiest move to dismiss is 57.\texttt{g3}, when Black takes the g4-pawn with check and then rounds up the h-pawn: 57...\texttt{e}xe4 58.\texttt{a}xa2 \texttt{xg}4\texttt{f} and so on.

After 57.\texttt{e}3, Black can take the g-pawn without giving up the a2-pawn: 57...\texttt{x}xg4 58.h6 \texttt{e}a3\texttt{f} 59.\texttt{e}e2 \texttt{h}3 and the a2-pawn is indirectly protected. Black ends up with two extra pawns again.

57.\texttt{f}2?! is trying to sidestep these variations. Here Black plays: 57...\texttt{x}xg4 58.h6 \texttt{a}7

White has not made any real progress. Again the check on h2 is an important theme which leaves no doubt as to the final outcome.

This is the instructive point I really wanted to make about this position. "Easy does it", as the expression goes. However, this does not mean that there is not a way to solve the position by brute force: 54...\texttt{e}e3?! 55.\texttt{e}xa2 \texttt{e}xe4 56.\texttt{f}3

Black wins with either 56...\texttt{x}xg4 57.\texttt{h}2 \texttt{f}4\texttt{f} 58.\texttt{e}3 \texttt{h}6\texttt{f} followed by ...\texttt{f}5\texttt{x}h5, or 56...\texttt{f}4\texttt{f} 57.\texttt{e}3 \texttt{x}xg4 58.\texttt{h}2 \texttt{h}6 59.\texttt{f}2 \texttt{g}7 60.\texttt{h}2 \texttt{f}4 61.\texttt{h}6\texttt{f} \texttt{h}7. However, neither of these wins is as clean, clear and easy to handle as the patient approach. At the end of the day, this is what we are looking for in positions like the above: to stay in control and to win without drama.

**Already known ideas – in a more complicated setting**

We have only dealt with a few general rook endgame themes in this book. They have been so basic that they might seem in danger of being unusable, but this is not the case. I will show how some of these ideas proved relevant in an endgame played between two of the best players in the world.

**Vladimir Kramnik – Alexei Shirov**

Istanbul (ol) 2012

This position should be drawn in many ways. However, Black has been under some pressure throughout the game, and he proceeds to mishandle the technical phase.

37...\texttt{x}b3
Though not technically a mistake, I do not like this move. 37...\textit{a}a3! looks more natural to me. White achieves nothing with 38.\textit{d}xd5 cxd5, where the idea of ...b4 would force a draw almost instantly. For instance, 39.\textit{d}d4 \textit{xa}2 40.\textit{xd}5 \textit{a}4 and everything is okay for Black.

White therefore needs to try 38.\textit{d}d4, which almost transposes to the game, the difference being that the white king is much better placed on e4, from where it can protect the g-pawn if needed. True, the difference is minor, but there is no need to give White the choice in the first place (he could also have chosen to put the king on d4 in the game). A possible line is 38...\textit{xb}3 39.\textit{xb}3 \textit{xc}6 40.\textit{xc}6 \textit{b}1! when the rook is ready to go to gl to attack the white pawns.

This would have led to a simpler draw, I would claim, but not one without details. And this is exactly the sort of point I want to make: it is not the understanding of the details that could lead us to choose this option, but the principle of trying to keep our rook as active as possible and to ensure as much counterplay as possible.

This move marks the end of whatever time pressure Shirov was under, as well as the escalation of Black's problems. Black should not seek a position where white has a passed pawn and a more active king and rook.

I prefer 40...h5!? at this point, with the idea of bringing the black king into the game, or getting a passed pawn. Taking the pawn does not impress me; and after 41.g5 fxg5 42.hxg5? (otherwise h4 becomes a target) 42...\textit{b}1 43.f5 \textit{g}1 Black has plenty of counterplay and the draw will be reached easily.

41.c4

The white passed pawn is stronger as it is supported by the king. Still, this is not enough to win the game.

41...h5?!

The most basic rule in rook endings is to keep your rook active. Here this meant playing 41...\textit{b}1 42.h5 b3 43.\textit{b}6 b2, when White would have to give up his c-pawn and thus allow a draw.

42.g5 fxg5 43.hxg5

Black is starting to encounter real practical problems. His king is poorly placed and the h-pawn has not yet given him great counterplay.
43...\textit{a}a3

43...\textit{g}g8 44.f5 looks unpleasant, but White is actually threatening nothing. Black draws by force after: 44...\textit{b}b1 45.g6 \textit{f}f8 46.\textit{c}c8\texttt{t} \textit{e}e7 47.\textit{c}c7\texttt{t}

44.\textit{b}b6 \textit{b}3?!

Black continues to drift. At this point 44...\textit{h}4! would have led to a draw, for example: 45.\textit{f}f5 \textit{h}3 46.\textit{x}xb4 \textit{h}2 47.\textit{b}b1 \textit{a}2 48.\textit{h}1 \textit{c}c2 49.\textit{g}4 \textit{g}6 After the exchange of the white c-pawn for the black h-pawn, the resulting position with two pawns against one is a theoretical draw.

45.\textit{f}f5\texttt{t}

Black has two active passed pawns now, but his king is in danger. Kramnik plays this phase of the endgame almost flawlessly.

45...\textit{h}4

It should be noted that after 45...\textit{a}a5 46.\textit{x}xb3 \textit{c}c5 47.\textit{c}c3 \textit{h}4 48.\textit{f}f4 \textit{g}8 49.\textit{g}4! White has a great advantage, based on the following variation:

46.\textit{b}b8 \textit{a}a4

46...\textit{a}a2! was stronger. The same move is possible on the next turn, so we shall deal with it there.

47.\textit{d}d4

This is the most critical moment of the game for Black. After some poor decisions he will have to play accurately in order to hold the game. Shirov's main forte has always been calculation, but here it betrays him.
47...\(\text{a}5\)?
47...\(\text{a}2\)!! was the right defence. After 48.\(x\text{b}3\) \(\text{d}2+\) 49.\(\text{e}5\) \(\text{c}2\) Black has just enough activity to draw. One important line is 50.\(\text{f}6\) \(\text{gxf}6\) 51.\(\text{gx}f6\) \(\text{g}6\), when the black king comes in to save the day.

White's best try is 50.\(\text{e}3\) \(\text{xc}4\) 51.\(\text{e}4\) \(\text{c}5+\) 52.\(\text{e}6\) \(\text{g}8\) 53.\(\text{h}4\). The position looks unpleasant and White can continue pressing, but the correct outcome is a draw nonetheless.

Black's general strategy in the above line relies exclusively on keeping his rook active. The difference is quite marginal, but the rook is more active on the 2nd rank than the 5th rank, which turns out to be the difference between drawing and losing the game.

48.\(c5\) \(\text{a}4+\) 49.\(\text{d}5\) \(\text{f}4\)

It is too late for:
49...\(\text{a}2\)

White has an extra tempo and will use this to push the c-pawn forward:
50.\(\text{xb}3\) \(\text{f}2\) 51.\(\text{e}6\) \(\text{c}2\) 52.\(\text{d}6\) \(\text{d}2+\)
53.\(\text{c}7\) \(\text{d}5\) 54.\(\text{c}6\) \(\text{xf}5\) 55.\(\text{h}3\)

55...\(\text{f}4\)
55...\(\text{g}6\) 56.\(\text{h}4\) \(\text{g}5\) 57.\(\text{c}4\) wins easily for White. The black king is cut off on the 4th rank, allowing the white king to come back in time.

56.\(\text{d}6\) \(\text{g}6\) 57.\(\text{c}7\) \(\text{c}4\) 58.\(\text{h}4\) \(\text{h}4\) 59.\(\text{c}8=\text{w}\)

55...\(\text{f}4\)
55...\(\text{g}6\) 56.\(\text{h}4\) \(\text{g}5\) 57.\(\text{c}4\) wins easily for White. The black king is cut off on the 4th rank, allowing the white king to come back in time.

56.\(\text{d}6\) \(\text{g}6\) 57.\(\text{c}7\) \(\text{c}4\) 58.\(\text{h}4\) \(\text{h}4\) 59.\(\text{c}8=\text{w}\)

Black cannot set up a fortress. If the king takes the g5-pawn, White checks on d8.

59...\(\text{h}5\)
The best try, but it is still not good enough.
60.\(\text{e}8+\) \(\text{x}g5\) 61.\(\text{e}7\) \(\text{h}6\) 62.\(\text{e}8=\text{w}\)
The rook is not allowed to get to f5.
62...\(\text{e}5+\) 63.\(\text{f}7\)
The fortress is broken.

50.\(\text{e}6\)

Kramnik repeats the position to show who is boss and to gain a bit of time on the clock.

50...\(\text{e}4\) 51.\(\text{d}5\) \(\text{f}4\)
52.\textit{f6!}
No draw, thank you.

52...\textit{gxf6}
White wins after other tries as well.

52...\textit{\textg6} 53.\textit{c6} wins, for instance 53...\textit{h3} 54.\textit{c7} \textit{h2} and now 55.\textit{hh8} is simplest.

52...\textit{h3} 53.\textit{\textgxb3} \textit{\textg4} 54.\textit{f7} \textit{h2} 55.\textit{\textg1} \textit{\textf4} 56.\textit{\textg1} also wins.

53.\textit{c6} \textit{\textf5†}
53...\textit{h3} also loses, 54.\textit{\textgxb3} (54.\textit{c7} is more complicated, but also wins.) 54...\textit{\textg5} 55.\textit{c7} \textit{\textf8} 56.\textit{\textg3†} \textit{\textg6} 57.\textit{\textc3} \textit{\textc8} 58.\textit{\texte6!} Ensuring that Black will not be able to shoulder with his king. 58...\textit{g4} 59.\textit{\texte5!} White wins.

54.\textit{\textd6} \textit{\textf1} 55.\textit{c7} \textit{\textc1}
This is the critical moment for White. He needs to calculate accurately in order to bring home the bacon.

Previously the ideas of active king, active rook, a bit of patience (Kramnik’s repetition) and escaping into a theoretically drawn ending have all been touched upon. At this point we go full circle and return to the idea of shouldering, as the key idea behind White’s winning plan.

56.\textit{\textgxf6?}
For once Kramnik fails at the critical moment. His move loses a tempo that allows the black king to enter the game just in time.

The winning line was 56.\textit{\textc8=} \textit{\textg8} 57.\textit{\textxc8} \textit{\textg6}, where Kramnik somehow did not work out the details correctly.
As already indicated, White wins by holding on to the principle of shouldering with:
58.\texttt{d5}!! h3 59.e1 xg5 60.e4 g4 61.g1+ h4 62.f3+ -- The split black pawns are not sufficiently supported by the king to create real counterplay. They will be picked up one by one, taken out the back door and destroyed.

56...\texttt{Gg6} 57.xb3 xf6
Now it is just a draw.

58.b8 d1+ 59.c6 c1+ 60.d7 f5

\texttt{61.c8=\# xc8 62.xc8 h3 63.d6 f4 64.c3 g4 65.e5 h2 66.c1 f3 67.f5 g2 68.e4 h1=\#} \frac{1}{2}—\frac{1}{2}
Chapter 8 – Complex Rook Endings

Inarkiev – Kiriakov, Sochi 2005

Ftacnik – Alsina Leal, Barcelona 2013

Sanikidze – Guliyev, Navalmoral de la Mata 2011

Ju Wenjun – Gaponenko, Dresden 2008

Frolyanov – Tomashevsky, Loo 2013

Deepan – Navin, New Delhi 2010
1. Aagaard, 2007

71. \( \text{d5?} \) would lose to 71...\( \text{e}8 \) 72.\( \text{f8} \) (if 72.\( \text{e}4 \) \( \text{g1} \)=\( \text{a} \) Black wins by a tempo) 72...\( \text{e}3 \) and the black king is not cut off as it is in the main line.

71. \( \text{d4!} \) \( \text{d1} \)++ Definitely the most tricky. 71...\( \text{e}1 \) leaves White with only one choice all the way, before having to defend with knight against rook. 72.\( \text{f8} \) \( \text{e}2 \) (72...\( \text{g}1 \) 73.\( \text{c}4 \) is good enough for a draw by a tempo.) 73.\( \text{g8} \) \( \text{g1} \)=\( \text{a} \) 74.\( \text{g}1 \) 75.\( \text{f8} \) This position is a draw because the black king is cut off. If the white king was on d5, Black would win. 75...\( \text{g}4 \) 76.\( \text{c}5 \) \( \text{c}3 \) 77.\( \text{b}5 \) \( \text{g}5 \) 78.\( \text{c}6 \) \( \text{c}4 \) 79.\( \text{b6} \) \( \text{g}6 \) 80.\( \text{c}7 \) \( \text{c}5 \) 81.\( \text{b7} \) \( \text{g}7 \) 82.\( \text{c}8 \) \( \text{c}6 \) 83.\( \text{b}8 \)++ White draws. 72.\( \text{c}5 \) \( \text{c}1 \)++ 73.\( \text{d}4!! \) To me this is the most counterintuitive move. Shouldeing is of paramount importance in endgames with pawn versus rook. After 73.\( \text{b}6 \)=\( \text{a} \) the white king is on the wrong side of the c-file. 73...\( \text{b}1 \) 74.\( \text{f8} \)++ 74.\( \text{c}4 \) \( \text{g}1 \)=\( \text{a} \) 75.\( \text{x}1 \) \( \text{g}1 \)+++ 76.\( \text{g}1 \) \( \text{g}1 \)++ 77.\( \text{b}4 \) White draws.

2. Aagaard, 2007

This could be called a study, but it is essentially an exercise in how to handle the king’s position. This time the solution is by no means easy.

1. \( \text{e}3 \) \( \text{a}2 \) 2.\( \text{a}8 \) \( \text{g}3 \)++ would allow Black to draw. White needs the check on the third rank. After 3.\( \text{h}7 \) 4.\( \text{g}7 \)++ \( \text{h}2 \) everything is easy.

1. \( \text{e}4 \) \( \text{a}2 \) 2.\( \text{a}8 \) \( \text{e}2 \) \( \text{e}1 \)++ 3.\( \text{a}8 \) \( \text{h}2 \) 4.\( \text{e}1 \)++ \( \text{h}1 \) also leads to a draw.

1. \( \text{e}4 \) \( \text{a}8 \) 2.\( \text{e}2 \) \( \text{a}2 \) 3.\( \text{xa}2 \) \( \text{h}3 \) 4.\( \text{e}1 \)++ \( \text{g}1 \) 5.\( \text{a}8 \) \( \text{h}2 \) 6.\( \text{g}8 \)++ \( \text{h}1 \)++ also leads to a draw.

1. \( \text{e}4 \) \( \text{a}8 \) 2.\( \text{a}8 \) \( \text{e}2 \) 3.\( \text{a}1 \) \( \text{g}3 \)++ draws. 2.\( \text{g}4 \)++ The most testing. 2...\( \text{g}3 \) 3.\( \text{f}5 \) \( \text{h}3 \) 4.\( \text{a}3 \)++ wins. 3.\( \text{a}7 \)!! This cool waiting move is the only way to win. 3.\( \text{g}8 \)++ \( \text{h}3 \) 4.\( \text{a}8 \) \( \text{g}4 \) does not achieve anything for White. 3.\( \text{a}6 \) allows Black to escape with: 3...\( \text{h}4 \) 4.\( \text{g}6 \)++ \( \text{h}5 \) An important tempo. 5.\( \text{g}1 \) \( \text{h}2 \) 6.\( \text{h}1 \) \( \text{g}4 \) Black draws. 3.\( \text{h}3 \) After 3...\( \text{g}3 \) 4.\( \text{f}5 \) \( \text{h}3 \) 5.\( \text{a}3 \)++ Black does not have a good move at his disposal. It ends with: 5...\( \text{g}2 \) 6.\( \text{g}4 \) \( \text{h}2 \) 7.\( \text{xa}2 \)++ \( \text{g}1 \) 8.\( \text{g}3 \) \( \text{h}1 \)=\( \text{a} \) 9.\( \text{g}3 \)++ 4.\( \text{g}7 \)++ The black king now ends up on the wrong side of the pawns. 4...\( \text{h}5 \) 5.\( \text{f}5 \) White is winning in many ways. One of the fun ones is: 5...\( \text{h}4 \) 6.\( \text{f}4 \) \( \text{h}5 \) 7.\( \text{a}7 \)++ \( \text{h}2 \) 8.\( \text{g}3 \)++ \( \text{h}1 \)=\( \text{a} \) 9.\( \text{h}7 \)++–

3. Evgeny Romanov – Giovanni Vescovi, Moscow 2010

73.\( \text{g}5 \)?? This loses to a nice idea. 73...\( \text{g}2 \) 74.\( \text{h}4 \) 74.\( \text{f}8 \) is refuted with a brilliant piece of zugzwang, leading us to the same point. 74...\( \text{e}4 \)++ The rook does not have to be on this exact square; it just has to stay on the 4th rank. (Black must avoid 74...\( \text{f}2 \)??, when after 75.\( \text{h}4 \) \( \text{g}3 \) 76.\( \text{x}2 \) White makes the draw.) 75.\( \text{f}7 \)++ (A calm waiting move; the only alternative is 75.\( \text{h}4 \) which can be compared with the game.) 75...\( \text{e}4 \)++ The rook takes up the optimal position. 76.\( \text{h}4 \) Otherwise Black just advances the pawn decisively. 76...\( \text{g}8 \) 77.\( \text{h}6 \) \( \text{f}2 \) 78.\( \text{xf}2 \)++ \( \text{xf}2 \) 79.\( \text{h}5 \) \( \text{g}1 \) 74...\( \text{g}3 \)!! White must have missed this. 75.\( \text{h}5 \) \( \text{g}4 \)++ 76.\( \text{h}6 \)++ 72.\( \text{e}4 \) Romanov resigned in the face of: 77.\( \text{x}2 \) 78.\( \text{h}7 \) \( \text{g}3 \) 79.\( \text{h}6 \) \( \text{f}4 \) 80.\( \text{h}8 \) \( \text{f}5 \) 81.\( \text{h}7 \) \( \text{g}6 \) 82.\( \text{g}8 \) \( \text{a}4 \)++ 0–1

73.\( \text{h}4 \)!! is a sensational drawing move. The first idea to make a short cut to the draw with \( \text{xf}3 \)++!. The most critical line goes like this: 73...\( \text{b}8 \) 73...\( \text{b}3 \) 74.\( \text{a}5 \) \( \text{e}3 \) 75.\( \text{a}2 \)++ This is not the only way to draw; the main thing for White is to be patient. (It is not yet time for 75.\( \text{g}4 \); when 75...\( \text{g}1 \!) 76.\( \text{h}4 \) \( \text{f}2 \) 77.\( \text{f}5 \) \( \text{e}4 \)++ and 78...\( \text{e}5 \) wins for Black.) 75...\( \text{f}1 \) 76.\( \text{g}4 \) \( \text{f}2 \) 77.\( \text{h}4 \) \( \text{g}1 \) 78.\( \text{xf}2 \) \( \text{xf}2 \) 79.\( \text{h}5 \) White draws. 74.\( \text{a}5 \) \( \text{h}8 \)++ 75.\( \text{g}4 \) \( \text{g}2 \) 76.\( \text{h}4 \) \( \text{f}2 \) 77.\( \text{a}1 \)
Chapter 8 – Complex Rook Endings

77...\texttt{a}2?! \texttt{g}8\texttt{t} would lead us to position 44 of Chapter 3 on page 69. 77...\texttt{g}8\texttt{t} 78...\texttt{f}5 White draws easily.

4. Krikor Sevag Mekhitarian – Markus Ragger, Moscow 2011

This exercise is about prophylaxis. Black needs to realize that his opponent has possible counterplay with the h-pawn, leading to wild complications.

In the game Black was a bit lucky. 39...b5? This should have led to a draw after best play. 40.e3? 40.h4! b4 The best response. Advancing the a-pawn would give Black some additional problems defending, which we don’t really care for. 41.g4 b3 42.h5 \texttt{a}7?! The best winning attempt. (White draws relatively easily after 42...b2 43.h6 \texttt{b}1=\texttt{w} 44.h7 \texttt{w}h1 45.d8\texttt{t} \texttt{c}7 46.h8=\texttt{w} \texttt{wxh8} 47.xh8 a3 48.xh1 a2 49.xa1, when the extra pawns on the kingside easily create enough counterplay. For example: 49...\texttt{d}6 50.f4 \texttt{d}5 51.e4\texttt{t}? Just proving a point. [51.g5 was also okay of course.] 51...\texttt{xe}4 52.g5 The draw is quite close.) 43.xa7 \texttt{xa}7 (43...b2 44.xa4 \texttt{b}1=\texttt{w} 45.\texttt{g}2 White draws. The rook will create a solid fortress from e4. It is not possible to force a zugzwang of any significance.) 44.h6 b2 45.h7 \texttt{b}1=\texttt{w} 46.h8=\texttt{w} \texttt{a}3 47.\texttt{c}8 \texttt{b}7 48.\texttt{c}2 White will suffer and have chances to mess up, but this queen ending should ultimately be drawn. 40...a3 41.d1 b4 42.d4 b3 43.c4 a2 44.xb3 a1=\texttt{w} 45.xa1 \texttt{xa}1 46.c4 \texttt{xd}1 The white king is cut off and Black wins easily. 0–1

39...a3! is the accurate move, which forces White to spend a move going backwards with his rook. 40.d1 b5! Again prophylaxis, this time against a defensive plan. 40...a2?! would not work. After 41.a1 b5 White has enough time to bring in the king. 42.e3 b4 43.d4 b3 44.c3 \texttt{b}5 45.b2 Suddenly it is Black who has to work to prove that the position is drawn. 41.e3 b4 42.d4 b3 43.c4 43.c3 \texttt{b}5! wins, as one of the pawns will promote immediately.

43...a2 44.xb3 a1=\texttt{w} 45.xa1 \texttt{xa}1 46.c4 \texttt{d}1 Black wins easily.

5. Dvoretsky, 2012

1.f3? was given as winning by Poghosyan, but Dvoretsky found a draw: 1...\texttt{a}4! 2.b7 \texttt{x}h4 3.a8 \texttt{xb}4 4.c6 \texttt{a}4 5.b6 \texttt{g}5 6.g8\texttt{t} \texttt{f}4 7.h8 f5 8.xh4 \texttt{a}3 9.a7 \texttt{a}1 10.b7 \texttt{b}1\texttt{t} 11.c6 \texttt{a}1=

1.\texttt{a}8! \texttt{xf}2 2.\texttt{a}7 \texttt{f}5 This defence was not mentioned by Dvoretsky, but seems the most logical to me. After 2...f5 White has a nice winning move in 3.\texttt{f}8\texttt{t}, cutting off the black king, or just winning a tempo. 3...g7 (3...f4 4.b7 \texttt{b}2\texttt{t} 5.a8 \texttt{f}3 [5...\texttt{b}4 6.a7!+] 6.xf3 \texttt{b}4 7.a7 \texttt{h}4 8.b3 White wins.) 4.b8\texttt{t}! Preparing to shield the king. (After 4.c8? \texttt{f}4 5.c4 \texttt{f}3 6.b6 \texttt{b}2\texttt{t} the difference is obvious, and Black draws.) 4...\texttt{f}4 5.b4! Keeping an eye on the f-pawn while preparing to use the king. 5...f6 6.b6! A common theme. (6.b7? \texttt{f}5 7.a7 \texttt{a}2 would allow Black to draw.) 6...f3 7.a7 \texttt{a}2 8.f4\texttt{t} \texttt{e}6 9.xf3 \texttt{b}2\texttt{t} 10.a6 \texttt{a}2\texttt{t} 11.b7 \texttt{b}2\texttt{t} 12.a8 \texttt{b}4 13.\texttt{f}8 \texttt{d}7 14.\texttt{b}8 \texttt{x}h4 15.b7 White wins, as shown by Dvoretsky. 3.\texttt{b}8 \texttt{g}4 4.\texttt{b}4\texttt{t} \texttt{g}3 5.\texttt{b}6! White cannot win this ending if he puts the king in the opposite corner, far away from the action: 5.b7? \texttt{a}2 6.a7 \texttt{f}5 7.a8=\texttt{w} \texttt{x}a8 8.xa8 \texttt{f}4 Black gets away with a draw. The king is one tempo too far away. 5...\texttt{a}2 5...f5 is easiest disposed of with 6.a4! \texttt{b}2\texttt{t} 7.c7 \texttt{c}2\texttt{t} 8.d7 \texttt{d}2\texttt{t} 9.e7 \texttt{e}2 10.a7 and White wins. 6.\texttt{b}5! 6.b5? looks similar, but Black can take on h4 immediately and thus draws in a long variation: 6...\texttt{x}h4 7.a5 \texttt{b}2 8.a7 \texttt{c}2\texttt{t} 9.d7 \texttt{b}2 10.c8 \texttt{c}2\texttt{t} 11.d8 \texttt{g}2! 12.a4\texttt{t} \texttt{h}3 13.a3\texttt{t} \texttt{h}2 14.a7 \texttt{g}8\texttt{t} 15.e7 h4
16.从中f6 中g2 17.从中f5 中e8 18.从中f4 f5 19.从中xf5 h3 20.从中a2 中g1 21.从中g4 中d2 中 White has to force the draw. 6...从中f5 7.从中a4 中b2 中 8.从中c6 中b8 9.从中a7 中a8 10.从中b7 中g8 11.从中a8= 中xa8 12.从中xa8! Taking with the king would be senseless — as well as drawing. 12...从中h4 12...从中f4 13.从中c6 中f3 14.从中d5 中f6 15.从中d4 中f3 16.从中e3 中f4 中 17.从中e2 中h2 18.从中g8 中h3 19.从中f2 中 White wins.

6. Etienne Bacrot — Ray Robson, Khanty-Mansiysk (1.5) 2011

This ending is winning for White, as long as he manages to prevent the black king from providing counterplay. 73.从中a8? This allows Black to win an important tempo attacking the a-pawn. Obviously it was almost impossible to find the correct continuation in a rapid game. 73...从中f5 74.从中a7 74.从中b8 中a2 75.从中b5 中g4 76.从中g5 中f3 77.从中b7 is not good enough to win, as after 77...从中b2 中 78.从中c7 中a2 79.从中b6 中e2 80.从中a7 中e8 White cannot make progress. 74...从中g4 75.从中b8 中a2 76.从中b3 76.从中b7 中g3 77.从中a8= 中xa8 78.从中xa8 中h4 79.从中c6 中g3 80.从中a3 中g2 Black draws. 76...从中f6 77.从中b6 中g5 78.从中f6 中g4 79.从中g4 中h4 80.从中b7 中xa7 中 81.从中xa7 中g3 82.从中g6 中f3 83.从中h6 中g4 84.从中b6 中h4 85.从中c5 中h3 86.从中d4 中g3 87.从中e3 中h2 中 87...从中g2 is a well-known draw. 88.从中g6 中h3 89.从中f2 中h1 中 90.从中f3 中h2 91.从中g7 1–0

7. Ernesto Inarkiev — Petr Kiriakov, Sochi 2005

Many rook endgames are tempo races. Often we find situations where we need to win tempos in counterintuitive ways, such as by making a move that will only become relevant deep into the line, because of some prophylactic idea. Surprisingly, this is the case here.

In the game Ernesto lost after: 51.从中f6 中e4 52.从中f7 中xg7 中 53.从中xg7 中d2! 54.从中a7 中e3 55.从中a2 中e1 56.从中a1 中e2 中 White delayed resigning until move 68, but we can stop here. 0–1

Also 51.从中f5 中d2 52.从中xe5 中xg7 would win for Black.

51.g4!! 中d2 This continues the race, but Black is not as well coordinated. The prophylactic idea is that the obvious 51...e4 can be met by 52.从中f5! (52.从中h6? 中d2!) 52...d2 53.从中xg2 中xg2 54.从中x4 中xg7 55.从中f5 with a draw. 52.从中f6 中e4 53.从中f7 中a8 54.从中e8= 中xg8 55.从中xg8 中e2 56.从中g5 Both players get their queens and the game is drawn.

8. Tornike Sanikidze — Namig Guliyev, Navalmoral de la Mata 2011

In this difficult position, White did not have enough time to find the draw. Instead he played prudently, albeit incorrectly with: 64.从中e4 中h5 65.从中h8 中e4 66.从中h8 中e2! 67.从中e4 中f3 68.从中d2 中g2= 中 69.从中a2 中e1 70.从中e3 中f1= 中 White tried for another thirteen moves, but could not rewrite the tablebases, nor deceive his opponent. ½–½

64.从中h5? looks tempting as well, but Black draws with accurate defence. 64...e3 65.从中d3 中e2! 66.从中d2 中g2= 67.从中f5 The only chance, as the f-pawn must be contained. 67...从中f3 68.从中e1 中g3
Chapter 8 – Complex Rook Endings

The only move, but not hard to find. Advancing the h-pawn too early would give White an extra tempo. After 70...h4 72.g6=\# h2! Black is aiming for a stalemate defence. (Again, 71.gxf6+ gxf6 72.g4 wins; 73.e6 White is in control.) 71.g2 h4 72.g8 h3 73.h8 e1=\#\#. Promoting to any other piece on e1 also draws. 74.xe1 g2 75.g8=\# h1 76.gxf2 h1 77.ea8 g2 78.e8=\# draws. 76.g2 h2 77.g3 f2 78.xf2 Stalemate.

The winning line starts with 64.g5! to keep an eye on the f-pawn. 64...e3 64...h5 65.xh5 is an easy win, as a comparison with the previous line will quickly inform us. 65.d3 h5 66.gxf2 g3 68.ea2 f3 69.eb2 Zugzwang.


A nice mutual zugzwang position. 54.e2! 54.d2? d3 would put White in zugzwang and win the game quickly. 54...g7 54...d3 55.d2 puts Black in zugzwang. Any king move would allow the white rook to come into play. 55.d3! 55.d2 g3 would land White in serious problems. 55.g7 The draw after 55.g3 is rather pretty, and easy to miss for ordinary grandmasters: 56.xd4 f3 57.e3 f2 58.e8=\# 56.e2! f2 The only remaining winning attempt. 57.xf8 xbx7 58.xf4 e3 59.h4! White needs to be able to give checks from the side. He has put the game into a theoretically drawn position. 59.d3 60.f3 c7 61.eb2 61.b3 also draws. 61.e2 62.b3! 62.b1 is too passive. After 62.g2 63.eb3=\# d4! Black wins, as he will have the use of the c3-square. 62.e2 63.c3 Black cannot make meaningful progress. 63.e2 64.b3 g2 65.c3 g3 66.e8 e2 67.e2f2 c3 ½–½

10. Lubomir Ftacnik – Daniel Alsinza Leal, Barcelona 2013

In the game White lost to a surprising check: 63.d4! xxc8 64.b5 d8=\#! Winning an important tempo. 65.e3 65.e5 b8 wins. 65.e8=\# 66.d4 66.f3 a8 White has been subdued. 66.f4 67.f6 f3 68.f7 f2 69.a7 f1=\# 70.b8=\# d8=\# 71.c5 f8=\# 0–1

63.d5? also fails due to 63...xxc8 64.b5=\# d8=\# 65.c6 f4 and the f-pawn is too strong.

Instead White could have drawn with: 63.d6! xxc8 64.b5 a8=\#! The best try. 64...f4 65.b6 f3 66.b7 is an easy draw. 64...d8=\# 65.c7 a8 66.b7 f8 67.a7 also allows White to survive. 65.c5=\# The big point. The king needs to be optimally placed in order for the pawns to be pushed. 65.c6=\# is too slow: 65...f4 66.b7 f8 67.a7 f3=. 65.c7 f4 66.b6 xxa6 67.b7 a7=\# also does not work. 65...f4 66.b6 f3 66...xa6=\# 67.b7 would even lose for Black. 67.b7 f8 68.a7 f2 69.b8=\# The draw is near.


White had to stop the black pawn’s advance, at least for the moment, in order to gain some counterplay before the blow-for-blow fight initiates. The game continued: 68.d4? b4 69.b5 b3! 69...f4? looks promising, if only because of the trap 70.exf4? xf4 71.b3 b6=\# and White is in zugzwang. However, White can draw with: 70.e4! d4 (70...b3 71.g5! draws by a tempo.) 71.b3! c4 72.b1 b3 (72...d3 73.e5 b3 74.e6 c2 75.e1! b2 76.g5 White is in time to draw.) 73.g5 c3 74.e5 c2 75.e1 b2 76.xf4 b1=\# 77.xb1 xxb1 78.e4 The pawns are far enough advanced to secure the half point. 70.g6 70.g5 loses in several ways, but the most clear-cut is: 70...b8! 71.h5 f4
216 Grandmaster Preparation – Endgame Play

72.e4 d4 73.g4 c3 74.b1 b2 75.e5 (75.fx4 c2 76.g1 b1=wb 77.xb1 xb1 78.e5 d3--; 75...c2 76.h1 b1=wb 77.xb1 xb1 78.xf4 d3 Black wins. 70...b8 71.g7 71.g5 is best met with: 71...b6! (71...d5? 72.xf5 c4 73.f4 c3 74.b1 d3 75.g5 b2 76.f5=) 72.h4 f4 73.e4 d4 74.g5 c3--; We are back where we were before. 71...b6! 72.e7 d5 73.f7 c4 74.e4 fxe4 75.xe4 d4 76.e7 xe4 77.d7 d3 78.c7 b4 0–1

The drawing move, as insinuated, is: 68.b4! Here Black has an ocean of opportunities. We shall look at only three. 68...d6 68...b8 69.h4 f6 70.e4 fxe4 71.xe4 White is drawing. 68...f6 69.h4 g6 70.e4 fxe4 71.xe4 g7 72.ff5 73.e4 g5 74.e4 Black cannot make progress; White has activated the rook and will draw. 69.f4 The passive 69.f2 loses to 69...c5 70.f4 b4! 71.xf5 c4 72.xh5 b3 73.g1 b2 74.b1 d3 and White is too slow. 69...c5 70.b1 b4 This looks promising, but White is just in time. 70...c4 also only draws: 71.xf5 d3 72.f4! b4 73.g5 b5 74.f5 b3 75.e4! The simplest move. 75...xe4 76.g6 White draws; the h-pawn is clearly not dangerous. 71.xf5 b3 71...c4 72.f4 b3 73.e4 b5 74.e5 c3 75.g6 c2 76.h1 b2 77.e6= 72.f4 c4 73.g5 c3 74.xh5 c2 75.e1 b2 76.f5 White escapes with a draw.


This position almost looks like it could be a study, and the solution contains many attractive small points tied together to create a pretty picture, almost as if it were a ‘draw by numbers.’ The ‘study effect’ is only diminished by the existence of a mirrored solution, as mentioned at the end.

In the game White erred and had to concede half a point after: 54.h6? d3 55.d7+ c3 56.c7+ d2 57.d7+ c3 58.g5 e2 59.e7 d2 60.d7+ c2 61.e7 d2 62.e8 d2 f5 e3 63.dxe3 dxe3 64.h7 e1=wb 65.h8=wb b1=wb is an immediate perpetual check. The white king will not be able to hide in front of the pawn because the f6-square is not available. 62...e1=wb 63.dxe1 dxe1 64.yg4 h1 65.yf5 yf2 66.yg6 yf3 67.yh7 yf4 68.g6 yg5 69.g7 xh6+ 1/2–1/2

54.ye8!! This is the only way to win the game. The point is to wait for Black to put his king on the d3-square, so that the e3-pawn can be taken with check. 54...d3 55.g5 yh4+ 55...e2 56.xe2! xe2 57.g6 is another great little point, when Black cannot prevent White from promoting at least one of the pawns. 56.yf3! xh5 56...h3+ 57.g4 h1 58.g6 is winning for White, as the pawns are too strong. 57.xe3+ d4 58.ye4+ d5 59.ya4! An important tempo gain. 59...ye6 60.yg4 h1 61.yf4! The black king is cut off and White wins in traditional fashion.

White could also have started with 54.ye6!, even though it would look a bit strange.
Chapter 8 – Complex Rook Endings

Papin – B. Savchenko, Taganrog 2011

Ivanchuk – Anand, Linares 2009

Carlsen – Wang Hao, Stavanger 2013

Nataf – Chabanon, Port Barcares 2005.

I. Sokolov – Morozevich, Sarajevo 2008
13. Vasily Papin – Boris Savchenko, Taganrog (variation) 2011

Upon analysing this game I came upon a position that could have made for an excellent study. But I am a chess trainer, not a composer, so we will keep the names and make it an exercise.

51...Ee8? looks tempting and is the first idea to dismiss. After 52.Exf8 b1=Q 53.h8=Q there is no draw. One of the long wins looks like this: 53...Eg1† 54.Qh4 Eh2† 55.Qg4 Ee2† 56.Qh3 Qe3† 57.Qh4 Qe4† 58.Qh5 Qe2† 59.Qh6 Qh2† 60.Qg6 Qg2† 61.Qf5+– Black is out of useful checks. Note that if the g-pawn is advanced one more square, it would be a different story.

Black's defence is deep. The idea is to create a scenario where a perpetual check can be given. 51...Eh8!! 52.g6 White has to push the pawn. 52...Eh8!! 52...b1=Q 53.Qxb1 Qf6 will be another initial attempt from anyone trying to solve this position, but White is winning: 54.Qb6† Qg7 55.Qg4 Qc8 56.Qe6 Ea8 57.Qf5 Qh6 58.Qe7 Qf8† 59.Qf7 Ec8 60.Qh8=Q† Exh8 61.Qf6+– 53.Qxf8 White has no choice, as 53...Qb1 Qf6 54.Qf1† Qe7 only repeats. 53...b1=Q 54.Qe8† 54.h8=Q Qxg6† 55.Qf4 Qd6† also gives a perpetual. 54...Qd7! 54...Qxe8 55.h8=Q† Qd7 56.Qf6† gives White a winning queen ending; the tablebases are shouting mate in 48! 55.Qd8† Qc7!! The final key move. We already know the rook is immune, but we also have to work out that after 55...Qe7? 56.h8=Q Qxg6† White wins with 57.Qf4†, exploiting the control over the d6-square, followed by 57...Qf7† 58.Qg5!, leaving Black without any sensible checks. 56.h8=Q Qxg6† 57.Qf4 Qf7† 58.Qg5 Qe7†! The white king cannot escape the checks. It looks like a miracle, and indeed it is.


Carlsen made a mistake based on overlooking the last move of the game. This is quite understandable, even for the best player in the world, though I have the feeling that he was less forgiving of himself. 64.Qg2† d3! 65.Qa5† Qd4 66.Qa4† Qc3 67.Qa6 d2 68.Qc6† Qd3 69.Qd6† Qc2 70.Qc6† Qd1 71.Qd6 f4! Carlsen had of course predicted this move, without which Black cannot improve his position at all. 72.Qxf4 Qe2 73.Qe6† Qe3 74.Qxe3† Qxe3 75.Qh7 d1=Q 76.Qh8=Q Qf3† 77.Qg1 Qf2† 78.Qh1 Qf1† 79.Qh2 g3†! The queen is lost. Carlsen had of course realized this somewhere not long after his 64th move, but there is something to be said for allowing the spectators to catch up as well (or allowing the opponent to make a blunder and give away the draw). 0–1

The correct defence is: 64.Qf2† d3 After 64...f4 65.Qxf4† Qxf4 66.Qd6 Black cannot make substantial progress. 65.Qa5† Qd4 66.Qa4† Qc3 67.Qa3† Qc2 68.Qa2† Qb3 69.Qa6! d2 70.Qe2! The real difference. 70...Qh2† If Black exchanges pawns, White draws easily. 71.Qd1 Qc3 72.Qa3† Qd4 73.Qh7 Exh7 74.Qxd2 Qh2† 75.Qe1 White defends successfully.

15. Ivan Sokolov – Alexander Morozevich, Sarajevo 2008

White has the advantage for several reasons, the main one being the active position of his rook. Black also has no easy way of improving his position. Still, the same is true for White and the best he can do before striking would be to repeat moves. The best continuation is: 61.e5! The direct and tactical way, although Sabino Brunello found a more technical winning method: 61.fxg5? hxg5 (61...fxg5? 62.e5! wins immediately.) 62.Qe3 Black cannot move so
White simply improves the king. 62...��e7 (62...��g7 63.��d3 ��g8 64.��c4 ��f7 65.��a6 ��g7 66.��b5--) 63.��d3 ��a7 64.h6! ��f7 65.��d6 White wins. 61...��xe5 62.��xe5? White misses a not-too-difficult win after: 62.fxg5! hxg5 (62...fxg5 63.��e4 is hopeless for Black, who will never get to enjoy his extra pawn.) 63.��e4! White is in complete control. Black’s pawns will fall one after another, for example: 63...��g7 64.��xc5 ��a7 65.d6 ��a4t 66.��f6 ��d4 67.��e6 e4 68.d7 e3 69.��c2 ��f8 70.��e2-- 62...��xd5! 62...fxe5? 63.��e4 is what Sokolov must have been expecting.

63.��xf6† ��g7 64.��g6† ��h7 65.��e6† Throwing away all winning chances. It appears that Black could still have made a draw with perfect technique, but why not test him? 65.��e4! would have given Black far greater problems.

63...��xd5! 62...fxe5? 63.��e4 is what Sokolov must have been expecting.

63.��b5+ -) 63.��d3 ��e5 64.��c4 ��f7 65.��a6 ��g7 66.��b6 ��e7 67.��d3 e4 68.d7 e3 69.��c2 ��f8 70.��e2-- 62...��xd5! 62...fxe5? 63.��e4 is what Sokolov must have been expecting.

63.��xf6† ��g7 64.刬g6† 刬h7 65.刬e6† Throwing away all winning chances. It appears that Black could still have made a draw with perfect technique, but why not test him? 65.刬e4! would have given Black far greater problems. 65...刬d4† 66.刬f5 刬f4† 67.刬e6 c4! This is the best move, looking for active counterplay. (67...刬xg4? allows the white king to become too active: 68.刬b5+ 刬g7 70.刬xc5 刬e7 71.刬d6 刬d1† 72.刬e7 刬g1 73.刬f7 刬f1† 74.刬e8 刬g7 75.e7 g3 76.刬e6 刬e1 [76...刬g2 77.刬d2+--] 77.刬d2 刬g7 78.刬d8 刬f7 79.刬e7 刬f3 The pawn promotes.) 68.刬d5 c3 69.刬c6 刬f3 This position is fabulously confusing for the engines. White seemingly has it all: an active rook and king, as well as the better passed pawn. He can manoeuvre around as he wants to, but in the end the pawn is not reaching the 8th rank and Black holds the draw. A possible variation is: 70.e6 刬g7 71.刬c8 刬e3 72.刬d6 刬f6 73.刬f8† 刬g7 74.刬f7+ 刬g8 75.刬e7 刬d3† 76.刬e5 刬f3† 77.刬g8† 刬g7 78.刬d6 刬f3† 79.刬e7 刬f3 80.刬c4 刬h3 81.刬e8 刬f6! Black makes the draw, for instance 82.刬c6 (or 82.刬e7?!=) 82...刬e3 83.e7† 刬g7 84.刬g6† 刬h7 85.刬f7 c2 86.刬c6 刬f3† 87.刬e8 刬f2= and the dance continues. 65...刬e5 The white king is cut off and there are no longer any winning chances. 66.刬f6 刬g7 67.刬f7† ½–½


Ivanchuk lost his way completely and allowed Anand to escape with a draw after: 47.刬d5? 刬c3! 48.刬b6! 刬g6? (48...刬c1! 49.刬c6 刬g1 50.刬c5 刬xg4 51.刬b5 刬f4 52.刬a7 刬f8 53.刬a6 刬a8 54.刬c6 g4 55.刬b7 刬e8 56.a8= הממשלה 57.刬xh8 刬g6=) 49.刬d6? (Ivanchuk misses his second chance at the full point. White was winning after: 49.刬c6! 刬g3 50.刬c4 刬xg4† 51.刬b5 刬e4 52.a7 刬e8 53.刬a6 刬a8 54.刬c6 g4 55.刬b7 刬f8 56.a8=;++ 57.刬xh8 刬h6 58.刬e5=) 49...刬h6 50.刬b8 刬a3 51.刬a8 刬g7 52.刬c5 刬a1 53.刬b6 刬b1† 54.刬a7 刬b4 55.刬b8 刬xg4 56.刬b5 刬a4 57.刬xg5 刬b4 58.刬c5 刬h6 59.刬c6 刬h5 60.刬b6 刬f4 61.刬b5 g5 62.刬b6 刬f6† 63.刬a5 刬f7 64.刬b6 刬f6† 65.刬a5 ½–½

Ivanchuk gave the following winning move: 47.刬d4! 刬g3 48.刬c5 刬xg4 49.刬e5!! This is Ivanchuk’s idea. It is a variation of a common theme – cutting off the black king on the fifth rank. 49...刬g6 49...刬a4 50.刬b5 刬a1 51.刬xg5 刬h6 52.刬c5-- 50.刬a7 刬a4 51.刬b6 刬x7 52.刬a7 刬g4 52...刬h5 53.刬b6 刬h4 54.刬c5 g4 55.刬d4+ 53.刬b6 g3 54.刬c5 g2 55.刬e1 刬f5 56.刬g1 g5 57.刬xg2 刬f4 58.刬d4 g4 59.刬f2† 刬g3 60.刬e3 White wins.

After 47.刬c6 刬g3 White can only win with 48.刬f5!; but not 48..刬d5? 刬xg4 49.刬c4 刬g2 50.刬a4 刬d2† 51.刬c6 刬c2† 52.刬b6 刬b2† 53.刬a5 刬b8 54.a7 刬a8 55.刬b6 刬g6 56.刬b7 刬f8 and Black draws.

47.刬f5! also seems to win: 47...刬a3 (47...刬g6† 48.刬xg5+--) 48.刬xg5 刬a5† (48...刬g8 49.刬g6 刬f8 50.刬b6--) 49.刬f4 刬a4† (49...刬g8 50.刬b6 刬f7 51.刬b7† 刬g6 52.a7 刬a4† 53.刬e5--) 50.刬f5 刬a5† 51.刬e4 g6 52.刬d4 刬h6 53.刬c4 刬g5 54.刬b4 刬a1 55.刬b5 White wins easily.

So more than one solution exists, but it is tough enough to find just one of them!

41. c4! After 41. d4 f6 42. exf6 gxf6 43. bxc5 it is doubtful that White has any advantage at all. 41... f6 Obviously this is the critical move; Black might even have suspected that White had missed it. After 41... e7 42. b5 bxc5 43. bxc5± there may or may not be a forced win, but the position is highly unpleasant for Black. 42. b5!! fx e5 42... bxc5 43. bxc5±

41. ... f6 42. b5!! fxe5 42... bxc5 43. bxc5±

43. cxb6 c7 44. b7 b8 45. c6 e4! This is the only move that sets White practical problems. 45... d8 46. f3 places Black decisively in zugzwang, and after 45... f6 46. c7 e8 47. b8= w bxb8 48. wxb8 e4 49. c7 e5 50. d7 White wins trivially.

46. c7 d8 When assessing the variation with the rook sacrifice, it is quite likely that we would arrive at this position and decide that it was not winning. The reason is that forcing thinking might cloud our judgement and have us rush to take back the material. However, this was not the way Nataf approached the position, and a masterpiece was created. 47. a3!! White is in no hurry. Black cannot improve his position, so Nataf prepares optimally for the pawn ending. 47. b8= w? bxb8 48. wxb8 d6! 49. a3! (49. b7 c5! is a draw; White needs to win a tempo to go to e5 in a straight line.) 49... c5 50. c7 d4 51. d6 c3 52. b4 axb4 53. axb4 cxb4 54. cxe6 (54. c5 c5 55. xe4 d6= might look uncomfortable for Black, but it is just a draw, as White cannot make any progress.) 54... c4 55. f7 d3 56. xg7 e2 57. f4 f2 The ensuing queen ending should be drawn, although Black will have to make some accurate moves to prove it. Interestingly, 47. g3! also wins, but it is a strange move to consider. We will focus on the game continuation, as Nataf’s move is more obviously useful and an easier move to understand. 47... e5 This is not a pleasant move to make; it is only to White’s advantage that the e-pawns are brought together. However, Black does not have any other sensible moves. For instance, 47... d7 48. b6 d8 does not make White’s task any harder. After 49. xa5! Black still cannot create a passed pawn while White has plenty. 47... c8 48. b4! axb4 49. axb4 also improves White’s position in the impending pawn endgame. 48. b8= w Now this wins easily. 48... b8 49. b8 d6 50. b7 c5 51. c7 d4 52. d6 c3 53. b4 axb4 54. axb4 b4 55. xe5 1-0
Chapter 8 – Complex Rook Endings

Eljanov – Van Wely, Wijk aan Zee 2008

Collins – Daly, Bunratty 2013

Kuzubov – Burdakov, Alushta (1.2) 2011

Ding Liren – Rapport, Biel (var) 2013

Van Wely – Safarli, Antalya 2013

Inarkiev – Aagaard, Torreleva 2007

This position is an excellent illustration of the theme of comparison, which is discussed in more detail in Chapter 4 of Calculation. Again I would like to ask anyone to start with that volume and only work through the present book after finishing Calculation, or at least in conjunction with it.

52...@f7? 53.£b6 £a4 54.£b7† The rook is much more restrictive on the 7th rank, which is why it was wrong to force it to go there. 54...@e8 It may look as though Black is winning a tempo in his race for the queenside, but this is an illusion. The white king is matching the file of the black king anyway; and the race is from the 8th rank to the 1st, not from left to right (or right to left depending on the side on which you are sitting). 54...£f8 55.£c6 £f4† 56.£g5 £b4 This does not work in the same way as in the solution, as Black is losing a tempo advancing up the board. 57.£a7 a4 58.£xh5 £e8 59.£g5 £d8 60.£f5 £c8 61.£e5 £b8 62.£a5 £h4 63.£d6 £b7 64.£b5† £a6 65.£b8 £h5 66.£c6 £a5 67.£g8! White draws. 55.£e6 £e4† 56.£f5 £b4 57.£a7 a4 58.£e6 £d8 59.£e6 £c8 60.£c5 £h4 61.£c6 £b8 62.£b7† £a8 63.£b5 £a7 64.£b7† £a8 65.£b5 £c4† 66.£b6 h4 67.£h5 £b4† 68.£a5 £g4 69.£b6 £b4† 70.£a5 £g4 71.£b6 £g6† 72.£b5 £g4 ½–½

52...£f8!! This move is vitally important. The point is that the white rook will not win a tempo giving a check on the 7th rank. It is amusing that, in order for the king to march up the board faster, it will have to retreat first. 53.£f1 £f4 54.£f5 £f6 55.£f4 £f4 Black has won an important tempo, which decides the outcome. 58.£g5 £d7 59.£f5 £c7 60.£e5 £b7 61.£a5 £c6 62.£a8 £h4 63.£e6 £c5 64.£e5 £b4 Black wins.

19. Yuriy Kuzubov – Kirill Burdalev, Alushta (1.2) 2013

In the game Black was lost after 73...£e3? 74.£f4 75.£c6! He soon went down hard after: 75...£b1† 76.£xf2 £b2† 77.£f1 £f3 79.£f8† £e3 80.c7 £b1† 81.£g2 £g1† 82.£h2 1–0

73...£e4? also does not work after 74.c6 £b1† 75.£xf2 £b2† 76.£g3 and White wins.

73...£d5!! It was deadly important to get the white rook off the 8th rank before attempting counterplay. The reason for this becomes apparent in our main line. 74.£c7 £e4!! This is the hard move psychologically. The king returns to the centre in order to provide the f-pawn with the necessary support. 75.£b7 75.£e7† £d5! is not an improvement for White. We should also consider 75.£d7?! trying to cut off the king. Here there are two ways to make the draw. 75...£e3 (75...£b1† is simpler, and after 76.£xf2 £b2† 77.£g3 £g2† 78.£h3 £g8! 79.c6 £f2 80.£f7 £d5 81.c7 £c6 Black draws.) 76.£d1 (After 76.£e7† £d4= White is suffering from not controlling the promotion square.) 76...£f4 77.£d8 £b1† 78.£xf2 £b2† 79.£e1 £b1† 80.£d1?! A needless risk to prolong the game. 80...£b2 81.£c1 £g3 White’s only defence is 82.b7! £xb7 83.£d2 £f2 84.£d3 when the c-pawn guarantees the draw. 75...£b1† 76.£xf2 £b2† 77.£g3 £g2† 78.£h3 £g8! 79.c6 £f7 £d5!= 79...£d5! Black draws.

20. Loek van Wely – Eltaj Safarli, Antalya 2013

Surprisingly, White only has one drawing move. 40.£c4? This is not it. £xf4 41.£xb4 £f1 42.£b5 £d2 43.£c3 £xf2 44.£d3 £xf3† 45.£e2 £g3 Black wins easily. 46.£b8 £f2† 47.£e1 £f4 48.£g8† £f3 49.£f8 £h2 50.£f7 £h1† 51.£d2 £f1 52.£g8 £g2 53.£g8† £f2 54.£g3 £g1 55.£d2 £f3 56.£h8 £e7 57.£h2† £g1 58.£h8 £g7 0–1

40.£e3? £b8 41.£b3 £b7! leaves White in zugzwang. He will have to go into a passive
position to avoid losing immediately: 42.\texttt{\texttt{d}2} (42.\texttt{\texttt{d}4}?! \texttt{xf}4 43.\texttt{\texttt{c}4} \texttt{f}5\rightarrow) 42...\texttt{xf}4 43.\texttt{\texttt{c}2} \texttt{f}5 44.\texttt{\texttt{d}2} \texttt{a}7! 45.\texttt{\texttt{e}1} (After 45.\texttt{xb}4† \texttt{xf}3 the f2-pawn is facing the sand running out.) 45...\texttt{a}4 46.\texttt{\texttt{e}2} \texttt{e}5 The black king comes to c4 and decides the game.

40.\texttt{\texttt{c}5}!! is the only move, enabling the rook to become active on the 4th rank. 40...\texttt{\texttt{f}2} 41.\texttt{xb}4 \texttt{xf}2 42.\texttt{\texttt{d}6} White draws. 41.\texttt{xb}4† \texttt{xf}3 42.\texttt{\texttt{d}4}† \texttt{e}8 43.\texttt{\texttt{d}5} Black is better, but not enough to win.

21. Sam Collins – Colm Daly, Bunratty 2013
We are continuing this game from page 142.
At this point White went astray. 60.\texttt{\texttt{g}3}? A natural move; unfortunately it is too slow. 60...\texttt{e}4! 61.\texttt{\texttt{g}6} \texttt{e}3 61...d3 62.\texttt{h}5 \texttt{d}2 63.\texttt{c}7! would give White better defensive chances. 62.\texttt{h}5 \texttt{e}2 63.\texttt{\texttt{g}1} d3 64.\texttt{h}6 \texttt{d}2 65.\texttt{h}7 \texttt{e}1=\texttt{\texttt{g}1}! 65...\texttt{d}1=\texttt{\texttt{g}1}! 66.\texttt{\texttt{d}1}† \texttt{xd}1=\texttt{\texttt{g}1} 67.\texttt{h}8=\texttt{\texttt{g}1} \texttt{xb}3† was more accurate, but Black is still winning after the text move. 66.\texttt{h}8=\texttt{\texttt{g}1} 67.\texttt{d}8† \texttt{e}4 68.\texttt{\texttt{d}2} \texttt{\texttt{b}6}† 69.\texttt{\texttt{a}8} \texttt{\texttt{a}6}† 70.\texttt{\texttt{b}8} \texttt{\texttt{b}5}† 71.\texttt{\texttt{a}7} \texttt{\texttt{b}3} Theoretically Black is winning in 59 moves, which in practice means that 46 moves were played and a draw agreed.

The drawing line is remarkable. 60.\texttt{h}5! \texttt{gxh}5 61.\texttt{b}4!! Black gets a winning queen ending after 61.\texttt{\texttt{f}5}? d3 62.\texttt{c}7 d2 63.\texttt{\texttt{f}6} \texttt{e}4 64.\texttt{\texttt{d}6} \texttt{e}3 65.\texttt{b}4 \texttt{h}4 66.\texttt{b}5 \texttt{h}3 67.\texttt{b}6 \texttt{h}2 68.\texttt{b}7 \texttt{h}1=\texttt{\texttt{g}1}! 69.\texttt{b}8=\texttt{\texttt{g}1} \texttt{c}1† Taking a queen immediately would allow perpetual check if White does not take on d1. 70.\texttt{c}6 \texttt{d}1=\texttt{\texttt{g}1} 71.\texttt{\texttt{f}1} \texttt{xc}1† \texttt{xc}1=\texttt{\texttt{g}1} Black wins in 52 moves. 61...\texttt{f}4 61...\texttt{e}4 62.\texttt{\texttt{f}5}† \texttt{c}4 63.\texttt{\texttt{f}5} \texttt{e}4 64.\texttt{b}5 \texttt{h}4 65.\texttt{b}6 \texttt{h}3 66.\texttt{b}7 \texttt{h}2 67.\texttt{c}7 (67.\texttt{h}5 also draws, but not as cleanly.) 67...\texttt{h}1=\texttt{\texttt{g}1} 68.\texttt{b}8=\texttt{\texttt{g}1} Black is the one who needs to prove the draw with 68...\texttt{\texttt{h}7}†!. 62.\texttt{b}5 \texttt{e}4 62...\texttt{c}5 63.\texttt{c}7! is not an improvement, though Black still draws. 63.\texttt{f}1 63.\texttt{\texttt{b}3} d3 64.\texttt{\texttt{b}1} is similar. 63...\texttt{e}3 64.\texttt{b}6 \texttt{e}2 65.\texttt{b}1!! The only square. It is important that the rook is protected. 65...\texttt{f}3 66.\texttt{b}7 \texttt{f}2 67.\texttt{a}8 \texttt{e}1=\texttt{\texttt{g}1} 68.\texttt{b}8=\texttt{\texttt{g}1} \texttt{\texttt{w}5} White makes a draw, as 68...\texttt{f}1=\texttt{\texttt{g}1} 69.\texttt{\texttt{d}8}† ends with a perpetual.

22. Ding Liren – Richard Rapport, Biel (variation) 2013
In the game Black played 30...\texttt{d}4-g7 and lost most of his advantage. But analysis shows that also after the stronger 30...\texttt{h}8! White would be able to make a draw.

31.\texttt{\texttt{f}6}!! If White does nothing, Black will advance the c-pawn and slowly win the game. But surprisingly there is enough counterplay if the queens are exchanged! 31...\texttt{xf}6 32.\texttt{\texttt{f}6} This looks slow, but it is good enough. 32.\texttt{xf}6? \texttt{\texttt{c}8} wins for Black. 32...\texttt{c}4 33.\texttt{\texttt{g}6}! \texttt{c}3 Black appears to be winning, but White has a brilliant resource. 34.\texttt{h}5!! 34.\texttt{\texttt{f}6}? is too slow. 34...\texttt{c}8 35.\texttt{\texttt{f}1} \texttt{b}5 The following line illustrates how Black’s win might come about: 36.\texttt{\texttt{c}1} \texttt{c}4 37.\texttt{h}5 \texttt{b}4 38.\texttt{\texttt{f}3} a5 39.\texttt{h}6 \texttt{a}4 40.\texttt{\texttt{e}2} \texttt{g}4 41.\texttt{\texttt{d}3} \texttt{\texttt{g}5} 42.\texttt{\texttt{c}4} \texttt{g}4 43.\texttt{\texttt{b}5} a3 44.\texttt{\texttt{a}4} \texttt{h}4 45.\texttt{\texttt{b}3} \texttt{h}7 46.\texttt{\texttt{e}1} \texttt{\texttt{h}6} 47.\texttt{\texttt{f}6}† \texttt{g}5 48.\texttt{\texttt{d}6} \texttt{h}1 With...\texttt{\texttt{b}1}† coming, Black wins. The clever point behind the text move is that it not only wins a tempo for advancing the pawn, but also helps to push the black king away. It is rather surprising that White manages to save the draw here. The following lines are not meant to be conclusive, though you can trust the conclusions. Black can try many ideas, but none of them will win against accurate defence. 34...\texttt{c}2

Black can easily get himself into trouble, as the following surprising line shows: 34...\texttt{c}8 35.\texttt{h}6† \texttt{g}7 36.\texttt{\texttt{g}6}† \texttt{f}7 37.\texttt{\texttt{f}6}† \texttt{e}7 38.\texttt{\texttt{e}6}† \texttt{d}7? 39.\texttt{g}6! \texttt{c}2 40.\texttt{\texttt{e}1} \texttt{\texttt{e}8} 41.\texttt{\texttt{c}1} \texttt{\texttt{e}5} 42.\texttt{g}7† \texttt{g}5† 43.\texttt{\texttt{f}3} \texttt{\texttt{g}7} 44.\texttt{\texttt{c}2} and White wins.
34...\textit{e}2\texttt{t} 35.\textit{g}g3 \textit{e}3\texttt{t} 36.\textit{g}g4 \textit{e}4\texttt{t} 37.\textit{g}g3 \textit{e}5 38.\textit{h}h6\texttt{t} \textit{g}7 39.\textit{x}x\textit{d}6 \textit{x}x\textit{g}5\texttt{t} 40.\textit{f}f4 \textit{x}x\textit{h}5 41.\textit{d}d7\texttt{t} \textit{f}6 42.\textit{x}x\textit{b}7 is a draw.

34...\textit{e}5 35.\textit{h}h6\texttt{t} \textit{g}7 36.\textit{x}x\textit{d}6 \textit{x}x\textit{g}5\texttt{t} 37.\textit{f}f3 c2 38.\textit{d}d7\texttt{t} \textit{f}6 39.\textit{c}c7 \textit{x}x\textit{d}5 40.\textit{x}c2 \textit{x}x\textit{h}5 reaches a tablebase draw, though some play remains.

35.\textit{h}h6\texttt{t} \textit{g}8 36.\textit{g}g6\texttt{t} \textit{f}8 37.\textit{e}e7 38.\textit{f}f1 \textit{e}8 38...\textit{h}h8 39.\textit{h}h6 \textit{g}8 40.\textit{c}c1 \textit{x}x\textit{g}5\texttt{t} 41.\textit{f}f3 \textit{x}x\textit{d}5 42.\textit{x}x\textit{c}2 White draws. 39.\textit{c}c1 \textit{e}5 40.\textit{f}f3 \textit{b}5 40...\textit{x}x\textit{d}5 41.\textit{x}x\textit{c}2 \textit{x}x\textit{g}5 42.\textit{c}c7\texttt{t} White draws. The main line is the last active try. Here I prefer to push the pawn. 41.\textit{h}h6 \textit{f}7 42.\textit{h}h7 \textit{g}7 43.\textit{g}g6 a5 44.\textit{e}e2 \textit{b}4 45.\textit{h}h1 \textit{c}c8 46.\textit{d}d2 \textit{x}x\textit{g}6 After 46...\textit{a}4 47.\textit{h}h8=\texttt{t} \textit{e}x\textit{h}8 48.\textit{x}x\textit{h}8 \textit{x}x\textit{h}8 49.\textit{x}x\textit{c}2 the pawn ending is a draw. 47.\textit{c}c1 \textit{g}7 48.\textit{h}h8=\texttt{t} \textit{e}x\textit{h}8 49.\textit{h}h8 \textit{x}x\textit{h}8 50.\textit{x}x\textit{c}2 a4 51.\textit{d}d3 The pawn ending is a draw by some margin.


After a scary opening and a difficult middlegame (an exchange down) I had come close to saving this still-lost endgame. Here Ernesto made a practical decision rather than delve into the position and solve the problems it posed.

Ernesto played 45.\textit{g}g8\texttt{t}? relatively quickly. After this Black should draw. 45...\textit{x}x\textit{h}6 46.\textit{g}g3 \textit{a}5! 47.\textit{b}xa5 \textit{b}a6 48.\textit{e}e5 \textit{e}xa5 49.\textit{d}d6 \textit{a}8 50.\textit{c}c6 \textit{b}8 51.\textit{c}c7 \textit{e}8 52.\textit{b}b6 \textit{b}b8\texttt{t} 53.\textit{a}a7 \textit{e}8 54.\textit{b}b6 54.\textit{b}b3 \textit{e}4 55.\textit{b}b6 \textit{g}8 56.\textit{c}c6 \textit{b}b8 57.\textit{b}b3 Here I could have saved the game with 57...\textit{a}8 58.\textit{x}x\textit{b}5 \textit{b}b8\texttt{t} 59.\textit{c}c4 \textit{x}c8\texttt{t}? 60.\textit{d}d5 \textit{e}a8! but instead lost after: 57...\textit{g}7?? 58.\textit{a}4! \textit{b}4 59.\textit{a}5 \textit{e}a8 60.\textit{b}b6 \textit{b}b8\texttt{t} 61.\textit{c}c5 \textit{f}6 62.\textit{a}6 1–0

45.\textit{g}g8\texttt{t}! was suggested by a young Sabino Brunello, although he did not find the follow-up. 45...\textit{h}h7?? This is the trickiest reply. One of the main ideas is that 45...\textit{a}5 is strongly met by 46.\textit{e}e5\texttt{t} when White wins in all lines: 46...\textit{a}4 (46...\textit{a}xb4 47.\textit{a}xb4 \textit{c}c4\texttt{t} 48.\textit{e}e4 \textit{e}c1 49.\textit{g}g5 \textit{x}x\textit{h}6 50.\textit{d}d6\texttt{t}) 47.\textit{e}e5 \textit{c}c4\texttt{t} (47...\textit{e}e3 48.\textit{g}g5\texttt{t} \textit{x}x\textit{h}6 49.\textit{g}g3 \textit{b}b3 50.\textit{e}e3 White wins, as the king soon approaches.) 48.\textit{g}g3 \textit{c}c3\texttt{t} 49.\textit{d}d4 \textit{e}xa3 50.\textit{b}b6 \texttt{h}7 51.\textit{c}c4 White wins. 46.\textit{e}e7\texttt{t} \textit{h}h8 47.\textit{e}e3! White has won a vital tempo compared to the game. 47...\textit{e}x\textit{h}6 48.\textit{e}e5 \textit{g}g8 49.\textit{f}f3! \textit{h}4 49...\textit{g}7 50.\textit{d}d5 \textit{g}6 51.\textit{c}c5 \textit{e}e6 52.\textit{d}d3 \textit{f}7 53.\textit{e}e6 White wins. 50.\textit{d}d5 a5?? 50...\textit{h}6 51.\textit{c}c5 \textit{e}g6 52.\textit{d}d3+– 51.\textit{c}c5 \textit{h}5 52.\textit{c}c6 a4 53.\textit{b}b6 \textit{d}5 54.\textit{a}a5 \textit{g}7 55.\textit{c}c3 \textit{f}7 56.\textit{c}c5 \textit{d}3 57.\textit{e}x\textit{b}5 \textit{e}xa3 58.\textit{e}e5 \textit{e}a1 58...\textit{f}6 59.\textit{e}e1 \textit{a}2 60.\textit{b}b5 a3 61.\textit{e}e3!– 59.\textit{b}b5 a3 60.\textit{e}e3! White wins.

Hector played: 52.g6? 53.g4 a3 and his pawns are no less dangerous than the White ones. 55.e1 e2 56.a5 a1=8 White cannot hurt his opponent with his rook tied down this way. 53.g4 e4 54.g7?? 54.e6 would have won easily. This is the moment of the game that Hector probably regretted the most, whereas the win two moves earlier was harder to find. 54...g8 55.f7 f6 56.g5 a3 57.g6 a2 58.f1 e3 59.f7 e2 60.f1 h1 g7 61.f1 c5 62.f1 h4 c4 63.f1 h5 c3 64.f1 h6 c2 65.f1 h7 e1=8 66.f1 c1 ½–½

52.g6? also does not work: 52...e4 53.g4 c4! 54.e2 d4?! (It is too early for 54...d2: 55.e3 xh2, as White wins with 56.a3!) 55.f5 (An important point is that 55.h5 d2! draws immediately.) 55...d5 (55...d2? loses the a-pawn after 56.e3 xh2 57.e3 h4 58.g6 when the black rook has too many responsibilities.) 56.f6 (56.f4 allows 56...d2!, as after 57.e3 xh2 58.e3 c6 the king comes in to protect the a-pawn: 59.g3 h5 60.g4 xg5 61.xg5 b5 with a textbook draw.) 56...d6 (Black has to be careful. After 56...a3: 57.e3 a2 58.e1 d6 59.f5 d5 60.g6 White wins.) 57.f7 (57.f7 d2 58.e3 xh2 59.g3 c6=) 57...d2 58.e3 xh2 59.e3 h4 60.g6 b6 61.g7 f4+ 62.e7 g4 Black is in time and draws easily.

The only winning move is a surprising one. The idea is that White needs to keep an eye on both of the black pawns before they become dangerous. 52.f1!! By retreating the rook all the way to f1, White avoids Black's counterplay against the h-pawn based on ...d2, which is the saving resource in the above lines with the rook on f2. 52...e4 52...d3+ 53.f4 only helps White. 52...c6 53.g6! d6? (53...e4 54.g4 changes nothing.) 54.g1 a3 55.h4 a2 56.g7 d8 57.g5 White wins. 52...a3 53.e3 a5 54.g4 e4 55.h4 e3 56.g6 also wins. 53.g4 e3 53...d2 54.h4 e3 55.e1 e2 Here both pawn advances win, but the simplest is the one with the h-pawn, as the newly promoted queen will cover the a1-square from h8. 56.h5! a3 57.h6 a2 58.h7+ 54.e1 d4 54...a3 55.e3 a2 56.e3 d2 57.h4 wins elementarily. 55.h5! Once the king hides from the checks, it will be clean sailing. 55...a3 55.e4 56.g6 is hopeless for Black. 56.e3 a4 57.e1 a2 58.ea1 White wins easily on the kingside.


Humpy played: 44...h5?? This is a weird choice as it offers no real resistance. White won without any difficulties. 45.f3 g5! was even stronger. 45.e3 46.e4 c4 47.e3 a6 48.a7 h6 49.f6+ f8 50.g3 h4 51.h3 e8 52.f5 d7 53.f4 h8 54.g5 h8 55.e6+ fxe6 56.d3+ 1–0.

44...e1! was the beginning of a difficult operation that would have saved the game. 45.f3 45.a7?? offers no problems for Black and was probably not the reason why Humpy avoided this line. 45...a7 46.f3 a7 47.f6+ f8 48.a7+ a7 49.f6 g6 50.f5 h7!! 51.g7 f6+ h7= 45...f1?! Maybe Humpy only considered 45.f1?, which at first glance seems to just lose to 46.f6!, exploiting the pin. However, Sabino Brunello pointed out that things are not so simple after 46...e6 47.a7 f5. At this point White only wins with 48.8h8!! a7 49.a7 h6, when he is either delivering mate on f6, or winning the rook after 49...g6 50.h5 e6 51.f5. 46.e3 Again this seems to be the only winning plan, otherwise Black will continue to deliver checks. For instance, 46.e3 g6 is an instant draw. 46.e1+ 46...g1 47.f6+ e6 48.f2!! e4 49.f3 spells the end for Black, due to 49...f5 50.e6!! and White wins.
49...h5 loses, either to 50.fxg7 hxg7 51...h6!!, or to 50.fxg7 hxg7 51...h8 hxg7 52...h6!! with zugzwang. Sabino Brunello suggested the following interesting defence: 46...f6 47...xg7+ f8 48...g6 fxg6 49...f6+ e7 50.fxe5 e1+ 51...f4 f1+ 52...g4 e1. However, White is winning with direct play: 53...h5 (53...e6+ also seems to work.) 53...e5xe5 54...g6 e1 55...f7+ e8 56...e1 e7. 57...h6+ h1 58...e8+ f7 59...g6 g1+ 60...f7 e1 61.f6 h5 62...g7 e1+ 63.f8 h1 64.f7 h4 65.g7 g1+ 66...h6= 47...f2 h1!! This is the spectacular drawing idea. It is essential to kill the white pawns' mobility. This can only be done by attacking the f5-pawn, forcing it to go forward. Once this happens, the black king becomes active and White has no winning chances whatsoever. 48...xg7 e5 49...f6+ White can also try to activate his rook with 49.g1 e5 50.f3, but it is clearly not enough. Black can take on f5 and draw slowly, or he can draw instantly with 50.f6!? (50...h5 is a draw as well, of course) 51...e4 h5 52...f7+ f8 53.exf6 f6. White cannot make sensible progress. 49...f6 50...h7 h1 White cannot improve his position in a meaningful way. 50...h3 51...g2 e3 52...e6 f5 53...e4 e3 looks like a draw as well. 51...g2 h4 52...g3 h1= If White moves his rook to the 8th rank, Black plays ...f5 and achieves a draw quite quickly.

The game ended: 39...e6! 40...a1 b4 41...c1 f6 42.c1 d6 43.a1 d4 44.a5 d5 45...e2 c6 46...d2 a6 47...b1 c5 48...b6 e5a5 49...xg6 e2+ 50.g1 f3 51.d2 a5 52.g8 e2a2 53.d3 1/2-1/2

The winning line went: 39...e1+ 40...e1 b4! The attack on the a-pawn is used to gain a tempo. 40...d4? with the idea of dominating the white king does not work. Because there is no threat to the a-pawn, White has time to play 41.d2 and the game is drawn in more ways than one. 41...g4! The most natural move is 41.f4, as this is the candidate pawn, but it is better to start by advancing the pawn furthest away from the black king. 41...d2? e4 wins easily for Black; the white pawns are too far back for such a sacrifice to work. 41...c3!! Domination in the pawn ending. 41...c4? 42.d2! (or to e2) secures the draw relatively easily. 42...d4 43.c2 e4 44.a5 White has enough counterplay; the main idea is of course 44...f3 45...d3 with a draw on the horizon. 44...f4 42.a5...d3 wins. 42...d1 does little for White's position, for instance 42...d3 43.a5 e6 44.e1 d4 45.d1 g5 and Black wins. The main line gives Black only one winning move. 42...d4!! This move is not so difficult when you are here, but to be able to see the entire manoeuvre of the king from c5 to b4, c3 and d4 is not at all easy.

27. Artyom Timofeev – Aleksandr Shimanov, Warsaw (rapid) 2011
In the game Black played: 47...e5? A mistake, but a forgivable one. Black should not free the white king. 48.fx5 a3 49.e6 a2 50.c7 f4 Black resigned before White could capture the pawn. Also after 50...b2 51.f4 a1=82 52.axa1 xxa1 53.xf5 e8 54.g6 and 50...h7 51.e8=87 e7a5 52.b8= White wins trivially. 1–0

The fabulous 47...a3!! would have led to a draw. There are two main lines:
48.e6 a2 49.c7 e8!! 50...g3 50...e3 allows two draws, of which 50...a1=82 is the simplest. 50...b2 At this point White needs to start thinking about bailing out with: 51...b7+– After 51...h4 h8! White needs to give up the e-pawn to make the draw. A careless move like 52.g3? even allows Black to win: 52...a1=82 53.axa1 xxa1 54.e3 e3 54...b2 55.e3 e3+ 48.exf6 a2! 48...c4 49.xa3 x5 50.a7 e6 51.f7 f6 52.g3 e8 53.h4 g7 54.g5 e7 wins for White. 49.f7 e2 50...e2 d8!! White cannot make any progress
228 Grandmaster Preparation – Endgame Play

51... $e_7$! is the best attempt, but Black draws with: 51...$a_1=\text{w} 52...\text{xd}8 \text{a}6^\dagger 53...e_3 \text{a}3^\dagger 54...d_3 54...f_2 \text{c}5^\dagger 55...g_2 \text{c}6^\dagger= 54...\text{e}7^\dagger Black has checking squares on $e_4$, $b_4$ and $h_4$, enabling him to all secure the draw.

Vitali Teterev – Tigran Petrosian

Rogaska Slatina 2011

It looks as if White is winning in all lines, but actually this is a rather famous theoretical position, made difficult. In 1946-48 Kasparian made six studies where he investigated this ending, the most famous one being $W$: $a_1, E!:h_7, g_6, h_5 \ B$: $g_8, E!:g_3$. White famously wins with 1...$e_2!!$ with the idea that when the black rook is on $h_3$, White wants to play $e_2-f_2$. It is all about avoiding Black's ...$E!:g_5^\dagger$ in the end, picking up the g6-pawn. In our version the action has been pushed to the 1st rank, but the issue is the same. The mutual zugzwang position will arise; but who will be to move?

69...$h_6^\dagger$! A forgivable mistake in an increment situation, but hopefully those spending more time at home were able to solve this rather difficult exercise. 69...$h_5 70...c_1$! Also after 70...$g_6 \ f_6 71.h_5 \ g_7 72.h_7^\dagger \ g_8 73.e_1 \ g_2 74.f_1 \ h_2$ we reach mutual zugzwang. 70...$g_2 71...b_1 \ h_2^!$! Accurate play. After 71...$e_2? 72.g_6 \ f_6 73.h_5 \ g_7 74.h_7^\dagger \ g_8 75.f_7 \ h_2 76.f_5$ White wins. 72...$g_6 \ f_6 73.h_5 \ g_7 74.h_7^\dagger \ g_8 75.e_1 \ g_2^!$ Black's moves are not too difficult, but they have to be accurate. 76.$d_1 76.E!:f_7 \ g_5^! 77.h_7 \ g_2$ is another nice way to end the game. 76...$h_2 77.e_1 \ g_2 78.e_1 \ h_2^!$ The key position. White is unable to make progress. 79.$g_1 \ a_2 80.h_1 \ b_2 81.h_6 \ b_6 82.E!:g_7^\dagger \ h_8 83.g_2 \ b_2^\dagger 84.g_3 \ b_3^\dagger 85.f_4 \ b_4^\dagger 86.e_5 \ b_5^\dagger 87.d_6 \ b_6^\dagger 88.c_7 \ b_7^\dagger 89.xb_7$ Stalemate! $\frac{1}{2}^\dagger$

69...$h_7^\dagger$! $f_5$ 70...$h_6^!!$ works in exactly the same way, thus ruining the position for the puritans, but making it much more real and difficult for the practical player, trying to improve his decision-making.

The right idea for White was to lose a move. 69.$h_8^!!$ $f_5$ Black's only alternative is to throw in a lousy check on $h_1$, forcing the white king into the game. 70.$h_6^!!$ The brilliant idea. We are heading for the mutual zugzwang spot, but with Black to move this time. 70...$g_2 71.e_1 \ f_4 72.g_6 \ e_3 73.f_1 \ f_2^!$ There are other moves, but most sensible continuations will end up
at the same mutual zugzwang position. 74.\texttt{g1} \texttt{f4} 75.\texttt{g2} \texttt{g4†} 76.\texttt{h3} \texttt{f4} 77.\texttt{h5} \texttt{g3†} 78.\texttt{h2} \texttt{f3} 79.\texttt{h7} \texttt{g2†} 80.\texttt{h1} \texttt{g5} This is the place we started the exercise. White needs to put Black in zugzwang.

28.
This is probably not too gruelling to solve; simply because I have chosen the moment where White is out of alternatives. Still, I assume that you have a plan beyond just the first move.

81.\texttt{h2} is met by 81...\texttt{g2†} and the king has nowhere to go but back to \texttt{h1}.

81.\texttt{h8} \texttt{f2} does not make any progress for White. The best continuation is 82.\texttt{h7} \texttt{f3} when it is time to find \texttt{h6}!!.

81.g7? traps the white rook. 81...\texttt{f2} 82.\texttt{h2} \texttt{f3} 83.h6 \texttt{h5†} 84.\texttt{g1} \texttt{g5†} 85.\texttt{f1} \texttt{a5} Black makes a draw à la Horwitz and Kling, who published their book \textit{Chess Studies} as long ago as 1851!

81.\texttt{f7†} \texttt{e4} 82.\texttt{h2} \texttt{xh5†} 83.\texttt{g3} would win if it was not for 83...\texttt{g5†} drawing immediately. This might look like a silly observation; but if you think schematically (see page 324), it is not so.

Almost by elimination we find the following idea: 81.\texttt{h6!!} \texttt{e2} 81...\texttt{g3} 82.g7! is a direct win. 81...\texttt{g4} 82.\texttt{h8} is similar to the main line and 81...\texttt{e4} 82.\texttt{h2} should transpose, as after 82...\texttt{f4†}! 83.\texttt{h7} White is on his way to victory. 82.\texttt{h2} \texttt{f3} 83.\texttt{h8}!! This is the point. White is ‘losing’ a move. 83.\texttt{g2†} 84.\texttt{h1} \texttt{g5} 85.\texttt{h7}! We are back at our starting position (at least for the exercise), but this time it is Black to play. 85...\texttt{f4} 86.\texttt{h8}! Zugzwang again. 86.\texttt{f7†} \texttt{e5} 87.\texttt{h7} \texttt{f4} just repeats. 86...\texttt{g4} If you remember the ‘silly’ observation regarding 81.\texttt{f7†}, you will now see that with the king one square up the board, White wins after 86...\texttt{f3} 87.\texttt{f7†} \texttt{e4} 88.\texttt{h3} \texttt{xh5†} 89.\texttt{g4} and there are no more checks on \texttt{g5}. 87.\texttt{f7†} \texttt{g5} 88.\texttt{h3} \texttt{g1} Now 89.\texttt{f1} is the direct win although, after making it through such a difficult rook ending, most people would prefer not to have to worry about winning with queen versus rook! 89...\texttt{h6} 90.\texttt{h8}! \texttt{g7} 91.\texttt{h7} \texttt{g8} 92.\texttt{h4} also wins over time.

29. Vadim Zvjaginsev – Krishnan Sasikiran, Khanty-Mansiysk (2.5) 2007

Something has been lost with the introduction of the FIDE time control. A friend of mine, who is highly esteemed both as a player and writer, recently told me he thought the 1960s was the golden age of chess. The reason was simple; there was more time for the players to think! I am not sure if this argument holds, but I do know that you will see a different level of chess in World Championship matches than you will in the World Cup – and I am talking about games played in some cases between the same players! The present endgame can be solved by a strong player (roughly from the level of titled and up) within about twenty minutes or so – but not with 30 seconds allocated for each move. As this was a rapid game, Black probably had even less time available when the position arose.

The game was won after poor play by both parties, but this is what you get in rapid games, even those involving world-class players. 55...\texttt{h3} Sasikiran probably played more with his fingers than with his head. 56.\texttt{a8}!! The best square for the rook in this type of endgame according to Dvoretsky. 56...\texttt{g6} 57.\texttt{h8†} But this is a blunder. 57.\texttt{a5†}! was correct, and after 57...\texttt{g5} 58.\texttt{a8}! White is drawing. 57...\texttt{h6} Now White will be stuck with a passive rook. 58.\texttt{f8} \texttt{g6} 59.\texttt{g8†} \texttt{f6} 60.\texttt{g1} \texttt{h2} 61.\texttt{h1} \texttt{g5} Nothing restricts the black king anymore. 62.\texttt{g3} \texttt{f6} 63.\texttt{f3} \texttt{h3†} 64.\texttt{g2} \texttt{g4} 65.\texttt{f2} \texttt{a3} 0–1
55...f6!! was the only winning move. Actually, it is not possible for Black to “move and win” here, and he must instead find the best plan. To do so it is sensible to know the few guidelines about what is important in this endgame. The first thing is that the defender wants to put his rook in the far corner, from where it can irritate the opponent’s king from the back and side, as well as keep an eye on the passers. The second is that the defender wants to put his king in front of the more advanced passed pawn, i.e. the h-pawn in the present case. Black cannot restrict the freedom of the enemy rook, but he can prevent the white king from making it to h2. As you will see, the winning line is all about this. The first objective is to stabilize the rook on g5, which explains the choice of first move. 56.\(\text{Ba8}\) \(\text{g6}\) Preparing to meet \(\text{h}8\) with \(\text{h}5\), when White will not be in time to squeeze his king in front of the h-pawn. 57.\(\text{Bg8}\)+ \(\text{h7}\)! This is the main point of the exercise: the rook is defended. It might seem rather simple, but the important thing was to ascertain White’s likely plan and to anticipate the last few moves. 58.\(\text{Bd8}\) \(\text{h3}\) Passed pawns must be pushed. 59.\(\text{Bd2}\) \(\text{g6}\)! 59...\(\text{h6}\)? is incorrect, as the h-pawn will be hanging with check. After 60.\(\text{Bh2}\) \(\text{h5}\) 61.\(\text{Bf2}\) \(\text{g5}\) 62.\(\text{Bg1}\) \(\text{g4}\) 63.\(\text{Ba2}\) White achieves the desired defensive formation, and draws. 60.\(\text{Bh2}\) \(\text{a5}\)\! The only way to make progress is to exploit the passive placement of the white rook to improve the pieces. 61.\(\text{Bg3}\) \(\text{a3}\)\!+ 62.\(\text{Bh4}\) Black has no easy way to make progress, but then again, what is White to play next? 62...\(\text{Bb3}\)! 63.\(\text{Bg4}\) 63.\(\text{Ba2}\) \(\text{f5}\) 64.\(\text{Ba6}\) \(\text{c7}\) 65.\(\text{Ba7}\) \(\text{c6}\) also wins for Black, as the white king is offside. 63...\(\text{f5}\)\!+ 64.\(\text{Bf4}\) \(\text{Bb4}\)\!+ The only way to make progress. 65.\(\text{Bg3}\) \(\text{g5}\)! Again exploiting the potential exchange of rooks to improve the pieces. 66.\(\text{Bd2}\) White is on his way to achieving the ideal placement of the king in front of the h-pawn. However, because his rook was passive for so long, it cannot make it to the back end of the board fast enough to fulfill its duties. 66...\(\text{Bb3}\)\!+ 67.\(\text{Bh2}\) \(\text{g4}\)\! 68.\(\text{Bd7}\) Passive play is no better. 68...\(\text{Bb2}\)\! The third and final rule of thumb in this endgame is an obvious one: the attacking side should strive to force the defending king to the back rank. 69.\(\text{Bg1}\) \(\text{f4}\) 70.\(\text{Bg7}\)\!+ \(\text{f3}\) 71.\(\text{Ba7}\) \(\text{e2}\) 72.\(\text{Bb7}\) \(\text{e4}\)! Black has achieved a lot with the placement of the rook and pawns, but he still needs to make something of the king. He can only do this with a zigzag manoeuvre. 72...\(\text{e3}\)! 73.\(\text{Bb3}\)\! enables White to draw. 73.\(\text{Be7}\)\!+ \(\text{d3}\) 74.\(\text{Bd7}\)\!+ \(\text{e3}\)! Now there is no check from the side. 75.\(\text{Be7}\)\!+ \(\text{d2}\) 76.\(\text{Bd7}\)\!+ \(\text{e1}\) 77.\(\text{Bf7}\) Being unable to harass the king any further, White turns to the little ones. 77...\(\text{Be4}\) Here White has two different defensive ideas, both of which can be dealt with elegantly. 78.\(\text{Bh2}\) 78.\(\text{Ba7}\)\! \(\text{f3}\)! 79.\(\text{Bf1}\) looks like a reasonable defence, but Black can dominate the white forces with a great line: 79...\(\text{e2}\) 80.\(\text{Ba2}\)\! \(\text{e3}\) 81.\(\text{Ba8}\) At this point a human player would surely prefer 81...\(\text{h2}\)\!+ 82.\(\text{Bxh2}\) \(\text{f2}\) with a simple win. However, the computer prefers 81...\(\text{Be7}\)!! 82.\(\text{Bb8}\) \(\text{g7}\)\! 83.\(\text{Bh2}\) \(\text{f7}\) 84.\(\text{Be8}\)\!+ \(\text{d4}\) 85.\(\text{Bd8}\)\! \(\text{e5}\) 86.\(\text{Be8}\)\!+ \(\text{d6}\) 87.\(\text{Bd8}\)\!+ \(\text{e7}\) 88.\(\text{Bd1}\) \(\text{f2}\) 89.\(\text{Bf1}\) \(\text{f3}\) when White is completely subdued. 78...\(\text{Bf2}\) White has obtained his ideal defensive set-up, but Black has achieved even more. Now comes a bit of shuffling of the pieces. 79.\(\text{Ba7}\) \(\text{Be3}\) 80.\(\text{Ba1}\) \(\text{Be1}\) 81.\(\text{Ba3}\) \(\text{Be8}\) 82.\(\text{Ba2}\)\! \(\text{f1}\) It is importantly to play this with the white rook on the second rank, so that ...\(\text{Be2}\)\! can be threatened in various lines. 83.\(\text{Bxh3}\) \(\text{Be3}\)!! The king must be pushed away. 84.\(\text{Bg4}\) \(\text{f3}\) 85.\(\text{Bf4}\) \(\text{Bb3}\) 86.\(\text{Bg3}\) \(\text{f2}\) 87.\(\text{Bh2}\) \(\text{f3}\)! Preparing the pawn for promotion. 88.\(\text{Ba1}\)\! \(\text{Be2}\) 89.\(\text{Ba2}\)\! \(\text{d3}\) 90.\(\text{Ba3}\)\! \(\text{e4}\) Black mates in another 17 moves according to the tablebase.
This game was played in the Danish league on board seven. It was quite intense with a lot of spectators, but clearly flawed by the exhaustion both players were experiencing at this point. The moves missed were great, but the ones played in the game were not so bad either!

43...b1? The first mistake in this ending is Black's. He could have won with 43...d4! 44.Wf4 d3 45.We3 because of the simple yet still hard-to-see 45...E'b3!. White cannot generate counterplay and after 46.Ef1 Ef7 47.h4 c5 48.f6 Ef6 Black wins slowly.

The text move brings us to our first test position from the game.

30.

44.e6? also does not save the game. Black wins after: 44...d4! 45.e7 (45.Wf4 Excl 46.Excl d3 47.Ee3 Excl 48.Ed2 prevents the immediate queening of the pawn, but even without the deadly ...c5-c4-c3†, White is in zugzwang.) 45...Exe7 46.Exb1 Exe1!! 47.Exe1 d3--+ One of the pawns will promote.

The solution was 44.Wf2!!, simply protecting the e1-rook and thus threatening the pawn on c2. Black still has some chances, but they are minimal against good defence. Here are the various options:

- 44...d4! (44...Exb2? 45.Exe2†; 44...E'b4 45.Excl 46.Exe1 Exe1† 47.Exe2 Exe2† 48.Exe2 Exf7=) 45.Eg1† Exf8 46.Exc2 Exg1 47.Exg1 d3 48.Ed2 Eb5 49.Exd3 Exe5 50.Ed8† Exf7 51.Eh8 Exf5 52.Exh7† Exd6† There are still some technical problems, but White should hold the draw.

44.Wf4? White returns the favour, overlooking the aforementioned drawing line. 44...Exb2? Black misses a win. After 44...E'b4† 45.Eg5 d4 the d-pawn is too powerful. Black feared the counterplay with the e-pawn, but after 46.e6 Excl 47.Excl d3 White has nothing.

45.e6 45.f6? was a bit stronger, but White still has drawing chances after the text move. 45...E'b4† 46.Exg5† 46.Ee5? is a mistake, when 46...d4 47.Ee4 reaches our second exercise.
31. Here the pundits (GM Lars Schandorff and I, in this case) were expecting White to save the game but, as you have no doubt discovered, he is entirely lost after 47...\textbf{b}3!!. Now after 48.e5 d3 and 48.f6 \textbf{x}h3 Black is just winning.

Returning to the game continuation, we have reached the third exercise.

32.

46...\textbf{xc}1?? This is where the game turned. We, the team mates, were quite depressed by this move, when we realized that it was now White who was winning.

46...d4! was the correct move. Here it is not easy to find 47.e7\textbf{e}8 48.f6 \textbf{b}8!, but it is possible. After 49.e5 \textbf{f}7 50.e4 \textbf{x}f6 51.xd4 \textbf{x}c1 52.xc1 \textbf{xe}7 53.xc2 \textbf{d}6 Black emerges a pawn up, although White still has drawing chances.

46...\textbf{b}8 is weaker. White plays 47.f6 d4 48.e7\textbf{e}8 49.e6 \textbf{x}c1 50.xc1, when Black has to go looking for the draw with 50...\textbf{b}3!.

47.xc1 \textbf{c}4 48.f6! White is now in the driving seat. The threat is e7\textbf{e}8 and g1-g8 with a mating attack. 48.f6 d4 49.e5 \textbf{c}3 only leads to a draw. 48...\textbf{c}3 49.e5! This is a great point. The king is heading for d6 with decisive effect. 49...\textbf{e}3 Or 49...d4 50.d6 d3 51.e7\textbf{f}7 52.d7 and White wins. 50.d6 \textbf{e}2 51.f6 d4 52.g1 I was hoping that White would play 52.f7, but even after my defensive idea 52...\textbf{f}2, White is winning, as you no doubt worked out in the final exercise.

33.

53.d7!! \textbf{x}f7 54.e5 d3 55.e6! This is the move I did not spot while kibitzing. 55...d2 56.g1+-

Instead the game finished: 52...\textbf{f}2 53.d7 1–0
Chapter 9

Rook and Bishop Endings

Levon Aronian – Maxime Vachier-Lagrave

Paris/St Petersburg 2013

Black is under a lot of pressure. In the game he did not manage to find a way out. Can you do better?
Rook-and-bishop endgames have a distinctive feel to them, as the absence of queens and knights makes it unlikely that the game will be decided by mating motifs or by elaborate tactical tricks. There are, however, a lot of other things going on, which we shall explore in this chapter.

I do not have any great insights that will help you to solve the exercises, beyond "don’t spend your time looking out for knight forks!" What we are dealing with here is a collection of non-standard positions that are a lesson in themselves.

The following game provides a good illustration of some typical tactical motifs that may occur with this material balance.

**Levon Aronian – Maxime Vachier-Lagrave**

Paris/St Petersburg 2013

Black has been under pressure for all of the game, which started in one of the most fashionable variations of the Grünfeld Defence. White has managed to push his passed d-pawn quite far up the park, and Black has serious trouble stopping it. Still, it was possible to secure a draw with accurate play.

34...\(\text{d4}\)\(\) 35.d7 \(\text{ad}1\)\(\) 36.\(\text{d}f2\) c4
Black is looking for a perpetual, but White has an escape route ready.

37.g3!
The king escapes from the perpetual check and White wins the game.

37...\(\text{ed}2\)\(\) 38.\(\text{d}f3\) \(\text{ed}3\)\(\) 39.\(\text{g}g2\) \(\text{ad}2\)\(\)
40.\(\text{h}h3\) \(\text{f}6\) 41.d8=\(\text{w}\) \(\text{xd}8\) 42.\(\text{xd}8\) \(\text{xd}8\)
1–0

How else could Black have played? 34...\(\text{f}6\)\(\) would be a complete disaster on account of 35.\(\text{a}8\)! when Black loses immediately.

Black could have held the game in a nice way: 34...\(\text{e}4\)!!
A cunning defensive idea.

35.\(\text{f}2\)
This is the best try, but it meets with a nice defence.

35.d7!? \(\text{xe}7\)! 36.d8=\(\text{w}\) \(\text{xa}7\) should be a draw, but Black's position feels more harmonious.

35.g3!? c4 36.\(\text{g}2\) looks tempting, but Black can play 36...\(\text{e}6\) with ideas such as ...\(\text{b}4\), ...\(\text{e}5\) and ...\(\text{f}6\) to neutralize the d-pawn. White cannot stop them all.

35...c4 36.\(\text{c}7\)
36...\texttt{Ad}4!!

Setting up the perpetual check. This time White cannot win with the g2-g3 idea, as Black can play ...\texttt{Ab}4 and obtain the draw.

37.d7 \texttt{Ad}2†

Black secures the draw. He will either deliver perpetual check, or force a draw in a different way:

38.\texttt{Af}3 \texttt{Ed}3† 39.\texttt{Ag}4 \texttt{h}5† 40.\texttt{Ah}4 \texttt{Af}6†=

I would like to mention that 34...\texttt{Af}4?! is a poor substitute. After 35.g3 Black will lose quickly unless he goes for the same defence as in the previous line: 35...\texttt{Ae}4! 36.\texttt{Af}2 c4 37.\texttt{Af}3 \texttt{Ee}1 38.a4 \texttt{Af}6!

Black has just won the exchange and probably wanted to play safely to get past the time control before working out how to win the game. However, passive does not mean safe and after his next move, Black must have been shocked to find himself entirely lost. Rooks are big animals: they are helpless in cages, and need to feel the wind in their arrow slits.

39...\texttt{Ad}7??

A horrible move, but for us it makes the game interesting.

39...\texttt{Ae}8! would most probably have won. White would lose immediately after 40.d7? \texttt{Ax}e3!, which is probably what Black overlooked. But after 40.\texttt{Ad}4 \texttt{Ae}2†, White can still fight a little bit.
40...\textit{f6} 41.h4 h6 might look more active, but this is of little consolation after \textbf{42.g5}! hgx5 43.hxg5+ \textit{f7} 44.g6+! when the pawn cannot be taken and Black will soon lose.

\textbf{41.e6 f7 42.g5}

Preventing the rook from coming to f6. Black can do nothing but sit and watch White improve his position.

\textbf{42...d7}

42...h6 43.h4 does not change anything.

\textbf{43.a4 f7 44.a5 d7}

No, it is not a threefold repetition - but nice try!

\textbf{45.h4 f7 46.b4 d7 47.d4 f7 48.h5 g6}

48...d7 49.g6 hxg6 50.hxg6 is also hopeless, for example: 50...b5 51.d5! d8 52.b6+ c8 53.e6 b7 54.c7 a7 55.e7 and White wins.

\textbf{49.hxg6 hxg6 50.e6 d7 51.e7}

Black is finally in zugzwang.

\textbf{51...b6 52.axb6 b7}

\begin{center}
\begin{tikzpicture}
\t\draw[black,thick] (0,0) grid (8,8);
\t\filldraw[black] (1,1) circle (0.1cm);
\t\filldraw[black] (2,2) circle (0.1cm);
\t\filldraw[black] (3,3) circle (0.1cm);
\t\filldraw[black] (4,4) circle (0.1cm);
\t\filldraw[black] (5,5) circle (0.1cm);
\t\filldraw[black] (6,6) circle (0.1cm);
\t\filldraw[black] (7,7) circle (0.1cm);
\end{tikzpicture}
\end{center}

This is the key position both players have been anticipating. Black might have hoped that his opponent had not seen how to win this position, or maybe he had not seen what was coming.

\textbf{53.d7+!}

White wins an important tempo by giving up his once favourite passed pawn.

\textbf{53...xd7 54.d6 d8}

54...h7 55.c7 wins.

\textbf{55.d5 b7 56.c6 c8 57.c7}

White had a slightly simpler win with 57.e5!, when after 57...e7 58.c7 Black should consider resigning.

\textbf{57...a5}

Obviously the only move, so the trap has no chance of success.

\textbf{58.b5!}

58.bxa5?? bxc7+! is a draw.

\textbf{58...axb4 59.xb4 d7 60.b5!}

Did White really see this on move 57, or was he just lucky?

60.c5?? ecx7+ 61.bxc7 ecx7 would give Black the opposition and thus ensure a draw.
60...\texttt{c8} 61.\texttt{e4}!

Triangulation. The c5-square continues to be mined.

61...\texttt{xc7}†

61...\texttt{d7} 62.\texttt{d5} is no solution either.

62.bxc7 \texttt{xc7} 63.\texttt{c5} \texttt{d7} 64.\texttt{d5}

White wins in our favourite pawn ending.

1–0

A more extreme example of our subject is the following mad and fascinating game, which has gone in and out of the exercise folder throughout the last few years. I love it, but maybe it does not work as an exercise.

\textbf{Tomas Studnicka – Lukas Cernousek}

Prague 2003

\begin{center}
\begin{tabular}{c|c|c|c|c|c|c|c|c}
\hline
 & a & b & c & d & e & f & g & h \\
\hline
1 & & & & & & & & \\
2 & & & & & & & & \\
3 & & & & & & & & \\
4 & & & & & & & & \\
5 & & & & & & & & \\
6 & & & & & & & & \\
7 & & & & & & & & \\
8 & & & & & & & & \\
\hline
\end{tabular}
\end{center}

In the game Black decided to go for a wonderful piece sacrifice. Objectively it does not work, though it did win the game for him.

31...\texttt{a4}? 32.\texttt{xe5} \texttt{a3} 33.\texttt{d1}† \texttt{c6} 34.\texttt{d4} \texttt{a2} 35.\texttt{ec1} \texttt{b5} 36.\texttt{d3} \texttt{a4} 37.\texttt{h4}??

The losing move.

White could have won with: 37.\texttt{c2}! \texttt{a3}

38.\texttt{b1}!!

In the initial position, the correct move is:

31...\texttt{e6}!

Protect your bishop! Actually, it makes just as much sense to put the king on d6, but since both moves lead to a draw, I have decided to include only one of them.

32.\texttt{d3}

The natural alternative is:

32.\texttt{e2} \texttt{a4} 33.\texttt{f4}!

The passive 33.\texttt{ee1}? allows Black to win surprisingly easily. 33...\texttt{a3} 34.\texttt{d3} \texttt{a2} 35.\texttt{c2} axb1=\texttt{w}† 36.\texttt{xb1} \texttt{d5} 37.\texttt{b3} \texttt{e4} 38.\texttt{c2} \texttt{d4}→
33.\(\text{d3}\)\text{?} enables White to make a draw, but the path is tricky. 33...\(\text{d5}\) 34.\(\text{e1}\) (34.\(\text{e5}\)? \(\text{xe5}\) just wins for Black as the a-pawn advances.) 34.\(\text{xf6}\) 35.\(\text{e8}\)! \(\text{b3}\) 36.\(\text{e3}\)\text{?} (36.\(\text{e8}\)? \(\text{xe6}\) 37.\(\text{e5}\)\text{?} \(\text{f5}\) is winning for Black.) 36...\(\text{c6}\) 37.\(\text{e8}\)\text{?} Now 37...\(\text{b7}\)? 38.\(\text{xc3}\) \(\text{xc3}\) 39.\(\text{d3}\) puts Black in trouble, but 37...\(\text{b5}\) 38.\(\text{d3}\) is drawing. The position is similar to the main line below; indeed, after 38...\(\text{c2}\) 39.\(\text{xc2}\) a transposition has occurred to move 40 in the main bolded line.

33...\(\text{xf6}\)

34.\(\text{e1}\)!
White prepares to drive the enemy king back.

34...\(\text{b3}\)!
34...\(\text{a3}\)? 35.\(\text{f5}\)\text{?} \(\text{e7}\) 36.\(\text{d3}\)\text{?} \(\text{f8}\) 37.\(\text{c2}\) \(\text{a2}\) 38.\(\text{ee1}\) followed by \(\text{b3xa2}\) wins.

35.\(\text{g4}\!\text{?}\)
The most challenging, but I also analysed: 35.\(\text{f5}\)\text{?} \(\text{e7}\) 36.\(\text{d5}\)\text{?} \(\text{f8}\)

39...\(\text{b1}\)\text{?} 40.\(\text{b1}\) \(\text{c2}\) 41.\(\text{f1}\)\text{?} \(\text{b2}\)
Despite being two rooks up, White has nothing better than a perpetual check.

32...\(\text{d5}\) 33.\(\text{e2}\)
33.\(\text{e1}\) \(\text{a4}\) 34.\(\text{e2}\) transposes.

33...\(\text{a4}\) 34.\(\text{d1}\)! \(\text{xf6}\) 35.\(\text{e8}\)! \(\text{b3}\) 36.\(\text{e3}\)\text{?}
36...\textit{c}4 37.\textit{c}8\textdagger \textit{b}4 38.\textit{d}3 \textit{c}2

White will hold a draw by putting his king on \textit{f}5 and advancing the \textit{g}-pawn. It is not possible for Black to move the king to \textit{c}2 and play ...\textit{c}1 and win, because White will have time to advance the \textit{f}-pawn, move the rook to \textit{g}1 and give a check on \textit{g}2 with the idea to eliminate the \textit{a}-pawn.

How could Black have made the right decision in the game? Essentially it is all about calculation; it is a big part of chess and often an even bigger part of the endgame. In the following exercises, deep calculation will be required as well.

39.\textit{c}4\textdagger \textit{b}5

This is slightly more comfortable than drawing with the exchange less after 39...\textit{a}3 40.\textit{x}c2 \textit{b}xc2 41.\textit{x}c2 \textit{a}2 42.\textit{h}4 \textit{d}4 43.\textit{f}3 \textit{a}3 44.\textit{h}5 \textit{g}7 45.\textit{f}4 \textit{f}5 46.\textit{b}1 \textit{h}6 47.\textit{h}1 \textit{f}8 48.\textit{b}1, when White cannot make progress.

40.\textit{x}c2 \textit{a}3 41.\textit{c}3 \textit{a}2 42.\textit{x}b3\textdagger \textit{c}5 43.\textit{x}b2 \textit{xb}2 44.\textit{e}4

40.\textit{x}c2 \textit{a}3 41.\textit{c}3 \textit{a}2 42.\textit{x}b3\textdagger \textit{c}5 43.\textit{x}b2 \textit{xb}2 44.\textit{e}4

White will hold a draw by putting his king on \textit{f}5 and advancing the \textit{g}-pawn. It is not possible for Black to move the king to \textit{c}2 and play ...\textit{c}1 and win, because White will have time to advance the \textit{f}-pawn, move the rook to \textit{g}1 and give a check on \textit{g}2 with the idea to eliminate the \textit{a}-pawn.

How could Black have made the right decision in the game? Essentially it is all about calculation; it is a big part of chess and often an even bigger part of the endgame. In the following exercises, deep calculation will be required as well.
Chapter 9 – Rook and Bishop Endings

Korneev – Sutovsky, Montreal 2006

Nakamura – Giri, London 2012

Shirov – Aronian, Moscow 2006

Turov – Sachdev, Wijk aan Zee 2012

Djukic – Khairullin, Legnica 2013

Iturrizaga – Milos, Mexico City 2010

0

0
1. Kitaev – Belokurov, Jaroslavl 1989
Okay, a simple one to start. Mate in three: 1...g3† After 1...xc7? 2.d7† White holds. 2.g2 h3† 3.xh3 3.e1 g3# 3...g4# 0–1

2. Emanuel Berg – Frode Elsness, Oslo 2011
33...c2! Forcing White into the pin. 33...f8 34.f4† gives White some drawing chances. 34.xc2 f8! Black is preparing ...e8, winning a piece. But not 34...e5? 35.d8† when Black has to struggle for a draw. 35.d3 e8 36.d6 xc7 37.xa6 White struggled on, but eventually lost on move 63. 0–1

In this position White lapsed in concentration and played a really awful move.
The game went: 36.a3? g5 37.e3 xe4† 38.xe4 xe4 39.xe4 g7 40.f5 h6 The reason this endgame is far worse than the direct version is that the b3-pawn has been weakened. White lost after: 41.h4 42.gxh4 gxh4 43.g4 g6 44.gxh4 g5 45.h5 e4 46.g5 d3 47.f5 c3 48.e5 b2 49.d5 xa2 50.xc5 xb3 51.b5 a4 52.c5 a3 53.c6 a2 54.c7 a1=’W 55.c8=’W With an easy draw.

4. Bartosz Socko – Grzegorz Gajewski, Chorzow 2013
Exercises with four pieces are fun, even though they usually are quite simple. 76.b8† a7 77.b5! 1–0

58.g6! Not a difficult position, but it is always good to warm up with simple tactics. 58...e6 58...xg3 59.f7† h8 60.xc8 is mate on the next move. 59.xc4 Black has no defence against xc8 and f4-h6, mating. 59...a6 60.e8 a7 Trying to avoid the plan. 61.d6 f7 62.xf8 Mate is near, so Black resigned. 1–0

Black has put all his chips on the two passed pawns. There is only one way to stop them and win the black rook along the way: 69.e8! 69.d8=’W? is a mistake: 69...xd8 70.d8 h2 71.h7 g2 White will have to struggle for the draw. 69.g7 a8 70.xg3 Ed8 would mean torture for Black, but a draw is still the likely outcome. 69...xh7 70.xg8 h2 71.g7† This was the point, of course. Instead after 71.h8?? xh7 Black wins. 71...c6 72.h7 1–0

White is of course winning, but the way he exploited his advantage is simply classic. 69.h6! e2!
You need to anticipate this counterblow to be able to say that you have solved the exercise. After 69...gxh4? 70.h7 White wins easily. 70...gxh6! The real point. 70...gxh6 71.gxh6 gxh6 72.b1 should win eventually though. 70...gxh4 71.d3!! Black resigned in view of 71...a1 72.e4 and the h-pawn queens. 1–0

8. Alexei Shirov – Levon Aronian, Moscow 2006

44...d6! This loses the exchange, but wins the game! 45.h5 f5 45...e6 46.h7 h8b4 47.g6 f5! transposes. 46.h7 h8b4 47.g6 e7 48.g7 e8! 49.g8f1 Zugzwang. 50.h4 e7 51.g7 e8! 52.d6 f8 53.h5 e7 54.g7 e8 55.g6 f8 56.h6 e7 57.d6!! White tries to avoid the inevitable. After 57.d6 e7 58.d6f1 Zugzwang, White will be forced to do damage to himself. 57...d6 58.g6 f7! White resigned rather than allow the beautiful finish 59.h7 d6 60.d7 g7 h8b4. 0–1


37...b2?? 38.d6 would give White the full point. 37...d6?? 38.e6f1 looks winning. It is – but for White rather than Black. 39.d6 f1 40.d6f1++; b1=0 41.d2 d6f1+ 42.d3f2 Although the finish is not trivial, White should prevail.

37...b2?? The only move, but rather a good one. 38.d6f1 38.e6f1 looks winning. 38...e6f1 39.e6f1 b2 40.d6f1 d6f1 41.d6f1 c6 42.d6f1 0–1


White is better after 47.a5, but Nakamura found an even more convincing way to continue. 47.g5 hxg5 48.h6! ghxh6 49.e5! fxe5 50.f6 d7 51.f7! e7 52.d7 d7 52...xf7 also fails, as White's bishops are too strong: 53.d5 g7 54.e4 f8f1 55.g3 f7 56.d5 Black cannot protect the b-pawn as well as keep the white king out. 56...d5 57.g4 g6 58.e4t d6 59.d6f1 d5 and so on. 53.d5 White wins easily. 53...h5 54.f8f1 d5 55.xf8 h4 56.d6f8 g4 57.g5 h3 58.d6f8 d6 59.d6f8 d6 60.d6f8 d6 61.d6 d6f8 62.d6f8 b6f8 63.a5 c6f1 64.b5 f1 65.xd4f1 1–0


White has been pressing for a long time in a typical English Opening position with opposite-coloured bishops. The defence was hard on Black and eventually she ended up in this position where White wins by force: 52.g5f1! First the king is diverted. 52...d5 52...xf5 53.d6 wins a piece as White has the check on e4. 52...g7 53.c6 d6 54.e7 dxc6 55.d5 White takes a bit longer, but is ultimately hopeless for Black. 53.d5f1! The most accurate way to play. White had another strong option in 53.d6f1 d6 54.e7 dxc6 55.e7f8 g7 56.d7f7 with great winning chances as the white king will infiltrate. The main line should be: 57...d6f8 58.e4 f8f1 59.d5 f1 60.d6h8 d7 61.d7f1 f8f1 62.d4xd6 e6 62.xd6 d6 63.xd6f1 f8f1 64.d6f1 e5 65.d6f1 d6f1 Black is winning with his extra pawn and active king. This solution is slightly inferior though, as it does not offer a line you can calculate until the end, as was possible with the game. 53...d5f8 54.e7f6 55.e8f1 55.d7f1 would be poor, as 55...xf7 56. xf7f1 xf7f1 57.e4 e6 58.e3 is a draw after both 58...xf7 and 58...d5f1 59.cxd5f1 d6.
55...\textit{xf7} 55...\textit{xf7} 56.\textit{xf8f} \textit{xf8} is a worse version of the pawn ending. After 57.\textit{e4} \textit{e7} 58.\textit{d5} \textit{d7} White puts Black in zugzwang with 59.\textit{e3}! and wins in a basic way: 59...\textit{e7} 60.\textit{c6} \textit{e6} 61.\textit{e4} \textit{e7} 62.\textit{c7} \textit{e6} 63.\textit{d8}+- 56.\textit{e4} Despite the limited material, White is completely winning. The king comes to d5 and just takes the d6-pawn, after which Black's position collapses. 56...\textit{a7} 57.\textit{d5} \textit{a2} 58.\textit{xd6} 58.\textit{e4} \textit{d2} 59.\textit{e6}+ \textit{g5} 60.\textit{xd6} \textit{xd3}\textdagger 61.\textit{xe5} was also clear. 58...\textit{xe2} 59.\textit{f8}+ \textit{g5} 60.\textit{xc5} \textit{d2} 61.\textit{d5}! \textit{xd3}\textdagger 61...\textit{e2} 62.\textit{c5} wins easily. 62.\textit{xe5} White wins as the black king is cut off. 62...\textit{e3}\textdagger 63.\textit{d5} \textit{g6} 64.\textit{c5} \textit{d3}\textdagger 65.\textit{e6} \textit{e3}\textdagger 66.\textit{d6} \textit{d3}\textdagger 67.\textit{c7} \textit{g7} 68.\textit{f4} 1–0

12. Eduardo Iturrizaga – Gilberto Milos, Mexico City 2010

White missed a nice little draw. In the game he lost without a fight after: 70.\textit{b4}? \textit{d5}! 71.\textit{d3} \textit{e1} 72.\textit{a7}\textdagger \textit{b8} 0–1

He probably realized that he could not give a direct perpetual, but must have missed that it would be there eventually. 70.\textit{a7}\textdagger! Black gets nothing out of 70...\textit{d8} 71.\textit{a8}\textdagger \textit{c7} 72.\textit{a7}\textdagger, so he has to try 72...\textit{b8}, when White has enough time to play: 73.\textit{xe7}! \textit{a1=\texttt{w}} 73...\textit{a4}\textdagger? would even put Black in some danger. After 74.\textit{xa4} \textit{a1=\texttt{w}} 75.\textit{b5} White can always put his rook on d7 and claim a fortress, while Black needs to take great care to make sure that the c-pawn does not become a candidate to greatness, or that White does not manage to get the king to f8 or g8, putting serious pressure on the kingside. 74.\textit{e8}\textdagger \textit{c7} The only try, but White has 75.\textit{c8}\textdagger! \textit{b7} 76.\textit{c6}\textdagger \textit{a7} 77.\textit{c7}\textdagger and now the perpetual is final.
Chapter 9 – Rook and Bishop Endings

Ponomariov – Svidler, Khanty-Mansiysk 2011
Felgaer – Montero Melendez, Gibraltar 2012

Bartel – Nisipeanu, Dresden 2007
Gislonson – Korchnoi, Gibraltar 2012

Caruana – Carlsen, Sao Paulo/Bilbao 2012
Murdzia – Postny, Griesheim 2011

△
13. Ruslan Ponomariov – Peter Svidler, Khanty-Mansiysk (6.2) 2011

33...\texttt{Exb3}!\texttt{?} The second best option, but still good enough. 34.\texttt{fxb3} \texttt{xb5}? It was much better to play 34.\texttt{e6}! 35.\texttt{c2} \texttt{d5}+ and the win is elementary. 35.\texttt{a2f} \texttt{c6} 36.\texttt{d2} \texttt{b6} 37.\texttt{f4}? After 37.\texttt{xb1} or 37.\texttt{g3} Black’s progress would not be so simple. 37...\texttt{c6} 38.\texttt{g3} \texttt{e4}! Taking control of important squares and finishing the game. 39.\texttt{d1} \texttt{b5} 40.\texttt{e1} \texttt{d3} 41.\texttt{e7} \texttt{c4} 42.\texttt{e7} \texttt{c3} 43.\texttt{d5}+ \texttt{c5} 0–1

The prettier way was pointed out by the computer: 33...\texttt{a4}! 34.\texttt{xf8} \texttt{xd1} 35.\texttt{d3} \texttt{c7}!! The point is that the rook is trapped. 36.\texttt{b5} c4 37.\texttt{xc4} \texttt{a4} 38.\texttt{b4} \texttt{c3} Black wins a piece.

Mateusz Bartel – Liviu-Dieter Nisipeanu, Dresden (variation) 2007

We will start by looking briefly at the position from the game, one move before the exercise.

The game continued 71...\texttt{xg6}? 72.\texttt{g5}+ with good winning chances for White, although the game was eventually drawn on move 96.

The best move is 71...\texttt{xf4}! when 72.\texttt{g7}! arrives at the position shown in the exercise. Before seeing the solution, let us briefly note that after 72.\texttt{g5}+ \texttt{xg5} 73.\texttt{f3}+ \texttt{xf3} 74.\texttt{g5} \texttt{hxg6} 75.\texttt{g6} \texttt{e4} 76.\texttt{h7} \texttt{d8} White cannot make progress, while 72.\texttt{hxh7} \texttt{exh7} 73.\texttt{g5}+ \texttt{exg5} 74.\texttt{f3}+ \texttt{xf3} 75.\texttt{g5} \texttt{e4} 76.\texttt{g6} \texttt{b7} also ends in a draw.

14.

Now we are ready to see the best continuation from our test position. 72...\texttt{d6}! 72...\texttt{g6}? allows 73.\texttt{g5}+! and White wins. 73.\texttt{g5}+! 73.\texttt{g3}?? \texttt{xf6}! wins for Black. 73.\texttt{g5}+ 74.\texttt{f3}+ \texttt{e4}!! A fantastic example of opposition. After 74...\texttt{xf3}? 75.\texttt{xg5} \texttt{g6} 76.\texttt{f5} the white king is shouldering the black king away, and one of the pawns will advance to the finish line. 75.\texttt{e3}+! 75.\texttt{g5}?? \texttt{g6}+! wins for Black, as the f5-square is crucially under Black’s control for a fleeting moment. 75...\texttt{xe3}?? 75...\texttt{f4}! is an immediate draw. 76.\texttt{g5} \texttt{e6}+ 77.\texttt{f5} \texttt{d4} The black king is just in time. 78.\texttt{b5} \texttt{c5} 79.\texttt{e5} \texttt{b6} 80.\texttt{d5} \texttt{b7} 81.\texttt{c5} \texttt{c7}– I cannot see a way for White to make progress here. Trying to advance or go around the pawns can prove to be risky: 82.\texttt{c4} \texttt{b7} 83.\texttt{b4} \texttt{g3}? Fishing. If now 84.\texttt{a5}? then 84...\texttt{g4}! and Black wins.
15. Fabiano Caruana – Magnus Carlsen, Sao Paulo/Bilbao 2012

Carlsen had squeezed blood from a stone, converting a drawish ending into a winning one. Still some accuracy was needed, and on this occasion it went entirely wrong for him. 80...\texttt{g2}?

81.\texttt{e3} \texttt{b2}?? This is not the sort of mistake you would expect from the greatest endgame player in the world, yet such things still happen occasionally. Black could have drawn with the fancy

81...\texttt{b3}! (or 81...\texttt{b1} 82.\texttt{xe4} \texttt{c1}! quickly transposing) 82.\texttt{xe4} \texttt{c3} picking up the c-pawn, creating enough counterplay to draw: 83.d5 \texttt{xc2} 84.d6 \texttt{c3} (84...\texttt{e2} also draws) 85.\texttt{g5} \texttt{e2} 86.\texttt{d5} \texttt{f2}! (86...\texttt{d2}?? 87.\texttt{c6}) 87.\texttt{e6} \texttt{e2} 88.\texttt{f7} \texttt{d2}! 89.\texttt{e6} \texttt{e2}! The game ends in a draw by repetition.

82.d5 \texttt{xc2} 83.d6 \texttt{c3} I suspect that Carlsen missed something along the lines of 83...\texttt{c3}! 84.\texttt{xe4} \texttt{d3} 85.\texttt{f6}! \texttt{xd6} 86.\texttt{f7} when the f-pawn queens. 84.d7 \texttt{d2} 85.d8=\texttt{f} \texttt{xd8} 86.\texttt{xd8} \texttt{h4} 87.\texttt{gxh4} \texttt{g3} 88.f6 c2 89.\texttt{d2} e3?? 90.\texttt{xc2} e2 91.\texttt{a5} Could this simple move be what Carlsen missed? Many miscalculations look like this! 1–0

Best play looks like this: 80...\texttt{b2}! 81.\texttt{f6} The only try. After 81.d5 \texttt{b5}! 82.f6 \texttt{xd5} 83.\texttt{e3} \texttt{e5} 84.\texttt{f4} \texttt{e8} Black wins. 81...\texttt{g2}!! This quiet move is quite easy to miss. The king is ready to go to \texttt{f2}, helping the e-pawn forward. 82.\texttt{f7} 82.\texttt{c3}? \texttt{b8} does not help White. Neither does 82.\texttt{e3} \texttt{xc2} 83.\texttt{g5} \texttt{c3} 84.\texttt{xe4} \texttt{e2} 85.\texttt{d3} \texttt{f2} when White cannot prevent \ldots \texttt{gx3} or \ldots \texttt{c2}, both of which are winning. 82...\texttt{b8} 83.\texttt{e3} 83.\texttt{e7} \texttt{f2} makes no sense for White.

83...\texttt{g8} 84.\texttt{xe4} \texttt{xf7} 85.\texttt{d5} Black wins more quickly after 85.d5 \texttt{f2} 86.c3 \texttt{d2}!. 85...\texttt{c3} 86.\texttt{f4} \texttt{f3} 87.\texttt{xc3} 87.\texttt{d3} \texttt{e7} changes nothing. 87...\texttt{e4} Black will win in the long run.

Black had an alternative win, which is far less practical but even more impressive: 80...\texttt{b1}! 81.\texttt{e3} (81.f6 \texttt{g2} 82.d5 \texttt{f2} 83.\texttt{g5} \texttt{b5} 84.\texttt{e3} \ldots \texttt{gx3}–+) 81...\texttt{e1}! 82.\texttt{d2} \texttt{f1} 83.f6 \texttt{g2} 84.\texttt{e3} The only chance is to activate the king. (84.d5 \texttt{f3} 85.\texttt{g5} \texttt{e3} wins the bishop and the game.) 84...\texttt{e1}! 85.\texttt{d2} (85.\texttt{f4} \texttt{e3} 86.\texttt{e4} \texttt{e2} 87.\texttt{e3} \texttt{c3} 88.f7 \texttt{f1} 89.\texttt{xe2} \texttt{xf7} 90.\texttt{d3} \texttt{f3} transposes to the 80...\texttt{b2} line!) 85...\texttt{f2} 86.\texttt{f7} It might appear that Black has misplayed his position, but after 86...\texttt{c3}!! 87.\texttt{xc3} \texttt{e3} and ...\texttt{f2}, the e-pawn is a winner.


53...\texttt{f7}?? 54.\texttt{exh7} \texttt{Ec4} 55.\texttt{g7} Black is unable to make progress in a sensible way. The best hope he has is to reach an endgame with rook and bishop versus rook, which should be a draw anyway. The game was drawn on move 85. \(1 \frac{1}{2}–\frac{1}{2}\)

53...\texttt{e6}! was the winning move. 54.\texttt{exh7} The only chance. 54.\texttt{exe8}?? \texttt{d6} 55.\texttt{hxh8} \texttt{e7} does not give White much hope. A probable line goes: 56.\texttt{f6} \texttt{f7}?? 57.\texttt{g5} \texttt{e6} 58.\texttt{d8}?? \texttt{d7} 59.\texttt{e8} \texttt{e5} 60.\texttt{b8} \texttt{d5} 61.\texttt{h8} \texttt{d4} and Black wins. 54...\texttt{e5}!! 55.\texttt{hxh4} \texttt{g5} 56.\texttt{g3} \texttt{f6} Black wins slowly and easily.

White should be winning with the extra rook, but the poor placement of his king and the power of the connected passed pawns makes the task trickier than one may expect. There is a way to take control, but it is by no means obvious. **68.\(\texttt{f}b8?\) e4 69.\(\texttt{d}d8\) \(\texttt{b}b4??\) Black stumbles. After 69...\(\texttt{b}b3\) 70.\(\texttt{x}d4\) \(\texttt{c}c3\) 71.\(\texttt{d}d8\) e3 72.\(\texttt{x}a4\) e2 the draw is imminent. **70.\(\texttt{xe}4\) 1–0**

68.\(\texttt{b}b5??\) feels logical, but after 68...\(\texttt{x}b5\) 69.\(\texttt{x}b5\) e4 the pawns are strong enough to secure Black a draw. 70.\(\texttt{b}b1\) d3 71.\(\texttt{c}c1\) e3 72.\(\texttt{xe}5\) (A draw is also reached after 72.\(\texttt{d}d5\) d2\(\uparrow\) 73.\(\texttt{c}c2\) \(\texttt{a}2\) 74.\(\texttt{d}d3\) a3 75.\(\texttt{xe}3\) d1=\(\texttt{wt}\) 76.\(\texttt{x}d1\) \(\texttt{b}2\) 77.\(\texttt{e}2\)\(\uparrow\) \(\texttt{b}1\) as the white king is cut off.) 72...e2 73.\(\texttt{d}d2\) \(\texttt{b}b3\) 74.\(\texttt{xd}3\) a3 75.\(\texttt{b}5\)\(\uparrow\) \(\texttt{a}4\) 76.\(\texttt{b}1\) a2 77.\(\texttt{c}c1\) \(\texttt{b}b3\) Once again the white king is cut off and the game ends in a draw after 78.\(\texttt{e}1\) \(\texttt{b}2\) 79.\(\texttt{xe}2\)\(\uparrow\) \(\texttt{b}3\).

**68.\(\texttt{e}e8!\)** is winning. 68.\(\texttt{d}d7\) also works, but we will focus on the more logical option which places the bishop farther from the black king, for no other reason than human intuition. Now it makes sense to branch the position into two.

**a) 68...\(\texttt{h}7\) 69.\(\texttt{b}b7\) \(\texttt{d}d3\) 70.\(\texttt{f}f7\) \(\texttt{e}2\) 71.\(\texttt{d}d5\)** gives White control. From this point the win comes slowly and carefully, but also without doubts. 71...d3 71...\(\texttt{d}3\) 72.\(\texttt{e}7\) is again one of those positions where you cannot calculate a win, but where you feel sure it is there. And you would be right, of course. It is available in many ways, all of them based on keeping control of the position. 72...\(\texttt{c}2\) 73.\(\texttt{xe}5\) \(\texttt{b}3\) 74.\(\texttt{e}e4\) \(\texttt{b}4\) 75.\(\texttt{g}5\) \(\texttt{c}c4\) 76.\(\texttt{b}2\) \(\texttt{b}4\) 77.\(\texttt{e}3\) a3\(\uparrow\) 78.\(\texttt{c}1\) \(\texttt{f}7\) 79.\(\texttt{c}2\) \(\texttt{c}4\) 80.\(\texttt{h}3\) White wins, for example after 80...\(\texttt{f}7\) 81.\(\texttt{d}3\)\(\uparrow\). **72.\(\texttt{b}2!** White has contained the opponent’s counterplay without giving up any of his advantages. He can secure the win by slowly improving his position. 72...\(\texttt{g}4\) 72...\(\texttt{d}1\) 73.\(\texttt{e}4\) \(\texttt{c}2\) 74.\(\texttt{f}5\) wins. **73.\(\texttt{e}e4\) \(\texttt{e}2\) 74.\(\texttt{b}1\) \(\texttt{f}1\) 75.\(\texttt{b}8\) \(\texttt{e}2\) 76.\(\texttt{c}1\) \(\texttt{a}2\) 77.\(\texttt{d}5\)\(\uparrow\) \(\texttt{a}3\) 78.\(\texttt{d}2\) \(\texttt{f}1\) 79.\(\texttt{c}3\) \(\texttt{e}2\) 80.\(\texttt{b}1\) and 81.\(\texttt{a}1\)\(\uparrow\).

**b) 68...\(\texttt{c}2\) 69.\(\texttt{b}5\) e4 70.\(\texttt{g}6\)** This is the point behind White’s first move, of course. 70...d3! The only try. After 70...\(\texttt{d}3\) 71.\(\texttt{b}2\)! Black is in zugzwang. **71.\(\texttt{d}5!!** Keeping control as always. 71...\(\texttt{xe}4?\) d2 72.\(\texttt{xc}2\) d1=\(\texttt{wt}\) is the last trick, as 73.\(\texttt{xd}1\) is stalemate. 71...\(\texttt{b}3\) 72.\(\texttt{d}8\) d2! 72...a3 73.\(\texttt{xe}4\) d2 74.\(\texttt{b}8\)\(\uparrow\) 73.\(\texttt{xd}2\) \(\texttt{d}3\) 74.\(\texttt{b}2\)\(\uparrow\) \(\texttt{c}3\) 75.\(\texttt{a}2\) \(\texttt{b}3\) 76.\(\texttt{f}7\)\(\uparrow\) \(\texttt{b}4\) 77.\(\texttt{b}2\) \(\texttt{e}3\) 78.\(\texttt{c}1\) a3 79.\(\texttt{h}2\) White wins.

18. Piotr Murdzia – Evgeny Postny, Griesheim 2011

This could have been in the book on calculation under the heading Method of Comparison. White needs to find the difference between moving his king to c3 and to c2.

In the game White did not find it. Instead a draw was agreed after: **51.\(\texttt{c}3?\) \(\texttt{a}4\) 52.\(\texttt{b}3\) 52.\(\texttt{c}7\) draws after 52...\(\texttt{c}4\) 53.\(\texttt{b}2\) \(\texttt{xd}4\)\(\uparrow\) 54.\(\texttt{b}1\) \(\texttt{c}3\) 55.\(\texttt{c}8=\(\texttt{wt}\) \(\texttt{xc}8\) 56.\(\texttt{xc}8\) e2 57.\(\texttt{b}7\) and so on. 52...\(\texttt{a}7\) 53.\(\texttt{c}3?\) \(\texttt{a}4\) 54.\(\texttt{b}3\) \(\frac{1}{2}\)–\(\frac{1}{2}\)**

51.\(\texttt{c}2!\) \(\texttt{a}4\) 54.\(\texttt{c}8=\(\texttt{wt}\) \(\texttt{xc}8\) 55.\(\texttt{xc}8\)\(\uparrow\) \(\texttt{e}7\) 56.\(\texttt{c}1\) \(\texttt{xd}4\) 57.\(\texttt{e}1\) White wins.
Chapter 9 – Rook and Bishop Endings

Rathlev – S. Haubro, Denmark 2012

Khalifman – Inarkiev, St Petersburg 2011

Aronian – Carlsen, Moscow 2011

Mastrovasilis – Kamsky, Brasov 2011

Fier – Wojtaszek, Tromso 2013

Zagorskis – S.B. Hansen, Warsaw 2013
57...c6? This looks like a logical way to support the pawn, but it is a step in the wrong direction.
57...c1? 58.b6? This looks like a logical way to support the pawn, but it is a step in the wrong direction.
57...c5 60.b6 f6 61.c4 b2 62.c6 h5 63.b5 c2? 64.d7 h2 65.c6 c2f 66.e5 c8 67.b7 b8 68.c6 ½–½
57...c4 h5 58.c5 h4 59.b6 h3 60.d5 h2 61.b7 cxb7 62.cxb7 cxf7 also draws by a whisker.
57...c5! was the correct move. Black is preparing c4-b5, shielding the king. 57...h5 58.b6 h4 59.b7 h3 60.d6! This is the surprising move. The king needs to be covered in order to win the game. Instead after 60.d6 c7! Black holds. 60...h2 61.c7 c1? 62.d7 b1 63.d6!!
The wonderful triangulation ends with zugzwang! Only from b1 can the rook interfere in all three files: 63...b5 63...b4 64.c7+-; 63...b2 64.c7 c2f 65.e6 c2t 66.e7+- 64.e7 c5f 65.e6 cxd5 66.e8=½ cxf7 67.e7=½ White wins.

20. Levon Aronian – Magnus Carlsen, Moscow 2011
Aronian missed something and went for 50.d7?, which allowed Carlsen to save the game after:
50...a5 51.bxa5 d8! 52.d5 e7 53.a6 e6 54.e4 d7 55.e4 e3 56.e2 f8 57.a7 e2 ½–½
50.d7? is insufficient after 50...e3 51.e2 e2 52.e1 a5 53.e5 d8 and Black survives.
50.d7? is also not enough to win. Play continues: 50...a5 51.bxa5 d7 52.e8 d8 53.c6 e6 54.h4 d6 55.b7 (55.b4 e3 58.e2 e2! 57.e2 f7 58.g2 f8t Black is okay.) 55...c6 56.e4 h5 57.g1 f8! 58.g2 e3 Black has enough counterplay to save the game.
50.g7f1 is the winning move. 50...d3! The best attempt. All other moves lose without a serious fight, for instance: 50...g4 loses to 51.d4 or 51.b5; 50.e3 does not offer much resistance after 51.b5 c7 52.e1 g4 and White wins. 51.b5 d4 52.b7 d7 52.b6? e2 53.c1 e8f1 leads directly to a draw. 52...e2 53.e1f1 The only winning move, but the concept is easy to understand: Black will not be allowed to threaten a check on the first rank. Compare the line 53.e1b1? f8 (53.e1a2-d2 also holds) 54.b2 f7! when Black is in time to draw the game. 53...d2f2 53...f7 54.d6 f1 55.g3f3 wins. 54.d1f1! Now that the black bishop has lost its way, White can put the rook on the other side of the pawn. 54...e1=½ 55.dxe1 fxe1 56.d8=½ d8f8 57.dxe8 f7 58.d6 White wins by a single tempo.

21. Alexandr Fier – Radoslaw Wojtaszek, Tromso (1.4) 2013
Black missed a win, and with it his chance to progress in the tournament. 57...d1? There are not even any practical problems for White after this move. 58.e8 f1=½ 59.e6 b3 60.e3 e1f1 61.d1 e7 62.gxh6 b1 63.g3 a5 64.a4 f7 f1 66.xb3 x3b3 67.f8=½ x8f8 68.xf8 f8 ½–½
57...b3? leads to rook and bishop versus rook after: 58.g6 f8! The only chance. (58...a8 59.g7 is an immediate draw.) 59.g7 x6f6 60.e4 e6f6 61.d5 e8 62.bh3f3
57...d5? also allows White to escape with a draw: 58.g6! b3 59.e3 b5 60.f7 a3 61.h7 and all the pawns on the board are likely to claim blood.
57...b8f8 would have won the game, with the important point 58.g6 b5f1. After 58.d7 b3 Black is ahead in the race, for example: 59.d3 59.e6 f7?? is rather elegant. 59.d4 60.g6 g7f7 61.b1 b2 62.b1 b5 Black wins slowly but surely.
22. Alexander Khalifman – Ernesto Inarkiev, St Petersburg 2011

Black missed not only one win, but two. 67...\texttt{c4}? This natural move allows White to draw in spectacular fashion. 68.a5 \texttt{c3} 69.a6 b2 70.a7 \texttt{c6}! The most challenging move would have been 70...\texttt{a8}!, when after 71.\texttt{b5}! \texttt{c2} 72.\texttt{c5}+ \texttt{d3} 73.\texttt{b5} \texttt{c3} White should be careful and not fall for 74.\texttt{b8}? \texttt{c2} 75.\texttt{c8}+ \texttt{b3} with the idea 76.\texttt{b8} \texttt{a2} or 76.\texttt{xa8} g1=\texttt{Wf}+, winning in both cases. Instead White should play 74.\texttt{gl}!, when there is no win. 71.a8=\texttt{Wf}! \texttt{xa8} 72.\texttt{c8}+ \texttt{d3} 73.\texttt{b8} \texttt{c2} 74.\texttt{c8}+ \texttt{d2} 75.\texttt{b8} \texttt{c3} 76.\texttt{c8}+ \texttt{d3} 77.\texttt{b8} \texttt{c3} 78.\texttt{c8}+ \texttt{d3} 1/2–1/2

Black had a nice and slightly complicated win with: 67...\texttt{d4}! 68.a5 \texttt{gl}+ 69.\texttt{xf1} \texttt{e3} and one of the pawns will promote within a few moves.

23. Dimitrios Mastrovasilis – Gata Kamsky, Brasov 2011

Accuracy is crucial in endgames; half or full points often hinge on single moments like this.

The game ended with a draw after: 53.\texttt{el}? \texttt{e3} 54.\texttt{f7} \texttt{f2}+ 55.\texttt{e1} \texttt{g4} 56.\texttt{xf6} \texttt{xf6} 57.\texttt{xb7} \texttt{bx6} 58.\texttt{b8}=\texttt{Wf} \texttt{xb8} 59.\texttt{b8b} h3 1/2–1/2

Instead White should have played: 53.\texttt{e1}! \texttt{c3}+ 53...\texttt{e3} 54.\texttt{f7}! wins the rook. 54.\texttt{d1}! 54.\texttt{f1}? allows Black to escape with 54...\texttt{bx6} 55.b7 \texttt{e3} 56.\texttt{e7} \texttt{e2}+ 57.\texttt{exe2} \texttt{a1}+ 58.\texttt{f2} \texttt{d4}+ 59.\texttt{e3} \texttt{b1} 60.\texttt{b8}=\texttt{Wf} \texttt{xb8} 61.\texttt{xb8} \texttt{g4} 62.\texttt{e5} \texttt{xe3}+ 63.\texttt{xe3} h3 when everything is exchanged. 54...\texttt{e6} 54...\texttt{e3} 55.\texttt{e7} does not change anything. 55.\texttt{d8} \texttt{bxc6} 56.\texttt{b7} \texttt{e3} 57.\texttt{e8}+ White wins.


Black was tired after a long game and a lot of suffering on Board 1 in the previous rounds. Here he let the advantage slip: first with 67...\texttt{f1}?? 68.\texttt{c2} \texttt{f2}+ 69.\texttt{d1}, which was now followed by 69...\texttt{d3}?. Black could still have created problems with 69...\texttt{xb2} 70.\texttt{e1} \texttt{d3} 71.\texttt{f1} \texttt{f3}, though a draw is the most likely result. 70.\texttt{b5}! This is what Black had missed. 70...\texttt{xb5} 71.\texttt{xb5} \texttt{xb2} 1/2–1/2

Instead Black had the chance to catch the white king in a mating net with 67...\texttt{b3} 68.\texttt{c1} \texttt{d3}! and it is time to shake hands.
Chapter 9 – Rook and Bishop Endings

Alekseev – Adhiban, Tromso (1.7) 2013

Wang Yue – Eljanov, Astrakhan Melilla 2010

Kramnik – Ponomariov, Moscow 2009
Black has to play actively in order to survive. Passive defence is doomed to fail. 47...d7? 48.d5
48.exg2 works too, the point being that 48...c6 is met by 49.g6† b5 50.d6 a3 51.g5† and White wins. 48...g1=Q 49.exg1 b5 50.g7† c8 51.c5 White wins this position, as
first shown by Enevoldsen in 1946. 51.b8 52.b6 c8 53.a7 e2 54.c7† d8 55.c2
b5 56.b7 d7 57.d2† e6 58.b2 c4 59.h2 d7 60.h4 b5 61.d4† c7 62.c7 c6 63.d6† c7 64.b6 d1 65.b1 c4 66.e1† f7 The king is now pushed far
enough away for White to win swiftly. 67.b7 b5 68.b1 d3 69.b6 c7 70.a6+ a6†
71.a6 1–0
47...b? is too passive. Black will eventually be put in zugzwang and find it impossible
to keep both pawns. When that happens, the king should not be placed passively in the corner.
48.c6 b7 49.c5 a7 50.g5 c3 e4 52.d4 b7 53.g8 c6 54.g7† b8 55.c5 e3 56.b6 White wins. The black king will be too late to support any counterplay.

I was watching this game live. At this point White calculated for a while before playing a lot
of moves quickly. 1.Bb8! gxh3! The most complicated option. 1...d6? would be a curveball, but
White is winning anyway after both 2.b4 and 2.e8† d5 3.xd6 a7 4.d8†. 2.a8=Q
xa8 3.xa8 h2 4.a1 e5 4...d5 offers less resistance. White wins after the concrete 5.f4,
but there is no reason for variations, when he can also play 5.a7† with the point that Black will
soon be in zugzwang and have to retreat. 5.xd4 The right move order. 5.h1? g4 6.xd4
xd4 h3 is a draw. 5.g4 5...xd4 6.xd4 g4 7.e3 wins, as Black will soon
have to play ...h3, when e3 leads to zugzwang and mate. 6.xe5 xe5 7.e4 7.e3 was
potentially a bit more accurate, but the tactical point is the same. The only difference is delivering
mate slightly quicker at the end. 7...h3 8.e3?? Jesper missed the win, which was spotted by
Lars Borbjerggaard during the game. It was a sad effect that eventually the league title went to
another team after a three-way tie, with our team finishing third. 8.f4† was the winning move,
the beautiful point being 8...xe4 9.e3! with mate on the next move. Black must therefore try
8...g2, when the finish might be: 9.f5 h1=Q 10.xh1 h1 11.f6 g2 12.f7 h3 13.e8=Q h2
14.e3† g1 15.e3 h1=Q 16.e2# 8...e4†! Now Black makes a draw. 9.xe4 e2 10.f4 h3
11.f5 h1=Q 12.xh1 h1 13.f6 h2 14.f7 g1 15.f8=Q h1=Q† ½–½

27. Arkadij Naiditsch – Viktor Laznicka, Valjevo 2011
The game went: 42.xb7? This allows Black to get sufficient counterplay with the passed c-pawn.
42...d4 43.cxd4† xd4 44.h2 d3 45.b4 e8 46.b2 a4 47.b8 e3 48.c8 d3
49.d8† c5 50.c8 d3 51.d8† ½–½
White missed the winning move: 42.d7!! Preventing ...d4 while also keeping the king away
from the e-pawn. 42...c6 43.h2 b5 44.d8! An important finesse. 44.a3? a5 45.d8 is
the computer’s preference, but exchanging the a-pawns leads to a draw: 45...b4 46.axb4† axb4
47.cxb4† xb4 48.e7 b3! Black exploits the absence of a pawn on a2! (48...c5 49.c8!!—)
49.\texttt{Rxd5} c3 50.\texttt{Rc5} \texttt{Rd7} 51.\texttt{Rc7} \texttt{Rc8} 52.\texttt{Rc8} \texttt{Rd7} = 44...\texttt{b4}! The only try. 44...a5 45.\texttt{e7} b4 46.\texttt{Rc8}+– 45.\texttt{Rxb4}+\texttt{Rd4} In the event of 45...\texttt{Rxb4} 46.\texttt{e7} White threatens \texttt{Rxd5}. In this line Black does not have ...\texttt{Rb3} to support the pawn, and after 46...c3 White has 47.\texttt{Rb8}† followed by \texttt{Rc8} winning. 46.\texttt{e7} c3 47.\texttt{Rc8} \texttt{b5} 48.\texttt{e8} = 48.\texttt{Rc5} also wins, but the text move is simple. 48...\texttt{Rxe8} 49.\texttt{Rxe8} \texttt{Rc4} 50.\texttt{Rc8}† \texttt{Rxb4} 51.\texttt{Rxb4} White wins, again because Black does not have access to the b3-square. For example: 51...\texttt{d4} 52.\texttt{Rg3} d3 53.\texttt{Rf3} and so on.

Black missed the win by playing: 44...\texttt{Rf2}? 45.\texttt{Rg2}! \texttt{fxg2} 46.\texttt{Rg2}† \texttt{Rg2} 47.\texttt{c5} The pawns are advanced enough to secure the draw. 47...\texttt{Rf3} 47...\texttt{Rf3} 49.\texttt{c7} also leads to a draw. 48.\texttt{b6} \texttt{axb6} 49.\texttt{Rb6} \texttt{Rc5} 50.\texttt{Rc5} \texttt{Rb4} 51.\texttt{Rc8}† \texttt{Rxc8} 52.\texttt{Rb8} White wins, again because Black does not have access to the b3-square. For example: 51...\texttt{d4} 52.\texttt{Rg3} d3 53.\texttt{Rf3} and so on.

29. Simonas Zickus – Viktorija Cmilyte, Vilnius 2009
White is in active, but trouble Black can play and still save the day. 99.\texttt{Ra4}? This forces Black to make the move she wants to play. 99...\texttt{d3} 100.\texttt{Ra3}† 100.\texttt{Ra8} is too late. Black uses the extra tempo to play 100...\texttt{b5}! 101.\texttt{Ra3}† \texttt{c3}, when the combined evil of the e- and h-pawns makes all of the world worship the dark lord. 100...\texttt{d4} 101.\texttt{Ra5} \texttt{e3} 102.\texttt{Ra6} \texttt{e5} 103.\texttt{Rf3} 104.\texttt{e6} \texttt{f4} 105.\texttt{e6} \texttt{e3} 106.\texttt{Rg2} h3† 107.\texttt{h1} h2 108.\texttt{g2} e2 0–1

99.\texttt{Ra6}? \texttt{e5} loses rather quickly. Black is planning ...\texttt{d4}–\texttt{e3}–\texttt{f4}, with the ability to throw in ...\texttt{e3} or ...\texttt{h3} in case White does anything active.

99.\texttt{h3}?! \texttt{d3} is also ineffective for \texttt{White}. Black is threatening ...\texttt{e3}–\texttt{f4}, and after 100.\texttt{Ra3}† \texttt{g2} 101.\texttt{Rg4} \texttt{f2} 102.\texttt{Rb2†} \texttt{f1} the black king is ready to support the h-pawn, or to assist with ...\texttt{g2} and ...\texttt{e3}. The attempt to defend with 103.\texttt{Ra6} \texttt{e5} 104.\texttt{Ra3} fails to 104...\texttt{e2}!, when the e-pawn will make a star appearance. 105.\texttt{Rf1†} \texttt{d3} 106.\texttt{Ra3}† \texttt{c3}–++

99.\texttt{Ra8}! is the correct move (though the rook can go to a7 as well). The main idea is: 99...\texttt{d4} Also after 99...\texttt{e3} 100.\texttt{Ra3} \texttt{d4} 101.\texttt{Rb8} Black does not have a hint of an advantage. Neither is 99...\texttt{e5} 100.\texttt{Rxb5} progress.) 100.\texttt{Ra8} The king cannot be allowed to reach e5 or f4. 100...\texttt{e5} 101.\texttt{Rb8} \texttt{f4} 102.\texttt{Rxf4} \texttt{e5} Even though Black wins the f5-pawn, she will not be able to win the game against accurate defence.

White had to use all of his advantages to gain the full point. This includes the currently pointless bishop, the passed a-pawn and the possibility of trapping the black king on the back rank.

In the game White did not sense the urgency and let his opponent off the hook: 44.\hbox{a}e2? \hbox{a}f7 45.\hbox{a}d1 \hbox{a}e6 46.\hbox{a}xb3 \hbox{c}4 47.\hbox{a}c2 \hbox{a}a7 48.\hbox{a}a5 \hbox{e}5 49.\hbox{a}f2 \hbox{d}4 With an active king, Black does not have any real problems. The game ended in a draw on move 57.

44.g4!! h\hbox{x}g4 This is the only move that makes full sense. However, there are a few other options that can be investigated:

- 44...\hbox{a}f7 45.\hbox{g}g2! \hbox{e}6 46.\hbox{a}xd5\hbox{t} \hbox{a}xd5 47.\hbox{a}xb3 White has a winning rook ending, though some additional moves are still needed to clinch the full point. The main point is that 47...h\hbox{x}g4 48.\hbox{a}b7 \hbox{e}8 49.a7 \hbox{a}a8 50.\hbox{a}xg7 is just over.
- 44...c4 45.\hbox{a}xd5 c3 is a funny try. (The objectively preferable 45...b2 46.\hbox{a}b5 \hbox{c}3 47.\hbox{a}d3 ends in a rook ending where White wins slowly.) White wins in one way only: 46.a7! \hbox{a}a7 47.\hbox{c}c4 b2 48.\hbox{a}d8\hbox{t} \hbox{h}7 49.\hbox{g}g8\hbox{t} \hbox{g}6 50.\hbox{a}d6#

45.\hbox{a}g2 \hbox{a}xg2 46.g6! This intermediate move is the big point. (The move order involving 45.g6 and 46.\hbox{a}g2 also works.) 46.\hbox{a}xg2? is too slow and fails to 46...\hbox{a}h7! 47.\hbox{a}xb3 \hbox{a}a7 48.\hbox{a}b6 \hbox{c}4 when Black holds. 46...\hbox{f}8 47.\hbox{a}xg2 \hbox{c}4 After 47...\hbox{e}7 48.\hbox{a}b7! (48.\hbox{a}xb3? \hbox{f}6 would allow Black to get organized) 48...\hbox{a}d6 49.\hbox{a}xb3! the rook ending wins easily, and in several ways. 48.\hbox{a}b8\hbox{t} \hbox{e}7 49.\hbox{a}b7 \hbox{d}7 50.a7 White gets to a winning ending, though it will take some moves to prove that the queen is better than the passed pawns. 50.\hbox{a}xg7 51.\hbox{a}a8=\hbox{a}f7 52.\hbox{a}a5 \hbox{b}8 53.\hbox{a}d8\hbox{t} \hbox{a}a7 54.\hbox{a}d4\hbox{t} \hbox{a}a8 55.\hbox{a}xc4 b2 56.\hbox{a}a2\hbox{t} \hbox{b}8 57.\hbox{a}b1 The king and h-pawn will come in to decide the game.

31. Evgeny Alekseev – Baskaran Adhiban, Tromso (1.7) 2013

This position arose in a rapid game, where White not only missed his wins, but in the end lost on time in a drawn position. In the second play-off game he was, unsurprisingly, unable to play his best and was eliminated. 45.\hbox{a}g4! This blows the win in a spectacular way, which is not always important for rapid games. 45...\hbox{e}7? Black could have made a draw here with 45...\hbox{g}7\hbox{t}!, with the idea 46.e6? \hbox{f}8! and Black even wins because of the check on e4. This is the main point of our solution. Also after 46.\hbox{h}f3?! \hbox{g}8 47.\hbox{g}3 \hbox{f}8? White needs to be a bit careful. The main drawing line goes 48.f6 \hbox{g}8 49.\hbox{g}4 \hbox{h}7 50.\hbox{h}5 \hbox{g}8 51.g6 \hbox{e}6? and neither player can make progress. 46.\hbox{h}5 \hbox{e}8 47.e6! \hbox{f}xe6 48.g6\hbox{t} \hbox{g}8 49.f6 \hbox{f}8 50.f7 50.\hbox{a}e5! 50...\hbox{e}7 51.\hbox{a}e5 d4 52.\hbox{a}xd4?! White misses a mate in four: 52.\hbox{d}d6! d3 53.\hbox{a}g5 d2 54.\hbox{a}f6 d1=\hbox{a}f 55.g7\hbox{t} 52...\hbox{e}5 53.\hbox{a}e3 \hbox{xf}7 54.\hbox{h}6\hbox{t} \hbox{g}8 55.\hbox{a}xg7 \hbox{xf}7 56.\hbox{g}4 \hbox{e}6 57.\hbox{a}f3 57.\hbox{g}7! 57...\hbox{d}5 58.\hbox{a}g7 \hbox{c}4 59.\hbox{a}e4 \hbox{b}3 60.\hbox{a}d3?! White completely loses his grip. 60.\hbox{a}xe5? wins in a complicated way, but even more convincing is 60.\hbox{a}f8! with the idea 60...\hbox{e}xa3 61.b5! \hbox{b}3 62.bxc6 bxc6 63.\hbox{a}xe5 with an elementary win. 60.\hbox{a}xa3! Here White lost on time, but the win is gone as well. After 61.\hbox{c}c3 e4 62.\hbox{a}d4 \hbox{a}2a2 63.\hbox{c}c2 \hbox{a}3 64.\hbox{c}c3 \hbox{a}2a7 65.\hbox{b}2 Black needs to advance the right pawn. 65...e3! 66.\hbox{c}c1 e2 67.\hbox{d}d2 \hbox{a}3 White cannot put Black in zugzwang, as long as he does not advance the a-pawn voluntarily. 0–1

45.\hbox{a}g3!! is the solution. 45...\hbox{e}7 The main point is that 45...\hbox{g}7 46.\hbox{g}4! puts Black in zugzwang. White is ready to play \hbox{h}5 on the next move and Black cannot meet it with ...\hbox{h}8\hbox{t}. 46.e6! White wins thanks to the tempo-gaining: 46...\hbox{f}xe6 47.g6\hbox{t} \hbox{h}6 48.f6 The poor placement of the rook on e7 is felt.
32. Vladimir Kramnik – Ruslan Ponomariov, Moscow 2009
53...\(\text{\texttt{d}e3}\) 54.\(\text{\texttt{exe}}4 \text{\texttt{xg}}5\) 55.\(\text{\texttt{b}e4}\) led to a lost position in the game. It would be possible to put a lot of detail into the analysis here, but I think Kramnik's play justifies the evaluation. 55...\(g6\) 56.\(\text{\texttt{b}b7}\)\(\rightarrow\) \(\text{\texttt{h}6}\) 57.\(\text{\texttt{fxg}}6 \text{\texttt{xg}}6\) 58.\(\text{\texttt{f}3}\) \(\text{\texttt{d}2}\) 59.\(\text{\texttt{g}4}\) \(\text{\texttt{e}1}\) 60.\(\text{\texttt{exe}}3 \text{\texttt{g}3}\) 61.\(\text{\texttt{f}3}\)! This ending is won for White if the black king has not reached the e-file. In this case he can use a combination of threats to the h-pawn and mating ideas in conjunction with zugzwang to push Black backwards.

61...\(\text{\texttt{e}1}\) 62.\(\text{\texttt{exe}}3 \text{\texttt{f}2}\) 63.\(\text{\texttt{f}7}\) 64.\(\text{\texttt{f}5}\) 65.\(\text{\texttt{e}4}\) 66.\(\text{\texttt{exe}}2 \text{\texttt{g}7}\) 68.\(\text{\texttt{exe}}7\) \(\rightarrow\) \(\text{\texttt{f}8}\) 69.\(\text{\texttt{f}6}\) \(\text{\texttt{f}2}\) 70.\(\text{\texttt{exe}}6 \text{\texttt{g}3}\) 71.\(\text{\texttt{g}6}\) \(\text{\texttt{h}2}\) 72.\(\text{\texttt{exe}}4 \text{\texttt{g}3}\) 73.\(\text{\texttt{f}6}\) \(\text{\texttt{f}2}\) 74.\(\text{\texttt{g}6}\) 75.\(\text{\texttt{f}2}\) \(\text{\texttt{d}6}\) 76.\(\text{\texttt{g}5}\) 77.\(\text{\texttt{f}6}\) \(\text{\texttt{f}4}\) 78.\(\text{\texttt{e}4}\) \(\text{\texttt{d}6}\) 79.\(\text{\texttt{exe}}4 \text{\texttt{e}7}\) 80.\(\text{\texttt{g}6}\) 81.\(\text{\texttt{e}4}\) 1–0

Instead Black has two ways to achieve a draw. The first is the fantastic: 53...\(\text{\texttt{d}6}\)! 54.\(\text{\texttt{exe}}4\)
White has to take this pawn, otherwise there will be no way to stop the b-pawn. 54...\(\text{\texttt{b}2}\) 55.\(\text{\texttt{exe}}1\)
Here and on other occasions White can flick in \(g5\)-\(g6\), but it never makes much sense. 55...\(\text{\texttt{f}4}\)
56.\(\text{\texttt{b}b1}\) 56.\(g6\)\!\! \(\rightarrow\) \(\text{\texttt{h}6}\) would be dangerous for White. He would have to find 57.\(\text{\texttt{f}6}\)! (57.\(\text{\texttt{b}b1}\) \(\rightarrow\) \(\text{\texttt{c}1}\) 58.\(\text{\texttt{f}3}\) 59.\(\text{\texttt{e}4}\) \(\rightarrow\) 57.\(\text{\texttt{g}6}\) 58.\(\text{\texttt{exe}}2 \text{\texttt{c}1}\) 59.\(\text{\texttt{g}6}\) \(\text{\texttt{xg}}7\) 60.\(\text{\texttt{exe}}7\) \(\rightarrow\) 61.\(\text{\texttt{b}7}\) to secure a draw. Also 56.\(\text{\texttt{f}6}\) \(\text{\texttt{exe}}6\) 57.\(\text{\texttt{exe}}7\) \(\rightarrow\) 68.\(\text{\texttt{exe}}6\) 69.\(\text{\texttt{exe}}2\) 70.\(\text{\texttt{exe}}4\) 71.\(\text{\texttt{exe}}2\) 72.\(\text{\texttt{exe}}4\) 73.\(\text{\texttt{exe}}4\) 74.\(\text{\texttt{exe}}4\) 75.\(\text{\texttt{exe}}4\) 76.\(\text{\texttt{exe}}4\) 77.\(\text{\texttt{exe}}4\) 78.\(\text{\texttt{exe}}4\) 79.\(\text{\texttt{exe}}4\) 80.\(\text{\texttt{exe}}4\) 81.\(\text{\texttt{exe}}4\) 1–0

The second solution is: 53...\(\text{\texttt{g}6}\)! 54.\(\text{\texttt{exe}}4\) The most challenging. 54.\(\text{\texttt{f}6}\) is less critical, but can lead to quite a funny position: 54...\(\text{\texttt{b}2}\)!! Good enough to draw (though 54...\(\text{\texttt{d}6}\) 55.\(\text{\texttt{exe}}4 \text{\texttt{b}2}\) 56.\(\text{\texttt{exe}}1\) \(\rightarrow\) leads to a draw very quickly). 55.\(\text{\texttt{exe}}4 \text{\texttt{exe}}4\) 56.\(\text{\texttt{exe}}2\) 57.\(\text{\texttt{exe}}4\) 58.\(\text{\texttt{exe}}2\) 59.\(\text{\texttt{exe}}4\) Quite surprisingly, this position is a fortress. White cannot make significant progress, as his king will never make it to \(e6\). Black puts his bishop on \(g7\) and king on \(e7\). 54...\(\text{\texttt{f}2}\) 54...\(\text{\texttt{exe}3}\) 55.\(\text{\texttt{exe}3}\) 56.\(\text{\texttt{exe}3}\) 57.\(\text{\texttt{exe}3}\) 58.\(\text{\texttt{exe}3}\) 59.\(\text{\texttt{exe}3}\) 60.\(\text{\texttt{exe}3}\) 61.\(\text{\texttt{exe}3}\) 62.\(\text{\texttt{exe}3}\) 63.\(\text{\texttt{exe}3}\) 64.\(\text{\texttt{exe}3}\) 65.\(\text{\texttt{exe}3}\) Black draws.

33. Wang Yue – Pavel Eljanov, Astrakhan Melilla 2010
White went from winning to losing in a one-move blunder. 53.\(\text{\texttt{exe}5}\)?? \(\text{\texttt{exe}3}\)!! White resigned.
0–1

53.\(\text{\texttt{exe}3}\)!! \(\text{\texttt{exe}3}\) 54.\(\text{\texttt{exe}1}\) would have forced Black into an ending he cannot hold. 54.\(\text{\texttt{exe}1}\) 54...\(\text{\texttt{exe}6}\) 55.\(\text{\texttt{exe}6}\) 56.\(\text{\texttt{exe}6}\) 57.\(\text{\texttt{exe}6}\) 58.\(\text{\texttt{exe}6}\) 59.\(\text{\texttt{exe}6}\) 60.\(\text{\texttt{exe}6}\) Not the only move, but it has a fantastic refutation. 57.\(\text{\texttt{exe}3}\)! It is possible that there are other ways to win this ending, but nothing as clear-cut as this. The main idea is to deploy the rook on the a-file to attack the black pawns from the side. It is easy to pile up the analysis here, but I will only give one main line for illustrative purposes: 57...\(\text{\texttt{exe}6}\) 58.\(\text{\texttt{exe}6}\) 59.\(\text{\texttt{exe}6}\) 60.\(\text{\texttt{exe}6}\) 61.\(\text{\texttt{exe}6}\) 62.\(\text{\texttt{exe}6}\) Here White can win by conventional means, but there is also a nice finish with 61.\(\text{\texttt{exe}6}\) 62.\(\text{\texttt{exe}6}\) 63.\(\text{\texttt{exe}6}\) and White wins the bishop.
Nakamura used to be a rather bad endgame player, but always excelling in tactical positions. I think he must have worked hard to improve in this field; his handling of endings the last few years have been much better. Here he managed to combine those two skills to win in great style.
It is already a third of a century ago that John Nunn, one of the greatest chess authors of all time, published *Tactical Chess Endings*. As I have been paying homage to great training books of the past throughout this series with the titles, I found it only fitting to give a similar name to a chapter in this book. This does not mean that our objectives are the same.

This chapter is a collection of complex positions that I hope the readers will find both interesting and instructive. Obviously tactics come into play in a majority of endings, but the positions in this chapter have more than one piece each.

The following position is a good illustration of what to expect in the exercise section, though it is at the easier part of the scale.

**Fabiano Caruana – Hikaru Nakamura**

Wijk aan Zee 2013

Black won the game with a beautiful undermining combination.

54...g4!! 55.bxg4 h3! 56.Ed1

The main point is of course that Black wins after 56.gxh3 Ef8 57.Ed3 Ef4!.

56...Ef8

A cleaner way is 56...h2!, when Black wins after 57.g3 (or 57.Eh1 Ed4) 57...Ed8 58.Ed1 Ef2t 59.Ed3 Eb2 60.Ed3 Eb2 61.Edc5 bxc5 62.Ec1 Ed6.

57.Ed3

57.Ed3 might have offered a little more resistance, but Black still wins with 57...Ee4 58.Ee4 h2 59.g3 Ef6 60.Edc2 Eg5 and White is all tied up.

57...h2 58.Ed1 Ed1 59.Ed2 Ee4 60.Ee4 Ef6 61.Ed3 Ed8

Caruana had seen enough and decided to leave revenge for another day.

0–1

The positions in the exercise section are quite varied in nature, one defining factor being that there is only one clearly best continuation. This is the way exercises have to be in order to be convincing, but the real world is rarely like this. My attention was brought to the following example.
Germany started as the 10th seeds in the 2011 European Team Championship, but ended as clear winners in what was arguably the greatest ever upset in a major team tournament. The team members all performed far beyond their usual level and won many key games. This was one of them.

42.\texttt{\texttt{h2}?! \texttt{b4} 43.\texttt{c3}? \texttt{xb2}!}

This tactic is not surprising, and both players had no doubt seen it quite a few moves ahead. The fact that it suffices for a draw is somewhat bad luck for White; however, to prove this verdict will require some brilliant play later on, which in turn is bad luck for Black!

49...\texttt{d2}?

49...\texttt{e1}! was correct, and not too difficult a move to understand. Play continues: 50.\texttt{xf4} \texttt{h4} 51.\texttt{h3} \texttt{c4}!

The queen plays a crucial role in keeping the white pieces away from the b-pawn, maintaining enough counterplay to secure a draw. White’s best winning try involves getting the knight back into the game. 52.\texttt{f2} \texttt{c2} 53.\texttt{g4} \texttt{f4} 54.\texttt{g3}! \texttt{d2} 55.\texttt{h3} b2 56.\texttt{a4}+ This is the last moment when an important decision must be made.
There is no way that Black can allow the pawn to walk on. 43...\( \text{a} \)x\( \text{a} \) 44.\( \text{a} \)a\( \text{a} \)\( \text{a} \) This gains an important tempo, pushing back the black king on account of 44...\( \text{b} \)b\( \text{b} \) 45.\( \text{a} \)a\( \text{a} \) followed by a knight fork. Black is thus forced to play 44...\( \text{b} \)b\( \text{b} \), after which 45.\( \text{a} \)e\( \text{e} \) followed by \( \text{e} \)e\( \text{e} \) eliminates all counterplay.

Though the above line was the cleanest win, there also was a simpler, more technical method, based on activating the king. After White moved his king to \( \text{h} \)h\( \text{h} \) in the game, he could have followed up with 43.\( \text{h} \)h\( \text{h} \) 44.\( \text{a} \)a\( \text{a} \) following by 44...\( \text{b} \)b\( \text{b} \) 45.\( \text{a} \)a\( \text{a} \) when Black is in trouble.

45...\( \text{b} \)bx\( \text{b} \) is nowhere close to working, so Black will have to play 45...\( \text{c} \)c\( \text{c} \) 46.\( \text{g} \)g\( \text{g} \) \( \text{g} \)x\( \text{g} \) followed by 47.\( \text{f} \)f\( \text{f} \), when White is poised to win the game on the kingside. Some additional moves will have to be made, but White is winning.

In what follows, you will be able to test (and hopefully improve) your tactical awareness in endings of all types. The positions range from five-piece endings to middlegame positions, where a transition to the endgame must be assessed correctly.
Chapter 10 – Tactical Endings

Hebden – D. Ledger, Ascot 2011

Radjabov – Karjakin, Wijk aan Zee 2012

Yusupov – Hess, Barcelona 2010

Nabaty – Ali, Gibraltar (var) 2012

Chirila – Kritz, Washington 2011

Gelfand – I. Sokolov, Wijk aan Zee 1996

CD
1. Mark Hebden – David Ledger, Ascot 2011
30.\( \text{\#h5!} \) The threat of \( \text{\#f6} \) is decisive. 30...\( \text{\#xh5} \) 31.\( \text{\#d8}! \) \( \text{\#g7} \) 32.\( \text{\#xh6}! \) The point. Black would now be lost after 32...\( \text{\#xh6} \) 33.\( \text{\#d7}! \). Instead there followed: 32...\( \text{\#f7} \) 33.\( \text{\#h7} \) \( \text{\#f3} \) 34.\( \text{\#d3} \) 1–0

Black is seemingly in full control. The king is on its way to e7 to take advantage of the unpleasant position of the white knight. However, Yusupov had foreseen this and found a solution. 50.\( \text{\#b7}!! \) \( \text{\#f4} \) 50...\( \text{\#xb7} \) 51.\( \text{\#a6} \) \( \text{\#c8} \) 52.\( \text{\#a7} \) 50...\( \text{\#a6} \) 51.\( \text{\#d4} \) \( \text{\#c8} \) 52.\( \text{\#c5} \) \( \text{\#b8} \) (52...\( \text{\#c7} \) 53.\( \text{\#f3} \) 53.\( \text{\#d3} \) \( \text{\#d7} \) 54.\( \text{\#f3} \) 51.\( \text{\#c2}! \) b3† 52.\( \text{\#b1}! \) This is the simplest. However, White is also winning after 52.\( \text{\#b2} \) \( \text{\#xb7} \) 53.\( \text{\#a6} \) \( \text{\#c5} \) 54.\( \text{\#a4} \) \( \text{\#a4} \) 55.\( \text{\#xb3} \) \( \text{\#b6} \) 56.\( \text{\#b4} \) \( \text{\#e7} \) 57.\( \text{\#c5} \) \( \text{\#a8} \) 58.\( \text{\#f3} \) \( \text{\#d8} \) 59.\( \text{\#xc6} \) \( \text{\#xc6} \) 60.\( \text{\#xc6} \) \( \text{\#c8} \) because he can advance the h-pawn and eventually put Black in zugzwang. The stalemate with the white king on a8 is not going to happen. 52...\( \text{\#e4} \) 52...\( \text{\#a6} \) 53.\( \text{\#e2} \) \( \text{\#c7} \) is of course possible, but White is completely winning after gobbling up the b-pawn. 53.\( \text{\#xb3} \) c5 54.\( \text{\#a6} \) \( \text{\#c6} \) 55.\( \text{\#a5} \) \( \text{\#b8} \) 56.\( \text{\#c4} \) \( \text{\#c3} \) 57.\( \text{\#b2} \) \( \text{\#b5} \) 58.\( \text{\#b6} \) \( \text{\#e4} \) 59.\( \text{\#d7} \) \( \text{\#e7} \) 60.\( \text{\#xc5} \) \( \text{\#h1} \) 61.\( \text{\#c4} \) \( \text{\#c7} \) 62.\( \text{\#c3} \) \( \text{\#d6} \) 63.\( \text{\#d4} \) \( \text{\#c6} \) 64.\( \text{\#e6} \) 1–0

51.\( \text{\#f4}! \) Black resigned in view of: 51...\( \text{\#xe7} \) (If 51...\( \text{\#h6} \) 52.\( \text{\#f6} \) the rook is lost.) 52.\( \text{\#g5} \) \( \text{\#h6} \) 53.\( \text{\#f6} \) The rook is trapped! 1–0

60.\( \text{\#b6}! \) \( \text{\#xa4} \) Black decided to allow the combination, as 60...\( \text{\#b7} \) 61.\( \text{\#c6} \) would leave White in complete control. 61.\( \text{\#b7} \) \( \text{\#b4} \) 62.\( \text{\#c4} \)† The pawn will promote, so Black resigned. 1–0

5. Tamir Nabaty – Sebbar Ali, Gibraltar (variation) 2012
This position did not occur, as Black played differently on the last move and lost easily. Had this position been reached, White would have had to find the winning plan, which includes taking control of the 6th rank and transferring the knight to f6, from where it would spearhead a deadly attack. 110.\( \text{\#b6}!! \) 110.\( \text{\#f7} \) \( \text{\#f8}† \) 111.\( \text{\#g6} \) \( \text{\#c8} \) just repeats. 110...\( \text{\#g8} \) 110...\( \text{\#g8}† \) 111.\( \text{\#f7} \) \( \text{\#g2} \) 112.\( \text{\#b5} \) \( \text{\#f2}† \) 113.\( \text{\#g6} \) Black is mated. 111.\( \text{\#g5} \) \( \text{\#f8} \) 112.\( \text{\#e6}! \)† There is no defence against \( \text{\#h7} \) and \( \text{\#e7} \).

This position contains a trap, and the only reason it fits in this book is that Black fell for it. Perhaps it was not so difficult for you. But you had been warned, poor Sokolov had not. 47...\( \text{\#d6}!! \) 48.\( \text{\#d7}† \) \( \text{\#c5} \) 49.\( \text{\#c7}† \) \( \text{\#b4} \) 49...\( \text{\#d4} \) 50.\( \text{\#c4}† \) wins. 50.\( \text{\#d3}† \) \( \text{\#b5} \) Or 50...\( \text{\#b3} \) 51.\( \text{\#c1}† \) \( \text{\#b2} \) 52.\( \text{\#xa2} \) \( \text{\#xa2} \) 53.\( \text{\#h4} \) and White wins. 51.\( \text{\#xc3} \) White won on move 72. 1–0

47...\( \text{\#e8}!! \) allows White to repeat the position.

The winning move was 47...\( \text{\#d8}! \), after which 48.\( \text{\#c6}† \) \( \text{\#e8} \) gives White little counterplay. For example, 49.\( \text{\#e7}† \) \( \text{\#f8} \) 50.\( \text{\#xe6} \) \( \text{\#a1}† \) 51.\( \text{\#g2} \) \( \text{\#e2} \) and Black wins.
Chapter 10 – Tactical Endings

Magem Badals – Inarkiev, Barcelona 2010

Movsesian – Naiditsch, Sibenik 2011

Mamedyarov – Eljanov, Moscow 2010

Poldauf – Polgar, Bulgaria 1988
7. Jordi Magem Badals – Ernesto Inarkiev, Barcelona 2010

White had been winning all along, but he overlooked a nice tactical trick, allowing Black to win material. 35...fxg3! 36.fxg3 f4†!! This move ruins White’s coordination. 37.xf4 37.hg4 xg2# is not an obvious improvement. 37...e1!! The geometry is quite peculiar. White cannot prevent ...xg2† and ...f3†, winning the exchange. 38.a7 xg2† 39.h4 xh4 40.a8=wg f3† 41.xf3† xf3 0–1

8. Sergei Movsesian – Arkadij Naiditsch, Sibenik 2011

37...f8? is not the right solution: 38.d7 a8 39.d8=wd† a8d8 40.xd8 e4 41.g4 f5 42.h3 e7 43.c6† d6 44.d4 d1 45.b5 Black even faces some practical problems to draw.

37...e3! Black is just in time to stop the passed pawn. White must have missed this. 38.fxe3 d7 38.e6 wins. 38...xe2† 39.f1 xd2 Black converted this winning position to a full point on move 70. 0–1

9. Shakhriyar Mamedyarov – Pavel Eljanov, Moscow 2010

Knights are not well bred to deal with rank pawns. The breakthrough on the kingside is a good illustration of this. 38.g5! hxg5 39.xg7!! hxg7 40.h6 h5 41.h7 f4† 42.g4 g6 43.g4! Keeping control by bringing the king across the centre line. This would not happen after 43.xg5, even though this may still be enough to win. Play continues: 43...d7! 44.f7 h8 45.h5 b5! 46.g6 c4 47.bxc4 b4! (47...bxa4 48.xh8 a3 49.f7+–) 48.xh8 b3 49.f6 b2 50.h8=wd b1=wd The position is far from as clear as White would like it to be. Endings with queens and kings in the open rarely go the way computers predict. 43...e8 43...h8 44.xg5 e8 also loses, because White is able to bring in the king after 45.g6! 46.f5 followed by g5 and f6. 44.xg5 h8 45.f6 g6 46.f5 e3 46...e3 is met by 47.d8 followed by f6 and f7, eventually queening the pawn. 47.h8=wd? Good enough to win, but the h-pawn looks stronger than the knight at the moment. Better is 47.xe5† e7 48.f6† f8 49.e5 when there is no defence against e5-e6, with ideas such as h8=wd and e6-e7#. 47...h8 48.xe5† e7 49.f6† Black resigned; a pawn is enough, after all. 1–0


In the game White lost quickly after: 49.d6?? g2† 50.h1 xe2! The move he had missed. 51.xe2 xe2 52.d7 d1=wh 53.g2 f4† 0–1

The winning line went: 49.a6! White anticipates his opponent’s trick, which turns out to be a fantasy. 49...a8 The only move. 49...g2† does not work due to 50.xg2 d1=wh 51.a7 winning. 50.a7 xd5 51.ed7! Keeping the a-pawn seems the best strategy. 51.b7 b6 52.xb6 xa7 53.xd6 a2 54.g3 might be winning for White, but certainly not through capturing the d2-pawn, as the exchange of rooks would result in a theoretical draw. 51...b6 52.axa8 xd7 53.f3 b6 54.g3 g7 55.f4 f6 56.e3 d8 56...e5 57.xd2 d4 58.e2 c5 59.e3 b5 60.a8=wd would win for White, as the king is too far away. 57.xd2 c7 58.d3 e7 59.c4 d7 60.c5 White wins after putting Black in zugzwang once or twice.

The rook is not working well against the black minor pieces, and the bishop is strong on f4.

White's only chance is therefore to make a seemingly unfavourable exchange. 81.\texttt{Exe}4! \texttt{fxf}3 82.\texttt{Exf}5? White had to force matters immediately. 82.\texttt{Exf}4+! \texttt{xf}4 83.c6 \texttt{g}4+ 84.\texttt{Exe}6 and the knight cannot stop the pawn. Black can of course play on, but the endgame is nowhere near winning for him. 82...\texttt{g}3 83.\texttt{Exe}7 83.c6 \texttt{f}1 changes nothing, for example: 84.\texttt{Exe}8 \texttt{d}3+ 85.\texttt{g}5 \texttt{h}2 86.\texttt{h}8 \texttt{d}5 and Black is in control. 83...\texttt{g}4 84.\texttt{h}7 \texttt{h}2 85.\texttt{d}3+ 86.\texttt{Exe}6 \texttt{f}2 87.\texttt{Ed}7 \texttt{d}5 88.\texttt{Exe}6 \texttt{c}7† 0–1


37.\texttt{Ed}8! \texttt{a}6 37...g4?! 38.\texttt{Exb}8 g3 was another try, but White wins with 39.\texttt{Ec}3!, supporting the knight. I am not sure how many lines it would be possible to calculate over the board from here, but here is a summary of the main options: 39...\texttt{Eg}4 (39...g2 loses to 40.\texttt{Exg}8 \texttt{g}4 41.\texttt{Ed}4† and the knight will stop the g-pawn.) 40.\texttt{Ed}4† \texttt{e}4 (40...\texttt{e}5 41.\texttt{Ed}8! The most accurate, but other moves should also get the job done. 41...\texttt{g}2 42.\texttt{f}3† \texttt{f}4 43.\texttt{g}1 White wins, as the b-pawn is too strong.) 41.\texttt{c}4 g2 42.\texttt{Ed}8† \texttt{f}4 43.\texttt{e}2† \texttt{f}3† 44.\texttt{c}5 \texttt{g}5 45.\texttt{c}6 \texttt{g}6† 46.\texttt{c}7 \texttt{g}7† 47.\texttt{h}8 \texttt{g}6 48.\texttt{a}7 The b-pawn cannot be stopped.

The game continued: 38.\texttt{Ec}3?? \texttt{b}4?? 39.\texttt{Ed}4† and Black resigned. Instead 38...g4! 39.\texttt{a}8 g3 would have drawn. 40.bxa6 is met by 40...g2, while after 40.\texttt{Ed}4† \texttt{e}5 41.\texttt{f}3† \texttt{d}5 42.bxa6 \texttt{c}5 it is clear that the a-pawn will be eliminated.

The correct winning path was: 38.\texttt{Ed}4! \texttt{b}4?? Probably the trickiest try. 38...\texttt{c}5 39.\texttt{Ed}5† wins. 38...\texttt{b}4 39.b6 also seems pointless. Finally, we should clarify that 38...\texttt{Exd}4 39.\texttt{Exd}4† would leave the a-pawn way out of reach, without helping the g-pawn's cause. 39.bxa6! \texttt{b}8 40.\texttt{a}7 \texttt{a}8 41.\texttt{a}4 \texttt{e}5 Black is trying to come in with the king in time. 41...g4 42.\texttt{Ed}4† \texttt{e}5 (42...\texttt{g}5 43.\texttt{c}6†) 43.\texttt{b}5 g3 44.\texttt{g}4 is pointless. 42.\texttt{c}3 \texttt{d}6 43.\texttt{c}4 \texttt{c}6 44.\texttt{c}5 \texttt{g}4 45.\texttt{a}6† \texttt{c}7 46.\texttt{b}5 g3 47.\texttt{g}6 \texttt{xa}7 48.\texttt{g}7† \texttt{b}8 49.\texttt{a}6†! \texttt{a}8 50.\texttt{g}8† \texttt{b}7 51.\texttt{b}8# A study-like finish. 1–0

13. Levon Aronian – Veselin Topalov, Morelia/Linares 2006

Aronian had been winning this game for a long time, but then gave Topalov one little chance, which the World Champion did not miss. I remember reading a 1996 interview where Topalov explained that playing chess is like being a striker in football. Often you will only get one chance, and when you do, you cannot hesitate! 57...\texttt{f}5†!! An amazing defensive move. Black manages to exchange his f-pawn for White's h-pawn in this great combination. Afterwards the position is objectively drawn, although it required a fantastic defensive effort from Topalov. The position is not that comfortable to defend. 58.\texttt{Exf}5 \texttt{f}7 59.\texttt{h}5 \texttt{a}5† 60.\texttt{e}4 \texttt{a}3! The h4-pawn falls. White continued pressing, but eventually had to settle for a draw on move 123. \frac{1}{2}–\frac{1}{2}


63.\texttt{h}6! \texttt{Exh}6 63...\texttt{h}2 was the obvious reason not to advance the h-pawn, but this can be refuted with 64.\texttt{b}8† winning a piece. (64.\texttt{a}1? \texttt{g}2† 65.\texttt{h}5 \texttt{h}2† 66.\texttt{g}6 \texttt{a}6 enables Black to draw.) 64.\texttt{Exh}6 \texttt{xe}5 A reasonable try, but not good enough. 65.\texttt{g}6† \texttt{f}5 66.\texttt{fxe}5 \texttt{xe}5 67.\texttt{g}5 \texttt{b}4 68.\texttt{Ec}6 \texttt{d}4 69.\texttt{f}4 a5 70.\texttt{f}3 \texttt{c}3 71.\texttt{xc}5† \texttt{xb}3 72.\texttt{xa}5 \texttt{c}2 73.\texttt{c}2 \texttt{b}3 74.\texttt{c}5† \texttt{b}1 75.\texttt{d}2 \texttt{b}2 76.\texttt{b}5 1–0
After 48.\textit{w}e6? \textit{d}d4\textit{t} 49.\textit{w}d6 Black wins with 49...\textit{e}4! 50.\textit{w}c5 (50.\textit{c}7 \textit{b}b5\textit{t} 51.\textit{c}c6 \textit{xc}7 52.\textit{xc}7 \textit{e}3 does not give Black many chances either) 50...\textit{xc}6 51.\textit{xc}6 \textit{e}3 52.\textit{d}d5\textit{f}f2 53.\textit{f}f4\textit{g}1 54.\textit{g}4\textit{f}f1 55.\textit{f}4\textit{f}2.

\textbf{48.\textit{f}6!} Accurately played. 48...\textit{e}4 49.\textit{e}5? A blunder. With 49.\textit{c}7! \textit{d}d6 50.\textit{e}6 \textit{c}8 51.\textit{d}5! White would have won the game. 49...\textit{e}7 50.\textit{c}7 \textit{d}d7 51.\textit{a}3? White would have had better chances for survival after 51.\textit{e}6 \textit{xc}7 52.\textit{xe}4. Black should still be winning after 52..\textit{e}5\textit{f} 53.\textit{d}d4 \textit{f}5\textit{t} 54.\textit{d}d3 \textit{c}3\textit{t} 55.\textit{xc}3 \textit{xe}4, but there are some complications to navigate. 51...\textit{e}3 52.\textit{c}3 \textit{c}6\textit{t} 53.\textit{e}6 \textit{xc}7 54.\textit{d}d5\textit{f}f2 55.\textit{d}d6 \textit{d}4! Clearly White had missed this. 56.\textit{xc}7 \textit{b}5\textit{t} 0–1

In the game White collapsed with: 40.\textit{d}1? \textit{xa}2 41.\textit{f}6? 41.\textit{e}8\textit{t} \textit{g}7 42.\textit{f}6\textit{t} \textit{g}6 43.\textit{f}7! \textit{xf}7 44.\textit{h}5\textit{t} \textit{g}7 45.\textit{e}7\textit{t} would have enabled him to salvage a perpetual check. 41...\textit{g}2!! Threatening ...\textit{f}3\textit{t} and ...\textit{g}1#. The game ended similarly with: 42.\textit{f}1 \textit{h}3 43.\textit{e}2 \textit{g}1# 0–1

White missed the chance to win through a mating attack: 40.\textit{e}8\textit{t}! \textit{f}7 41.\textit{d}1!! \textit{xd}1\textit{t} Forced. 41...\textit{xa}2 allows White to deliver checkmate with: 42.\textit{h}5\textit{t} \textit{g}7 43.\textit{f}6\textit{t} \textit{h}7 44.\textit{g}6\textit{t} \textit{h}6 45.\textit{h}8# 42.\textit{xa}8!! Domination of the black knight is the main idea here. 42...\textit{xe}8 43.\textit{b}2! The most controlled move, although White can also win with the immediate 43.\textit{g}6. Black has no counterplay of any sorts. for instance 43...\textit{h}4 44.\textit{gxh}4 \textit{h}3\textit{t} 45.\textit{g}3 \textit{d}3\textit{t} 46.\textit{g}4++ and the black knight stays dominated.

\begin{center}
\begin{tabular}{|c|c|c|c|c|c|c|c|c|}
\hline
8 & 7 & 6 & 5 & 4 & 3 & 2 & 1 \\
\hline
a & b & c & d & e & f & g & h \\
\hline
\end{tabular}
\end{center}

\begin{center}
\begin{tabular}{|c|c|c|c|c|c|c|c|c|}
\hline
8 & 7 & 6 & 5 & 4 & 3 & 2 & 1 \\
\hline
a & b & c & d & e & f & g & h \\
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Chapter 10 – Tactical Endings

Kotronias – Gustafsson, Aix-les-Bains 2011

Vitiugov – Khalifman, Taganrog 2011

Moiseenko – Ponomariov, Kiev 2011

Chernobay – Demidov, Moscow 2013

Cornette – Inarkiev, Aix-les-Bains 2011

Howell – McShane, London 2010
Black lost in a horrible manner. 37... exchanged. 38... exchanged. 39... exchanged. 40... exchanged.
41... Black goes all the way from a win to a loss in just a few moves. Here he could have held the game with 40... exchanged. 41... exchanged. blocking the b-pawn. The extra pawns White has after 42... exchanged. 43... exchanged. 44... exchanged. are easily blocked. 41... White wins the black rook. There is still some work remaining, but for a betting man, the game is over. White won on move 67.
37... exchanged! would have won the game. White can win his piece back with 38... exchanged, but it does not save him: 38... exchanged. 39... exchanged. 40... exchanged. exchanged. leads to a quick mate. 39... exchanged. 40... exchanged. exchanged.
White is paralysed and Black wins easily.

18. David Spence – Christopher Dorrington, Canterbury 2010
White has a fantastic combination at his disposal. 22... exchanged!! exchanged. 23... exchanged. The main point of White's play arises after 23... exchanged. 24... exchanged. exchanged. 25... exchanged, when the black king (and also the rook) has been stalemated. White will advance his pawns on the queenside and win easily. This resembles something from a study. 24... exchanged. exchanged. 25... exchanging the rooks, along with any counterplay. 26... exchanged. 27... exchanged. exchanged. 27... exchanged! The final small finesse, keeping the black king out of play. Taking the (tripled) pawn on f6 would have been ridiculous. 28... exchanged. Black cannot get the h-pawn going in time, and the outcome is decided. 28... exchanged. exchanged. 29... exchanged. exchanged. 30... exchanged. exchanged. 31... exchanged. exchanged. 32... exchanged.

35... exchanged? would fail, as after 35... exchanged! the pawn is queening. After 36... exchanged a2! 37... exchanged a1= exchanged! White has a few drawing chances, but they fit on the hand of an ostrich.
35... exchanged!! placed. The only defensive option. After 35... exchanged, White wins quickly: 36... exchanged! (36... exchanged exchanged! 1 is even better.) 36... exchanged 37... exchanged 38... exchanged 39... exchanged b2 40... exchanged a1= exchanged! 42... exchanged! White has a winning ending, based on 42... exchanged 43... exchanged! The only move. 37... exchanged 38... exchanged exchanged. 39... exchanged! threatens exchanged and leads to an easy win after 39... exchanged exchanged. 38... exchanged c6 This passive move is not a serious attempt to save the game. 38... exchanged 39... exchanged a2 40... exchanged is equally hopeless. 38... exchanged was the best chance, but after 39... exchanged exchanged! 40... exchanged exchanged, White should win with careful play. 39... exchanged exchanged! 40... exchanged exchanged! 41... exchanged exchanged! 42... exchanged exchanged! exchanged! This non-standard position did not arrive by force, but by White's choosing; given the evaluation

20. Vitali Golod – Michal Luch, Bremen 2011
The game went downhill quickly for Black. 39... exchanged?? An awful move. The number one rule in winning endings is to prevent counterplay if possible. Here Black does the opposite and forces his opponent to activate his king. 40... exchanged e2 40... exchanged exchanged! exchanged! 42... exchanged wins. 41... exchanged exchanged! is even simpler. 41... exchanged 42... exchanged exchanged! exchanged! A nice move, but not the only route to victory. White won on move 60. 1–0
39... exchanged? also fails to meet the demands of the position. 40... exchanged e2 41... exchanged White has a strong initiative. The main line goes: 41... exchanged exchanged. exchanged! exchanged. 43... exchanged d3 44... exchanged d2 This is not achieved.

of the position a few moves ago, I decided it was realistic that White would have been happy to take a few risks. He is actually winning with accurate play, even if he cannot prevent the coronation of the enemy pawns. 45.\textit{e}e5! \textit{e}1=\textit{W} 46.\textit{xf}6 \textit{xf}6 47.\textit{f}8=\textit{g}6 48.\textit{e}7 (48.\textit{f}7=\textit{h}6 49.\textit{e}7 \textit{e}3=\textit{W} 50.\textit{d}5 \textit{e}2 51.\textit{f}7=\textit{h}7 52.\textit{e}8=\textit{W} \textit{d}1=\textit{W} 53.\textit{d}x\textit{d}1 \textit{xf}8 54.\textit{d}x\textit{e}8 \textit{e}x\textit{e}8 55.\textit{c}1=\textit{W}) 48...\textit{e}5=\textit{W} 49.\textit{b}6=\textit{e}2 50.\textit{x}a6 The white rook is ready to deliver a check on b6. 50...\textit{e}3=\textit{W} is the last chance, preventing \textit{f}3=\textit{W} in some lines, but after 51.\textit{b}6=\textit{h}5 52.\textit{h}3=\textit{W} White wins.

The winning move was: 39...\textit{e}6=\textit{W}! The two main ideas are to prevent the white bishop from participating in the events on the kingside (h2) and stop the white king from becoming active on d5 or f5. 40.\textit{e}4=\textit{W}? The only try. 40.\textit{b}6=\textit{f}5=\textit{W}! is an important point, when White is mated. 40.b8=\textit{W} is not much of an improvement for White: 40...\textit{x}b8 41.\textit{x}b8 \textit{d}2=\textit{W} 42.\textit{e}4 e2 43.\textit{e}1 d3 44.\textit{e}3 \textit{d}1 45.\textit{f}2 Here Black wins with either 45...d2 or the amusing 45...\textit{e}1=\textit{W}! 40...\textit{e}2 40...\textit{d}2=\textit{W} transposes to the note to move 40 in the game continuation above. 41.\textit{d}3=\textit{W}! A necessary retreat. 41.\textit{e}1 \textit{x}g2 is virtually hopeless for White, who will be no match for four connected passed pawns. After 42.h3 \textit{g}4 43.\textit{h}x\textit{g}4 \textit{h}3 it would be time to resign. 41...\textit{x}g2 42.b8=\textit{W} 42.h3 \textit{e}1=\textit{W} 43.\textit{d}x\textit{e}1 \textit{b}2 gives Black a winning ending. 42...\textit{d}8 43.\textit{x}b8 \textit{b}x\textit{h}2 Black’s advantage is beyond doubt; the only question is whether White has a miracle draw. I believe he does not. (Obviously the final assessment is irrelevant to our decision-making process in the initial position, but it is interesting nonetheless). 44.\textit{a}7 \textit{g}2 45.\textit{x}c5 \textit{h}3 46.\textit{d}x\textit{d}4 \textit{h}2 47.\textit{c}1 \textit{g}1 48.\textit{x}g1 \textit{h}1=\textit{W} 49.\textit{c}x\textit{c}2 \textit{g}4 As I see it, White will not be able to restrain the black g-pawn while also organizing sufficient counterplay with the c-pawn to hold a draw. Without the a-pawns, the probability of a draw versus a win for Black would be about 50/50, but with those pawns on the board White will suffer from the famous two weaknesses.

White missed the chance to trap the black rook in a magical continuation.
32.\textit{d}3=\textit{W} \textit{a}1=\textit{W} 33.\textit{d}2 a4 White was struggling for a draw, which can still be held. However, the game was eventually won by Black on move 48. 0–1
32.\textit{c}1=\textit{W} Threatening to win the rook with \textit{c}1=\textit{b}1. 32...\textit{a}1=\textit{W} 33.\textit{b}1=\textit{W}! Freeing the c2-square for the knight. 33...\textit{a}4 34.\textit{d}2=\textit{W}! Closing the net. 34...\textit{c}5 34...\textit{e}4 also fails to provide an escape route after 35.\textit{a}2 \textit{e}3 36.\textit{d}2=\textit{W}. 35.\textit{b}2 c4 36.\textit{a}2 \textit{e}7 37.\textit{b}3=\textit{W} White wins.

22. Cerdas Barus – Hrvoje Stevic, Biel 2011
After the game moves 41.\textit{g}3 a3 White played 42.\textit{b}1? \textit{g}8 and went on to lose this now even endgame on move 74. White could still have posed Black problems with 42.\textit{d}6=\textit{W}, when the only way to save the game is: 42...\textit{x}d7=\textit{W}! 43.\textit{x}d7 a2 44.\textit{x}g6=\textit{h}6! 45.\textit{g}5=\textit{W} \textit{x}g5 46.\textit{d}5=\textit{W} \textit{x}g6 47.\textit{d}6=\textit{W} \textit{f}5 48.\textit{x}a6 \textit{d}3 The tablebases reveal that Black can draw, although for a human player there would still be some work ahead. 0–1
White has a strong d-pawn, but no easy way to gain control of the promotion square. However, we should never forget that an obstinate opponent can only be defeated by mate. 41.\textit{g}5=\textit{W}!! With the direct threat of 42.\textit{d}5 followed by 43.\textit{h}4=\textit{W}. 41...\textit{g}8 42.\textit{c}6 Threatening \textit{f}4, \textit{d}5=\textit{W} and \textit{h}4=\textit{W}. 42...\textit{f}7 43.\textit{e}4=\textit{W}! a3 44.\textit{e}8 a2 The a-pawn secures Black counterplay against the white d-pawn, but not against: 45.\textit{d}5=\textit{W}

The a-pawn would decide, if only Black could find a way to bring his knight into the game. 62...\textit{xc6}! 63.\textit{xe6} \textit{ed1}? Leko missed 63...\textit{e6}!, when White is lost after 64.\textit{exe1} \textit{a1=} 65.\textit{ff2} \textit{d1}+, with mate coming, or 64.e5 \textit{a1=} 65.\textit{xf6}+ \textit{h7} 66.\textit{exe1} \textit{exe5} when there will be no fortress. 64.\textit{xd4}! The other two defences do not work here either, but Black's inaccuracy gave White this extra option. 64...\textit{xd4} 65.\textit{e6} \textit{e4} 66.e5 \textit{a1=} 67.\textit{xa1} \textit{d4}+ 68.\textit{f3} \textit{g4}+ 69.\textit{e3} \textit{xe5}+ 70.\textit{xf1} The most accurate defence was 70.\textit{e8}! \textit{b4} 71.\textit{g8}+ \textit{h7} 72.\textit{e8} and Black will make no progress; all he can do is exchange into a theoretically drawn ending. 70...\textit{a4} 71.\textit{f8} \textit{a1} 72.\textit{e2} \textit{a2}+ 73.\textit{f1} \textit{e6} 74.\textit{e2} \textit{e2}+ 75.\textit{f1} \textit{b2} 76.\textit{g1} \textit{b6} 77.\textit{g2} \textit{d6} 78.\textit{g1} \textit{b6} 79.\textit{a4} \textit{f5} 80.\textit{a4} \textit{d6} 81.\textit{f2} \textit{d2}+ 82.\textit{f1} \textit{f4} 83.\textit{a2} \textit{e3} 84.\textit{f2} \textit{e4} 85.\textit{a4}+ \textit{d4} 86.\textit{e2} \textit{e4} 87.\textit{e2} \textit{b4} 88.\textit{a2} \textit{b3} 89.\textit{f4}+ \textit{f5} 90.\textit{f2} \textit{f3} 91.\textit{e2} \textit{d3} 92.\textit{f2} \textit{d2}+ 93.\textit{f1} \textit{d4} 94.\textit{e3} \textit{b4} 95.\textit{e2}? 95.\textit{a3} \textit{e2} 96.\textit{a8}+ was the best defence. One idea is that Black makes little progress after 96...\textit{e4} 97.\textit{a4}+ 95...\textit{b2}+ 96.\textit{f1} \textit{e4} 97.\textit{a3} \textit{d2} 98.\textit{e4}+ \textit{d4} 99.\textit{a2} \textit{d3}? Low on both time and energy, the players are messing up a bit. Here Black could have won with 99...\textit{e3}! 100.\textit{e5} \textit{e4} 101.\textit{e1} and so on. 100.\textit{f2}! \textit{f3}+ 101.\textit{g2} \textit{e3} 102.\textit{a4}+ \textit{d3}? 103.\textit{e4} e4 104.\textit{g8} \textit{c2}+ 105.\textit{f1} \textit{e1}+ 106.\textit{g2} \textit{e3} 107.\textit{d8}+ \textit{e2} 108.\textit{a8} \textit{e1} White lost on time. 0-1


31...\textit{xe7}? 32.\textit{xe5} \textit{d3} 33.\textit{e3}+! White could have got a draw by torture after 33.\textit{ed5}+, which he probably rejected on account of 33...\textit{f4}. But White holds with accurate play: 34.\textit{e5} \textit{xe5} 35.\textit{e5} \textit{b3} 36.\textit{e8}+ \textit{g8} (36...\textit{e6} 37.\textit{xf4} \textit{b2} 38.\textit{e6}+ \textit{g5} 39.\textit{e6} \textit{e2} 40.\textit{e6}+) 37.\textit{e6}+ \textit{h8} 38.\textit{b5} \textit{b2} 39.\textit{e5} \textit{b1}+ 40.\textit{e2} \textit{e5} 41.\textit{e5} \textit{e5} 42.\textit{e5} There are still enough pieces on the board to make it complicated, but the likely outcome is an ending with rook and knight versus rook, which should be drawn. 33...\textit{f4} 33...\textit{d2}! would have kept realistic winning chances. 34.\textit{e6}+ \textit{xe6} 35.\textit{e6} \textit{b1}+ ½–½

The winning move was: 31...\textit{b3}! “Passed pawns must be pushed!”, as the generalist advice goes. 32.\textit{e2} 32.\textit{xe5} \textit{c2} 33.\textit{e8}+ \textit{g7} 34.\textit{e8}+ \textit{b2} 35.\textit{e2} \textit{a4}– The pawn will soon promote. 32...\textit{e2} Black should be a little careful when it comes to White’s counterplay: 32...\textit{e2} 33.\textit{e5} \textit{b2}?? would be disastrous due to 34.\textit{d5}! and White wins. 33.\textit{e5} 34.\textit{e1} \textit{e4} 35.\textit{e6} \textit{e2}! A final accurate move, preventing \textit{f1}. Now Black is threatening ...\textit{d2}, and after 36.\textit{e1} \textit{c2} 37.\textit{e2} \textit{c1}+ the b-pawn is queens. Black should probably also win after 31...\textit{b1}+!? 32.\textit{h2} \textit{b3} 33.\textit{e5} \textit{c1} 34.\textit{e8}+ \textit{g7} 35.\textit{b8} \textit{f6}, but there would be a lot of extra work. The b-pawn is not queening easily and White may prolong the game by giving up his knight for it at the right moment.


46.\textit{h7}+ Kotronias was rightfully upset after missing the win. His rating has been around 2600 for a decade, though his strength has always seemed a good deal higher to me. Such accidents are the main reason why he is not more successful. 46...\textit{g8} 47.\textit{e7}+ \textit{f8} 48.\textit{g6}+ \textit{g8} 49.\textit{e7} \textit{b6} 50.\textit{e5}? We will leave this game after White finally throws the win away for good,
as the moves in my database are hard to believe. White is still just about winning after 50...h5!, when the black rook does not have a good square available. After 50...f6? 51.e5! White loses at once. His best chance is 50...b5† 51.xb5 fxe5 52.gxf5 xxa2, but White appears to be winning after 53.e7† fxe7 54.d6 c5 55.xe6 c4 56.g6† g8 57.f4.

46.e7 b6 47.g6† xg6 48.xg6 c7xe2 might win for White, but it is more difficult than we would like it to be.

46.d8 b6 47.e6 g8 48.xg7† h8 49.e7 g8 50.h7† h8 51.xf4 xea2 52.g6† xg6 53.xg6 also wins the exchange, but things are not so easy here either.

46.f7† would threatened e7 followed by h7#. Black’s only try would have been: 46...xf5 46...g7 47.e6 is even worse. 47.gxf5 xea2 Black seems to have some chances with the a-pawn, but White seals the victory with 48.e7 b4 49.f6! with renewed mating threats, forcing Black to give up his bishop.


33...c1=+? The game continued: 34.xc1 xc1 35.g7† f8 36.xh7? Moiseenko misses his chance to complicate matters. After 36.xb7! Black’s victory is far from certain. The only try is 36...c6 37.d7 e4 38.e7 axa4 39.xc6 xed7 40.xd4†, when I believe that a draw is the most likely result. 36...c6 37.e7 e8† Black is back on track, and converted his advantage. 38.e8† d7 39.c7† xd6 40.g7 e6 41.xb2 c2 42.xg6† f7 43.f6† e7 44.g3 e2d2 45.h5 e8b2 46.e6 xe2f2 47.h6 xe2f2 48.xf4 f7 49.a5 xe2f2† 50.xe4 g4† 51.d3 ea2 52.a6 ga4 53.h8=+† xe8xh8 0–1

33...e1=+ is correct. 34.e7† f8 35.d7 Black is also winning after 35.xh7 e4! 36.d7 c6, for example: 37.h5 gxh5 38.xh6 xed7 39.e2 d1 40.e1 e5! 35...d8! I find this more convincing than Ponomariov’s line, which goes: 35...c6 36.e7 edx6 37.xe4 edx7 38.e4 e7 39.e5 eb1! Black should win here too, but there is some play left. 36.xh7 c6 37.e8† f7 38.xd8 xa1 39.xf6 xxf6 40.e8 c1=+ 41.e6† xb6 42.d8=+† f7 Black should win without great problems.

27. Matthieu Cornette – Ernesto Inarkiev, Aix-les-Bains (variation) 2011

Inarkiev gave this fantastic variation in his annotations. Cornette rejected this line, and rightfully so. 21...xb7! More accurate than Inarkiev’s 21...a3?! When White stays in the game with 22.axa7 xa7 23.g3†. 22.xb7 a3! The knight on d7 is not important if White cannot stop the a-pawn. 23.xd7 23.xd7† e8 24.xb7 only transposes. 23.e3 is of course possible, but after 23...a4 24.e1 c5 the ending will eventually end with 0–1. 23...a4!! Blocking the retreat of the white knight, making the front a-pawn a serious force. 23...a4 24.e5† d8 25.e3 allows White to force a perpetual check after 25...e8! 26.exf7 xa6! 27.f8† d7 28.e7†, as it would be suicidal for Black to try 28...e8? 29.xb7 a4 30.e1 when the pawns are effectively blocked. 24.e5† 24.xb7 xed7 25.e7 26.xb8 26.xf1 e3 wins easily, of course. 24.e8! The most accurate. 24...f8?? would be foolish on account of 25.e1 a2 26.e1 b8 27.d7†, while 24...d8?? would still win after 25.e1 a2 26.e7† c5 30.dxc5 c6 31.e2 e5 32.e5 e3 33.g5, but it would take more time. 25.e1 a2 26.e1 b8 Finally the back rank mate comes into play and Black wins.

White played 28...f3, which was met by 28...e8!. Black was over the worst and drew the game on move 41. ½–½

There is a winning continuation involving elegant geometric motifs. 28.d3! xb2 28...xd3 offers less resistance: 29.e8t! The most precise win. (29.xf6 would also lead to a full point, but after 29...c5 [29...gx6? 30.g3t leads to a quick mate] 30.e8t xe8 31.xe8t sh7 32.d7 xd7 33.gxf6 xf6 34.xf6t sh8 35.xf6t sh7 36.xf7t sh8 37.xe7 xe7 some work would still be required.) 29.xe8 30.xe8t sh7 31.xe4t g8 32.xf6 Black is pinned and the d-pawn wants to get up in the world. 32...c1 White has several wins, but the cleanest is 33.g4, when only the exchange of queens followed by an animal sacrifice can prevent a new white queen from deciding the game. 29.xc5 d4 29...xc5 30.d7 wins easily for White. The main line is: 30...f8 31.e8f6 32.xf8t xg8 33.xe8t h7 32.e4t 32.e4t xe4 33.xe4 b5 is far less clear, although still close to winning. 32.d7? xf2! would be a cruel piece of self-inflicted pain to endure. 33.d8=xe8 34.h3 h1t 35.g4 xg2t 36.e5 h3t 37.e5 c3t with a perpetual check. 32...b5 32...e5t 33.g3 c7 35.xf7 leads to a position that is obviously winning, but not immediately so. 33.d7 b6 34.f6t! xf6 34...g6 35.d5 35.xf7t h8 36.xf6t h7 37.xb6 White wins.

29. Artem Chernobay – Mikhail Demidov, Moscow 2013

This could of course also have been placed in Chapter 6, but with the strong attack on the king, I felt that it would be nice to include it here.

In the game Black managed to hold the draw after 41.e8t? g7t.

The winning continuation is: 41.xd6 xd6 42.e8t g7 43.c3t f6 One of the big themes of this example is domination, as shown after 43...f6. 44.e5! when there is no defence against e7. For example: 44...h6 45.e3t and White wins. 44.c7t h6 45.g4! g5 46.d2t g3 d6t delivers Black from the threat of mate, but the endgame after 47.xd6 xd6 48.e7! g5 49.hxg5t xg5 50.xh7 looks hopeless. 46.hxg5t xg5 47.g8t f4 48.c1t At this point there are many other ways to win. If your intuition was that Black will somehow be mated here, to me this is good enough to count as a correct solution. 48...e5 49.e8t e6 After 49...d5 50.e2! Black has no defence against the various threats. 50.c7t d5 51.d7t e5 52.f4t White wins.


A tense game ended in time trouble, leaving the players with insufficient time to see the hidden tactical nuances in the position. In the game, mistake followed mistake after: 34.e7t e8t McShane misses that he would be better after 34...g8t. 35.e5 d8 36.d5t Missing two wins: 36.xh7t g8 37.he7! xh6 38.e8t xe8 39.xe8t g7 40.xc8 g2 41.f3 f6 42.c4+- and 36.f3, based on 36...g2 37.f3t. The second line is perhaps simpler, but the first is more conclusive. 36.e8 37.e5 d8 38.d5t At this point a draw was agreed. ½–½

34.e7t The obvious first move. 34...g8 35.f7t!! This beautiful move, along with the concept connected to it, is what Howell missed. 35...xh7 36.d8t! f8 37.h7t White promotes his pawn. And if 35...e8 36.e5 d8 37.h7t h8 38.f1 White wins with his ocean of extra pawns. 36.xf8t xf8 37.d8t e7 38.xc8 g2 39.f3 f6 40.g8t– The technical conversion should not be too difficult.
Chapter 10 – Tactical Endings

Nepomniachtchi – Wells, Aix-les-Bains 2011

Korobov – Le Quang Liem, Loo 2013

Kasparov – Vachier-Lagrave, Clichy 2011

Voiska – N. Kosintseva, Khanty-Mansiysk 2010

Kabanov – Volkov, Moscow 2012

Vallejo Pons – Cori, Khanty-Mansiysk 2011
31. Ian Nepomniachtchi – Peter Wells, Aix-les-Bains 2011
The game ended in a draw after: 46...bxa5! b3 46...bxa8 was clearly not what Nepomniachtchi was scared of. One hardly needs to look for a forced win against such an obviously passive move, but here is one anyway: 47.c5 b8 48.f8t f6 49.Bc7 f7 50.Bxf8t xBf8 51.Bb5 Bxf6 52.Bxe4 e5 53.Bb8 Bxe6 54.Bd7 f5 55.Ba8 Bc7 56.Bb8=+ 57.Bxa5 Be8 58.Bxa4 Bb6 59.Bb4= Bc6 60.a4 1/2-1/2

The winning line is by no means obvious: 46.bxa5! Bb3 46...Bb8 was clearly not what Nepomniachtchi was scared of. One hardly needs to look for a forced win against such an obviously passive move, but here is one anyway: 47.c5 Bxc5 48.dxc5 Bf6 50.Bxf8+ Bxf6 51.Bxd7+= 47.Bf4 White has a winning position, as the black pawns do not offer sufficient counterplay. Nepomniachtchi must have been unsatisfied with something here, but I have analysed three variations to prove that White is winning. I would imagine that most grandmasters would feel confident that White was winning, but perhaps less confident about their ability to apply the necessary technique – especially when playing with an increment. 47...e5

Other moves are no better:
47...Bf3 48.Be5 Bc3 49.Bd6 g3 50.Bf8 Bf6 51.Bc7 f4 (51...g2 52.Bd1=) 52.a6 g2 53.Ba7 Bg1= 54.Ba8 B White wins.

47...Bxa3 48.Bc6 Bc3 is refuted in several ways. One of them is 49.Bxe5! Bxc6 50.Bf8 Bg5 51.Bae6 Bg6 52.Bg7 Bh6 53.Bf7 Bc1 (53...Bg6 54.Bf6= and Bg7= wins the black rook) 54.Bf6 Bc8 (54...a3 55.Bf8 and; 54...Bc6 55.Bxf5 a3 56.Bf6= are easily winning) 55.Bd4 also win simply for White.

48.Bxe5 Bc3 49.Bd6 g3 50.Bf8 Bf6 51.Bh7 Bd3 51...g2 52.Bh6= Bf7 53.Bg6 wins. 52.Bc7 f4 53.Bh6= Bf7 White is obviously winning here. One move is 54.Bg6 and White will win eventually. A more tactical line is 54.Bg6= Bg7 55.Bxf4 Bxh6 56.Ba6= and the white pawn cannot be stopped.

Kasparov is, of course, still officially in retirement, but he resurfaces for the odd blitz match for charity. In his match against Vachier-Lagrave he had this fantastic chance to show his greatness once again. However, if he wants to produce more masterpieces, he needs to come back to standard chess...

The game went: 48.e6? d2? 48...fxe6 49.g6 hxg6 50.hxg6 e5 51.g7 Bf7 52.Bb8 Bf4 53.Bg3 Bxf6 54.Bxd8 Bxg7 might win eventually for White, but nothing is certain. 49.e7 d1=+ 50.Bxd1 Bxd1 51.h6 Bf6 52.Bg2 Bg6 53.Bf3 Bf6 54.Be2 Be6 55.Bd3 Bf6 56.Be4 b5 57.g6! fxg6 58.exd8= Bxd8 59.Bf7= 1-0

48.g6= was the winning move. 48...hxg6 49.hxg6 fxg6 50.e6 Bb6 Kasparov must have overlooked 51.Bf5=, preventing a check on f6. After the forced 51...gx5 52.e7 d2 53.exd8= Bxd8 54.f7= White takes the full point.

33. Nikolai Kabanov – Sergey Volkov, Moscow 2012
White has an extra exchange and can create passed pawns by attacking a7. But Black also has counterplay in the centre with his two connected passed pawns. 41.Bf1? A logical move, which unfortunately is insufficient to win the game. 41...f4 42.Bf2 Also after 42.Bb4 Bc5 43.Bf7 a3 44.Bxa7 d3 45.Bc7= Bb4 46.fxe3 fxe3 47.Bxc3 Bxc3 48.a7= Bc2 Black escapes with a draw. 42...e3
43.fxe3 fxe3† 44.♖d3 e2 45.♖d2 d3 46.♗b7 g5 47.♗b8 White has to be careful. Maybe it was only here that he realized that 47...♖xa7 would lose to 47...♖b1†!! 48.♕a1 ♕a3 when Black promotes first – and with check. 47...♗d5 48.♖d8† ♦e4 49.♖e8† ♦d4 50.♖d8† ♦e5 ÷1—÷

The way to understanding the win begins with the following failed attempt: 41...♖b7? f4! Supporting the e-pawn. (With 41...d3? Black shows his cards too early, and after 42.♕e1 f4 43.♕d2 White wins.) 42.♖xa7 d3 43.♖a8 ♖d7! The rook has no route back into the game, but White would of course have seen this in advance. 44.♖d8† ♖xd8 45.♖a7 Maybe this is your solution? Did you stop here? If so, you are in for a heavy surprise! 45...d2 46.♖a8=♕t ♖c7! Surprisingly, White cannot force a check that picks up the d2-pawn, and will therefore have to settle for a perpetual check.

However, White can win a tempo with: 41.♕b4! 41.♖b6† ♕c5 42.♖b7 achieves the same thing. 41...♕c5 41...d3 42.♕e1 changes nothing. 42.♖b7 f4 43.♖xa7 d3 Black's counterplay is less effective when the rook is in the game. 44.♖c7† ♖d4 45.a7 46.♖d7† ♕d5 47.♖xd5† ♕xd5 48.a8=♕t Check!

34. Anton Korobov – Le Quang Liem, Loo 2013
A brilliant example of comparison. White moves the king forward to win the black knight, but which of the two squares is the correct one? This can only be solved by calculating the variation to the end and seeing where the knight is able to escape with a trick, in the event that White puts the king on the wrong square. 55.♗b4! ♗xd6 56.c7 ♖xc7 57.e5† ♖xe5 58.♖xc7 Had the white king been on a4 in this position, Black would have been able to hold a draw with 58...♖e6! 59.♖e7 ♖b7!!, when the knights defend each other perfectly. 58...♖xh5 59.♖xa5 ♖g5 60.♖c5† ♖f6 61.♖d3 1–0

35. Margarita Voiska – Nadezhda Kosintseva, Khanty-Mansiysk (ol) 2010
After 49.♖c8? ♖xd7 50.♖xc4† ♖xc4 51.♗e5† ♖c3 52.♖xd7 b5 Black was winning and took the full point ten moves later.

49.♖xh5! ♖xd7 50.♖xg5 b7 is bad news for White. There might be a miracle draw lurking somehow in this ending, but in general it is dangerous to play with knight against bishop. A plausible line is: 51.♖e4 a5 52.♖d6 ♖b8 53.♖xc4 ♖xc4 54.♖e1 b5 55.♖d2 b4 56.♖a6 ♖b5 57.♖e6 a4 By now, faith in the white position is dropping like house prices in a recession. 49.♖c7 is playable, but after 49...♗b5! (not 49...a5 50.♖e3 when White is out of danger) 50.♖e5 a5 51.♖c1 ♖xd7! White is still under pressure, even though a draw is not necessarily out of reach.

Although White is struggling, she could have pulled out a miracle save through a nice tactical idea. 49.♖e5! The most logical move. White is protecting her passer with a gain of tempo. In the game White was attracted to winning a piece, but did not realize the strength of the queenside pawns, as well as just how badly cut off both her knight and king would be. 49...♖b5 Otherwise White wins with ♖c8. 50.♖c1!! An important gain of tempo. White now makes a draw. 50.♖c7 a5 favours Black, as already discussed. 50...♖d5 50...♖d4 51.♖c4† would allow White to queen the pawn. 50...♖d6 is similar to the main line. 50...♖xd7 51.♖xd7 ♖xd7 52.♖c7 is the important change from the 49.♖c7 line. White wins the a-pawn and might even have a few practical winning chances. 51.♖b1† ♖c5 52.♖c1† ♖b4= The game ends in a repetition, as Black can hardly contemplate 52...♖d4? 53.♖d1†.
36. Francisco Vallejo Pons – Jorge Cori, Khanty-Mansiysk (1.4) 2011

51.\textit{e}1? \textit{g}2\textasciitilde 52.\textit{f}1 \textit{f}2\textasciitilde 53.\textit{g}1 \textit{g}2\textasciitilde 54.\textit{f}1 \textit{f}2\textasciitilde 55.\textit{g}1 \textit{a}7? 56.\textit{c}6? 56.\textit{a}1 would have won the game, if this position was indeed on the board... 56...\textit{g}2\textasciitilde 57.\textit{f}1 \textit{f}2\textasciitilde 58.\textit{g}1 \textit{g}2\textasciitilde 59.\textit{f}1 ½–½

51.\textit{d}1 \textit{xe}3\textasciitilde 52.\textit{f}1 \textit{f}3 leads to an immediate draw.

51.\textit{a}1!! The rook has to do two things: get out of the king’s path, and support the a-pawn. This move achieves both objectives. 51...\textit{xe}3\textasciitilde 51...\textit{g}2\textasciitilde 52.\textit{f}1 \textit{f}2\textasciitilde 53.\textit{e}1 \textit{b}4\textasciitilde 54.\textit{d}1 \textit{d}2\textasciitilde 55.\textit{c}1 \textit{xd}8 wins the knight, but the pawns are worth more than this. 56.a6 \textit{c}5 57.a7 \textit{xa}7 (57...\textit{xe}3\textasciitilde 58.\textit{c}2 \textit{xa}7 59.\textit{xa}7 \textit{b}8 wins for White, because he can delay the loss of the h-pawn with 60.\textit{a}3\textasciitilde \textit{xb}4 61.\textit{b}3 leading to an elementary win, for example after 61...\textit{g}5 62.\textit{b}2.) 58.\textit{xa}7 \textit{b}8 59.h5! \textit{h}4 60.e4+- White will have the option of giving a check and protecting the h-pawn. 51...\textit{f}3 52.\textit{e}6 \textit{xe}3\textasciitilde transposes to the main line. 52.\textit{f}1 \textit{f}3 53.\textit{e}6 \textit{xb}7 53...\textit{f}2\textasciitilde 54.\textit{e}1 \textit{e}2\textasciitilde 55.\textit{d}1 \textit{d}2\textasciitilde 56.\textit{c}1! \textit{d}7\textasciitilde 57.\textit{c}2 \textit{xb}7 58.a6 \textit{e}7 59.\textit{g}5\textasciitilde \textit{f}4 60.\textit{a}4\textasciitilde \textit{f}5 61.\textit{b}3 White will win eventually. 54.a6 \textit{e}7 55.\textit{g}5\textasciitilde \textit{f}4 56.\textit{g}2 White has a winning position, although it will take a while to transform the material advantage into cold hard cash.
The game went entirely wrong: 40.\textit{b}6+? \textit{a}e7 41.\textit{b}b7+\textit{a}e8 42.\textit{e}a1 \textit{a}d1 43.\textit{b}f1 \textit{g}6 would have immediately decided the game in Black’s favour. 43.\textit{e}5+! \textit{a}c7 44.\textit{b}b7+? White misses his big chance. After 44.\textit{e}e4! \textit{a}a1 45.\textit{b}b6! \textit{h}h8 46.\textit{e}e2 \textit{xd}1 47.\textit{e}xh1 \textit{c}4 48.\textit{e}g1 \textit{c}3 49.\textit{e}g8 b3 50.\textit{e}xh8 \textit{c}2 51.\textit{a}a8 \textit{c}1=\textit{w} 52.\textit{h}h8=\textit{w} Black would have had to take the perpetual check.

44...\textit{c}e8 45.\textit{g}5 45.\textit{e}e4 would have offered a bit more resistance, but Black wins after 45...\textit{a}a1 46.\textit{b}f1 \textit{h}h8 47.\textit{b}b6 \textit{d}5! 48.\textit{e}f5+ \textit{a}c7 49.\textit{e}d6 \textit{e}e6 50.\textit{e}e4 \textit{c}4 and so on. 45...\textit{a}a1 46.\textit{e}xg5+ \textit{c}b8 47.\textit{e}b5+ \textit{a}c7?!

White resigned. He is lost and Black will probably put the king correctly on a7 the second time around. 0–1

40.\textit{b}6+? \textit{a}e7 41.\textit{b}b7+\textit{a}e8 42.\textit{e}a1 \textit{a}d1 43.\textit{b}f1 \textit{g}6 41.\textit{h}7 would have immediately decided the game in Black’s favour. 42.\textit{e}e4! \textit{a}a1 43.\textit{b}b6! \textit{h}h8 44.\textit{e}e2 \textit{xd}1 45.\textit{e}xh1 \textit{c}4 46.\textit{e}f2 \textit{xd}1 47.\textit{f}f4 \textit{c}3 and so on. 43...\textit{a}a1 44.\textit{b}b5+ \textit{a}c8 45.\textit{b}b5+ \textit{a}c7

45...\textit{a}a1 46.\textit{e}xc5+ \textit{a}b8 47.\textit{e}b5+ \textit{a}c7?!

45...\textit{a}a1 46.\textit{e}xc5+ \textit{a}b8 47.\textit{e}b5+ \textit{a}c7 48.\textit{e}e4 \textit{c}3 49.\textit{e}g8 b3 50.\textit{e}xh8 \textit{c}2 51.\textit{a}a8 \textit{c}1=\textit{w} 52.\textit{h}h8=\textit{w} Black would have had to take the perpetual check.

46.\textit{e}f4 ! \textit{a}a1 47.\textit{b}b6 \textit{d}5! 48.\textit{e}f5+ \textit{a}c7 49.\textit{e}d6 \textit{e}e6 50.\textit{e}e4 \textit{c}4 and so on. 45...\textit{a}a1 46.\textit{b}b5+ \textit{a}c8 47.\textit{b}b5+ \textit{a}c7?!

White resigned. He is lost and Black will probably put the king correctly on a7 the second time around. 0–1

0-1


32.\textit{e}4 \textit{f}x\textit{g}5 33.\textit{e}x\textit{g}5 33.\textit{d}8+ \textit{e}g8 34.\textit{e}x\textit{g}5 \textit{e}x\textit{d}8 35.\textit{e}g7 \textit{e}d6! 36.\textit{e}a7 \textit{e}x\textit{h}6 37.\textit{e}a6 \textit{d}6 38.\textit{e}d7+\textit{e}g8 39.\textit{e}f6t \textit{g}8 40.\textit{e}e4! was the game continuation. White later won, but at this point the outcome is far from clear. 1–0

32.\textit{e}4 \textit{f}x\textit{g}5 33.\textit{e}x\textit{g}5 34.\textit{d}7 \textit{e}h5 35.\textit{e}x\textit{h}7t \textit{g}8 36.\textit{e}x\textit{g}6 is of course favours White, but Black can resist quite a lot. 33...\textit{e}x\textit{g}5 34.\textit{e}e4 \textit{e}x\textit{g}3 35.\textit{d}8+ \textit{e}g8 was the game continuation. White later won, but at this point the outcome is far from clear. 1–0

32.\textit{e}4 \textit{f}x\textit{g}5 33.\textit{e}x\textit{g}5 34.\textit{d}7 \textit{e}h5 35.\textit{e}x\textit{h}7t \textit{g}8 does not give White an advantage. Actually he should hurry to draw with 36.\textit{e}c7 and not fall for 36.\textit{g}4? \textit{e}h1+\textit{f}.

Correct was: 32.\textit{e}h4! \textit{f}x\textit{g}5 33.\textit{e}x\textit{g}5 34.\textit{d}7 \textit{e}h5 35.\textit{e}x\textit{h}7t \textit{g}8 does not give White an advantage. Actually he should hurry to draw with 36.\textit{e}c7 and not fall for 36.\textit{g}4? \textit{e}h1+\textit{f}.

Correct was: 32.\textit{e}h4! \textit{f}x\textit{g}5 33.\textit{e}x\textit{g}5 34.\textit{d}7 \textit{e}h5 35.\textit{e}x\textit{h}7t \textit{g}8 does not give White an advantage. Actually he should hurry to draw with 36.\textit{e}c7 and not fall for 36.\textit{g}4? \textit{e}h1+\textit{f}.

32.\textit{e}h4! \textit{f}x\textit{g}5 33.\textit{e}x\textit{g}5 34.\textit{d}7 \textit{e}h5 35.\textit{e}x\textit{h}7t \textit{g}8 does not give White an advantage. Actually he should hurry to draw with 36.\textit{e}c7 and not fall for 36.\textit{g}4? \textit{e}h1+\textit{f}.

Correct was: 32.\textit{e}h4! \textit{f}x\textit{g}5 33.\textit{e}x\textit{g}5 34.\textit{d}7 \textit{e}h5 35.\textit{e}x\textit{h}7t \textit{g}8 does not give White an advantage. Actually he should hurry to draw with 36.\textit{e}c7 and not fall for 36.\textit{g}4? \textit{e}h1+\textit{f}.


The combination in this position was also discovered by Mikhail Golubev and published in Chess Today. I am never entirely sure if I like the fact that other people are doing their homework as well! In this position Magnus Carlsen mentioned 49...\textit{e}e5 at the press conference. Instead the computers instantly spot a fantastic idea: 49...\textit{a}4!! 50.\textit{e}x\textit{a}4 50.\textit{d}2 \textit{e}5 looks hopeless, but is of course forced. 50...\textit{a}4! With the threat of ...\textit{f}4 mate. 51.\textit{e}x\textit{d}2 \textit{c}4 Black wins, as the following pawn ending is not even close: 52.\textit{e}b5 52.\textit{d}4+ also gives no chance of saving the game. 52.\textit{e}b5 53.\textit{d}4+ \textit{e}x\textit{d}4 54.\textit{e}x\textit{b}5 \textit{e}5 55.\textit{e}x\textit{b}6 \textit{e}4 56.\textit{c}3+ \textit{e}x\textit{c}3 57.\textit{a}4 \textit{e}3 58.\textit{a}5 \textit{e}2 59.\textit{a}6 \textit{e}1=\textit{w} 60.\textit{a}7 \textit{e}4++
To me, the term *fortress in chess* refers more to a defensive strategy than to something that is only there if it works. The reason is simple: at the board we do not necessarily know if it holds; but if we know the basic ideas we might play the positions much better.

In this situation, White has the advantage. But is it enough to win?
There are a few themes that are specific to the endgame: primarily zugzwang and stalemate, but also the establishment of fortresses as a defensive strategy. Like in ancient warfare, it is a last-ditch attempt at survival when luck has passed us by on the battlefield.

I shall not pretend to be a great expert on fortresses; I have a feeling there are very few of them about. The coverage of fortresses in the bible of endgame preparation, *Dvoretsky's Endgame Manual*, does not offer great insights into this subject, and if Mark cannot tell us anything profound, I am not sure anyone can.

However, I did make a few observations while working on the positions in this chapter. Before we go into them, I should clarify that I consider an attempted fortress a fortress, whether or not it actually draws the game, just as a ship that sinks is still a ship.

**Fortresses are most often broken with zugzwang**

Because fortresses are usually constructed in a limited area of the board, the pieces often have restricted mobility. If a piece deserts its defensive post, the fortress is liable to be breached.

A related point is that fortresses which enable the defender to shuffle a piece back and forth are more robust than those that do not.

**A frequent way to create zugzwang is by including the threat of mate**

As fortresses are seldom established in situations of material supremacy, the attacking side will often be able to bring his king in to assist the pieces in creating threats, including against the enemy king.

**Many fortresses break in only one way**

I have noticed that fortresses often contain a single weak link in the chain. If the opponent is able to put pressure on this link, it will break and the fortress will be breached.

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**Some fortresses can be broken by returning the extra material**

As we all know, the advantage can have several forms in chess and a strong player will be good at changing the nature of his advantage when necessary. Fortresses sometimes break when material is returned or even sacrificed in order to gain a positional advantage.

Let us look at some concrete examples in order to make these abstract points more real. I will not be able to cover all of the above aspects in this introduction, but they will feature throughout the exercise section. I could imagine myself collecting a large selection of fortresses sometime in the future, but this would be a project for a full (and extremely anti-commercial!) book.

The first example is a rook ending on the surface, but to assist with the understanding of our theme, we will investigate a couple of fortresses involving queen versus rook and pawn.

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**Emil Sutovsky – Baadur Jobava**

Poikovsky 2010

White has two ways to take on f5. Analysis shows that they are both winning, but neither in a straightforward way.
43...exf5 44.\(e_5\) e\(a_2\)

Another defensive try was 44...e\(g_6\) 45.e\(f_8\) e\(g_5\). This is a clever idea from a clever man, but I doubt that the position can be saved even by such an expert as Alex Baburin. White wins after: 46.a4! e\(h_4\) 47.e\(d_3\)!

45.c6 e\(e_2\)

Black has to rely on the manoeuvre ...\(e_b_4\)-b6-c6 in some lines, and now it will not come with check. 47...e\(h_6\) 48.e\(c_4\)! This accurate move ensures the win. The main point is 48...e\(f_6\) 49.e\(x_f_6\) e\(x_f_6\) 50.e\(b_5\)! and the c-pawn queens.

46.e\(d_4\)?

46.c7! was the only path to victory. 46...e\(e_8\) 47.e\(c_4\) e\(c_8\) 48.e\(c_5\) g5 49.e\(d_5\) e\(g_6\) 50.e\(d_6\) e\(h_5\) 51.e\(d_7\) e\(x_c_7\) 52.e\(x_c_7\) and White wins.

46...e\(h_6\)?

Black misses a fabulous draw, based on one of the classical fortresses.

46.e\(d_2\)!

This was pointed out by Baburin in Chess Today, though he kindly credited it to me.

47.e\(c_3\)

47.e\(c_5\) is not too challenging; Black plays 47...a4! 48.e\(f_3\) e\(c_2\) 49.e\(d_6\) g5 and draws.

47.e\(d_8\) 48.e\(c_4\)

The white c-pawn is dangerous and the black king and g-pawn are isolated in the far corner, unable to influence events. However, the a-pawn gives Black a lifeline.

48...a4! 49.e\(b_5\) a3! 50.e\(c_7\) e\(a_8\) 51.e\(f_1\) 51.e\(b_6\) a2 52.e\(f_1\) a1=\# 53.e\(x_a_1\) e\(x_a_1\) 54.e\(c_8\)=\# e\(h_1\) also allows Black to escape with a draw.

51...a2 52.e\(a_1\) e\(h_6\) 53.e\(b_6\)

53.e\(x_a_2\) e\(x_a_2\) 54.e\(c_8\)=\# e\(b_2\) also draws.

53...e\(g_5\) 54.e\(x_a_2!\)

This is the most challenging. In the event of 54.e\(b_7\) e\(e_8\) 55.e\(x_a_2\), Black responds with 55...e\(f_4\) and uses the shouldering method to draw.

54.e\(x_a_2\) 55.e\(c_8\)=\#
I assume that there will be very few people who would pick up a book such as this and not know that Black would have an impenetrable fortress if he had the rook on f6 and the king on h7. From the present position Black is unable to achieve the most robust form of the fortress, but he can still put one together that holds.

55...b2†! 56.a5 a2† 57.b4 b2† 58.a3 f2!

Black will establish a fortress with the rook on f6. Things become shaky due to the king’s position, but the fortress still holds.

59.g8??

59...h6? looks so natural, but it loses. The problem is the rook’s poor position on f2.

60.h8† g6 61.e8† h7 62.e4† g8

Black is only one move away from making a draw, but the king is unable to make it to the h-file because of the check on h4. This enables White to ruin Black’s coordination and use zugzwang to force the king out of its hive. 63.c4† f7 64.e6 f8 65.c8† e7 66.g8 f6 67.b4 Black is not able to establish his fortress in a comfortable way. It will take quite a while for White to break the fortress, but it can be done, as the following variation illustrates: 67...g6 68.e8 f6 69.c5 e7 70.f8† f7 71.d8† g6 72.e8 f6 73.d6 g5 74.d5 g7 75.e5 The fortress is falling apart, for instance 75...f4 76.h5! and the g-pawn falls.

60.b4 h6

The situation is almost the same as in the previous note; with the only exception being the position of the rook on f3 instead of on f2. As White no longer has any powerful checks,
Black will draw “reasonably” effortlessly. I could give a lot of moves here, but for those wanting to test the fortress, I would suggest that they play the black side against a computer and see if they can actually hold it; and if not, analyse the game to understand where they went wrong.

Back to the rook ending.

47...\textit{f}2\textit{t} 48.e\textit{c}4 \textit{f}2\textit{t} 49.e\textit{b}5 a4!

The only move, but not a difficult one to find.

50.e\textit{e}3 g5 51.e\textit{b}6 \textit{h}5 52.c7 \textit{h}4 53.e\textit{e}8 g4 54.e\textit{f}8\textit{t} \textit{g}3 55.c8=\textit{w} \textit{x}c8 56.e\textit{x}c8 \textit{f}2 57.e\textit{f}8\textit{t} \textit{e}3 58.e\textit{g}8 \textit{f}3 59.e\textit{f}8\textit{t} \textit{e}3 1/2-1/2

Let us look at the exchange sacrifice, starting with the computer’s preferred move:

43.e\textit{f}5!? ex\textit{f}5 44.e\textit{f}5\textit{t}

This is one of the times when chess fans looking at the position with their engines on would be shaking their heads about the low level of the top grandmaster and wonder why, oh why, did he not just take with the rook and queen the pawn like any normal person would? A very good question! Unfortunately too many stop there and do not even realize that it is a real question and that Sutovsky would have seen this option in a fraction of a second. But he also saw something that the computer did not, because computers are entirely hopeless at fortresses.

In \textit{Chess Today}, Mikhail Golubev pointed out that Black could defend with a lovely sequence:

44...g6! 45.c6 \textit{h}5!!

Because of the check on c5, the white pawn has to hurry on.

46.c7 e\textit{f}5 47.c8=\textit{w} \textit{g}7
Black has established a fortress that cannot be broken by returning the queen; all pawn endings will be elementary draws. Golubev was obviously writing an article with a quick turnaround and was not especially interested in fortresses, so he just decided that it was probably a draw and moved on.

However, the fortress can be broken – with the use of zugzwang. The problem for Black is that since the g-pawn is on the 6th rank, he has to allow the enemy queen to g8. Then the black king must go forward. Further zugzwang will force the rook off the 5th rank, after which the a-pawn becomes exposed. In the long run Black is dead and White will yield the slow knife.

The position I was envisaging in my head looked like this:

![Diagram 1]

White has managed to get his king dangerously near, and it is impossible for the black rook to stay on the 5th rank because of zugzwang. The following line is quite representative of how such a zugzwang could come into effect.

48.\texttt{Wc7}\texttt{g8} 49.\texttt{d4} \texttt{h8} 50.\texttt{h2}\texttt{g7} 51.\texttt{e4} \texttt{h5} 51...\texttt{f6}? 52.\texttt{c7}\texttt{g8} wins the a-pawn.

52.\texttt{c7}\texttt{g8} 53.\texttt{d6} \texttt{f7} 54.\texttt{d7}\texttt{f6} The king can go to g8 as well, but then White checks on e8, e7 and goes to f6. The black king will have to go to h7 followed by h6 and g5, just as in the main line.

55.\texttt{e8} \texttt{h4} 55...\texttt{f5} is met by 56.\texttt{f8}\texttt{g5} 57.\texttt{g7}.

56.\texttt{d5} \texttt{h5} 57.\texttt{d6} \texttt{g7} 58.\texttt{e7}\texttt{g8} 59.\texttt{f6} \texttt{h7} 60.\texttt{f7}\texttt{h6} 61.\texttt{g8} \texttt{f5} 62.\texttt{h8}\texttt{g5} 63.\texttt{e7}

![Diagram 2]

The position is similar to what I had in mind. Black is in zugzwang and will not be able to maintain the fortress for long. However, the manner in which the fortress falls still came as a bit of a surprise to me.

63...\texttt{f1} 64.\texttt{h2} \texttt{f5} 65.\texttt{h3}! The zugzwang is decisive.
Chapter 11 – Fortresses

65...\texttt{\v{f}}4 66.\texttt{\v{g}}3\texttt{\v{f}}5 67.\texttt{\v{f}}7 \texttt{\textcolor{violet}g}5 68.\texttt{\v{d}}3\texttt{\v{e}}5\texttt{\textcolor{violet}f} 69.\texttt{\v{g}}6 \texttt{\textcolor{violet}g}4 70.\texttt{\v{g}}5 \texttt{\textcolor{violet}e}4 71.\texttt{\v{b}}5\texttt{\textcolor{violet}f}

White wins easily.

Fortresses come in many shapes and forms. Often they are a desperate measure in positions where everything has gone wrong. So whether they actually hold or not is not what attracts us to them; we leave our opponents to worry about such details.

In the following game White has been on the back foot ever since a mistake on move 10. At this point he is desperate beyond compare, and sees a glimmer of an opportunity to create a fortress. Greedy and brutal by nature, his opponent cannot contain himself and grabs the material.

\textbf{Valery Salov – Viktor Korchnoi}

\textit{Wijk aan Zee 1997}

\begin{center}
\begin{tikzpicture}
\draw[help lines,step=1cm] (0,0) grid (8,8);
\draw[ultra thick] (0,0) -- (8,8);
\draw[ultra thick] (0,8) -- (8,0);
\fill[red] (4,4) circle (0.1cm);
\fill[blue] (5,5) circle (0.1cm);
\fill[blue] (5,4) circle (0.1cm);
\fill[blue] (6,5) circle (0.1cm);
\fill[black] (3,5) circle (0.1cm);
\fill[black] (3,6) circle (0.1cm);
\end{tikzpicture}
\end{center}

42.\texttt{\v{f}}5!?

White is just lost no matter what, so why not try this?

42...\texttt{\textcolor{violet}g}xf5?!

We all have our character flaws. One of Korchnoi's has always been that he was unable to resist free material, even when it would be better to look for ways to remove all counterplay. I do not mean this in a simplistic way, but as a deep-rooted pull in one direction, when no choices are obvious. At least this is my observation from looking at his games.

One commentator suggested that 42...\texttt{\textcolor{violet}g}5 was the right choice. But if you look a bit deeper, as I am sure Korchnoi did, you will see that not everything is easy. For example: 43.\texttt{\v{g}}3 \texttt{\v{d}}xe2 44.\texttt{\v{d}}xe2 \texttt{\textcolor{violet}b}xe2\texttt{\textcolor{violet}f} 45.\texttt{\v{g}}3

Despite the two extra pawns, there are still some pitfalls for Black. I have the feeling that Korchnoi looked at this and realized that after 45...h5 46.gxh5 \texttt{\v{d}}h6 White would be able to get a positional draw with 47.f4! \texttt{\v{g}}xh5 48.\texttt{\textcolor{violet}c}5! f6 49.fxg5 fxg5 50.\texttt{\v{e}}5!.

The rook will go to e8 and check the black king away and then attack the g-pawn. I am not sure if Korchnoi had a clear evaluation here, but he realized it was troublesome.
With today's tools we can ascertain in a heartbeat that the position is in fact a draw. However, Black could have improved matters by throwing in 45...f6! 46.g2 before playing 46...h5!. This time the endgame is winning, as Black will have ...g4 immediately.

42...xe2t 43.g3 also holds some pitfalls.

Here 43...d5 is a winning move (I am sure you can see the nice fork on f1?), but probably Korchnoi looked at this and saw that the immediately attractive 43...g5? would be a mistake, as after 44.xf4! White is on the way to establishing a different type of fortress. Korchnoi probably did not know if this would actually hold – indeed it looks fragile upon a closer look – but discarded it as being less promising than having a queen against a rook with no extra pawns.

I fully understand Korchnoi's decision, but it was impractical. A better approach would have been to keep things fluid and retain a two-pawn advantage, while giving the opponent more challenges than moving his rook between h5 and f5. It is hard to anticipate that Black does not simply win here, but in the game one of the strongest endgame players of all time did not manage to break down the fortress.

43.xf4 xe2t 44.g3 e1 45.xf5 g1t 46.h2 e2 47.xg1 e1=wf 48.g2 g6 49.h5 e2t 50.g3 f1 51.f4 e1

I found this position in one of the greatest endgame books written. However, the conclusion that this was a functioning fortress seemed unreliable to me. Not only does Black have an extra queen, but contrary to normal fortresses, White does not even have a pawn to show for it. Still zugzwang is quite difficult to achieve and Korchnoi did not manage it.

The game continued: 53.c7t 54.g2 f4 55.h5 f6 56.d5 e6 57.h5 d2t 58.g3 f6 59.e1 c1 60.h5 g1t 61.f4 e1 62.b5 c1t 63.g3 g1t 64.f4 h2t 65.e3 f7 66.h5 g1t 67.f4 g6 68.d5 h2t 69.e3 f7 70.h5 g1t 71.f4 e6 72.b5 h2t 73.e3 d6 74.g5 b2 75.h5 e6 76.f4 c3 77.g3 c7t 78.g2 f7 79.b5 e8 80.b5 g6 81.b5 Finally, the players agreed a draw.

With the lovely new software we have these days it was possible to establish the winning method. It is by no means easy; rather, it is elaborate and hard to conceptualize. First the king has to be pushed away from its safe space, after which a zugzwang has to be established. I am sure that Korchnoi understood this much, but could not find a way to do it. Neither could I, but FinalGen revealed a beautiful solution.
53...\textit{g}1\texttt{t} 54.\textit{f}4

54.\textit{h}3? would offer no resistance after 54...\textit{f}2 55.\textit{f}5 \texttt{h}5! when the fortress is no more.

54...\textit{h}2\texttt{t} 55.\textit{e}3

55.\textit{e}4?! allows Black to push the king away from the kingside, after which winning is less of a challenge. 55...\textit{e}2\texttt{t} 56.\textit{f}4 \textit{c}4\texttt{t}!

56.\textit{b}5 \textit{e}6 57.\textit{f}5 \textit{g}1\texttt{t} 58.\textit{f}4 \textit{c}1\texttt{t}!

Another annoying check, keeping the king in an uncomfortable position.

59.\textit{e}4

59.\textit{g}3 \textit{c}7\texttt{t} 60.\textit{h}3 \textit{c}2 61.\textit{a}5 \textit{c}3 62.\textit{f}5 \textit{d}3 63.\textit{f}4 \textit{d}5!!

A key zugzwang position. White cannot give the rook check on e4 as the pawn ending is just lost. And after 64.\textit{g}2 Black wins everything with 64...\textit{d}2\texttt{t} 65.\textit{g}3 \textit{d}6.

59...\textit{f}6 60.\textit{h}5 \textit{f}7 61.\textit{f}5 \textit{g}6 62.\textit{h}5 \textit{d}2

This king manoeuvre is hard to understand at first. Black could also win with ...\textit{f}6 and keep the king on \textit{g}6, but it takes longer for some reason I have not fully been able to understand. It has to do with forcing the white king into the open, of course.
Grandmaster Preparation – Endgame Play

63.gfS Wfc2t 64.@f4 Wfxf5t 65.gxfSt @hS!

Black wins the pawn ending trivially.

Before we enter the funhouse at the Spanish Inquisition, we shall see two practical examples where fortresses was used successfully, even though they were shaky in both cases.

Michal Krasenkow – Sergey Erenburg

Reykjavik 2004

1. d4 d5 2.c4 c6 3.llf3 lllf6 4.llc3 a6 5.e3 h5
6.b3 ig4 7.ie2 e6 8.h3 ihS 9.0-0 lllbd7
10. tlleS ixe2 11. tllxe2 dxc4

In a theoretical position, Krasenkow blunders.

12.Wf c2? tllxe5 13.dxe5 Wd3!

He must have missed this; such oversights can happen early in a game when the brain is not yet in gear.

14.Wxd3 cxd3 15.tf4 t8d5?

15...t8e4! was stronger. Black has some advantage, but of course the game goes on.

16.txd3 0–0–0 17.\b2

Black’s position looks nice, but objectively he does not have a real advantage. Nevertheless, in practice the position is not easy to defend for White, and in the game he came close to losing.

17...t8b4!

This simplification is the best way to exploit Black’s slight lead in development.

18.txb4 txb4 19.td1 t8c7 20.tf1 t8b6
21.t8e2 a5 22.txd8!

22.t8d4+ c5 23.t8b2 was also possible. Black is at least equal after 23...a4! 24.bxa4 bxa4, though it is unclear if he has a real advantage. I would say yes; the computer says no.

22...t8x8d8 23.t8d1 \8xd1 24.t8xd1 a4
This is the first critical position of the game with special interest for our theme. White should make a draw by setting up a fortress.

25.a3??

A horrible move. The pawns have to hold the light squares, while the bishop covers the dark squares. The reader may be tempted to assume that Krasenkow was not even thinking about fortresses at this point. However, my guess is that he did plan a fortress, but missed a tactical nuance. When a great player like Krasenkow makes a positional mistake, it is more likely to have been caused by his overlooking a tactical trick than by a lack of understanding.

White could have drawn with: 25.©e 2! ©e7 26.©d3 ©a5 27.©c3† ©b4 (After 27...b4 28.©d2 ©b5 29.©c1 Black has no way through.) 28.a1 axb3 29.axb3 ©e1 30.©c3†! (30.©e2? ©xf2! 31.©xf2 ©b4—+) 30...©c3 31.©xc3 c5 32.h4 White gets away with a draw.

A more bizarre and scary-looking fortress defence was 25.bxa4?! ©e1 26.f3 ©a5 27.a3! The pawn ending is a draw; how many humans would be confident enough to play this way? 28...©g3 29.©d3 White holds. Just.

Finally, 25.©c2?! ©e1 26.f3 ©a5 27.a3! also holds.

25...©e7

25...©xa3?? 26.©xa3 axb3 does not work; in fact, it is White who wins with 27.©f8 c5 28.©c1 c4 29.©b2 ©a5 30.©a3 followed by slowly pushing Black backwards.

26.b4!

The only defensive try.

I am sure that Krasenkow was planning 26.bxa4?! with the idea of answering the recapture with 27.©c2, when White indeed has a fortress. But Black needs to win the battle for the light squares, and does so after 26...©a5!!, when it is all clean sailing. 27.axb5 cxb5 28.©c2 ©a4 29.g4 ©xa3 30.©d4 ©b4 Followed by ...©c4 with a winning position. We all blunder and we have already seen that Krasenkow was not having his best day.

26...c5 27.©c3!

From here on Krasenkow defends brilliantly, proving the old truism that it is hard to beat a grandmaster, even from a winning position.

27.bxc5†? ©xc5 followed by ...b4 is easily winning.
27...cxb4 28.axb4
28...xb4? axb4 29.axb4 f5! is winning for Black:

Alternatively, after 30.exf6 gxf6 31...d2 c6 32.f3 d5 33.c3 Black wins with patience:
33...f5 34.d3 h5 35.g3 a3! 36.c3 e5 37.b3 e4 38.f4 a2 39.xa2 c4 and so on.

28...f6 29.exf6 xf6 30.xf6
30.d2? xc3+ 31.xc3 c6 wins easily.

The game continuation should also go in Black’s favour, but Krasenkow found a lovely trick along the way.

30...gx6 31.g4 c6 32.h4

32...d5??
Erenburg falls for it.

The winning continuation was 32...d6! (or to d7) with the idea to play ...h5! at the right moment. This will either split the white pawns and make them ripe for picking or create a second black passed pawn, leading to an easy victory. For example: 33.c2 h5 34.f3 hgx4 35.fxg4 f5 36.g5 e5 or 33.f4 e5 34.f5 h5! and the king is close enough to stop any potential passed pawns.

33.f4! d6
Black can try different things, but no matter what, there will be no route in for his king.

33...e4 34.h5! is an easy draw.

33...e5 34.f5 e4

35.h5! and h5-h6 with a blocked position. The c4-square will never be available for the black king because of g4-g5 breaks.

34.h5 e7 35.e4 f7 36.e5 h6 37.c2
Black has no way to make progress and accepted the draw.
½–½

I watched the next game live in Moscow and believe it was the decisive game of the match. If Gelfand had won this game, I do not think Anand could have come back a second time.
Boris Gelfand – Viswanathan Anand

Moscow (9) 2012

1.d4 d5 2.c4 e6 3.d3 c3 b4

Anand seemingly concluded that he had played the ...a6 Slav one time too many.

4.c3 0–0 5.g3 d5 6.g3 c5 7.0–0 dxc4 8.xc4 cxd4 9.exd4 b6

This is one of the big main lines of the Nimzo-Indian. Traditionally Black’s position has been regarded as okay here, but it is not entirely safe. Kramnik won an important victory against Kasparov in the 10th match game of the 2000 match, securing a two-point lead.

10.g5 h7 11.we2 tbd7 12.xc3 g6

This is one of the main set-ups of this line. Usually White does not commit the queen to e2 this early, but Gelfand was clearly trying to mix things up a little bit.

15.c4

15...xf3?

A novelty “found” at the board and a truly terrible one. Anand later admitted to having mixed things up in the opening, and this is clearly the moment to which he was referring. The general way to deal with the White set-up has been known for 35 years and the concept does indeed involve swapping this bishop for the knight on f3. But you have to be accurate, and on this occasion Anand failed to solve the problem put before him.

15...h6! is probably the best move. The first idea is that 16.h4 h5! 17.xf5 xf4 leads to exchanges and immediate equality.

The second is that after 16.xf3 xf3 17.xe1 we have transposed into the game Anand was trying to replicate:

17...xf3! 18.xf3 e5 This should result in equality after 19.d5 c5. In the original game White instead went for 19.g3? exd4 20.xe8+ xe8 21.f4 c6 but gained no real compensation in Portisch – Karpov, Bugojno 1978, and subsequently lost.

16.xe8 xe8

Played relatively quickly, which does not mean that it was his intention when he took on f3. When Anand blundered early on in a game in a 1994 match against Alexey Dreev, he realized the mistake quickly and played his
next move almost instantly, to try to make the opponent believe that he was doing as intended and was confident. I am not sure if this kind of psychological trick would work on Gelfand, but when we are in trouble, we do have a tendency to gravitate towards things that have worked for us in the past, whether or not they are relevant to the situation right before us.

16...e5? is the only way to explain what Anand was trying to do. But he must have realized that White plays 17...f5! and Black is busted:

If 17...exd4 18...xf6 xf6 19...xc8 xc8 20...f5! followed by...f1, Black will not escape exchanges and the inevitable defeat.

17...ce8 is met by 18.c5! exd4 19.c6 e5 20.f4 when White regains the pawn with something close to a winning advantage.

17...fd1

The rook could also be put on e1, but this is sensible enough.

17...h6 18.h4 d6?!

A provocation, Anand stated after the game. He disliked his position so much that he wanted to tempt Gelfand into winning the queen in order to attempt a fortress. Not surprisingly, Gelfand went into a big think here.

19.c5?

I was greatly disappointed when I saw this move. I was sure that White should win this game with good play and that Anand was so out of form that he would not be able to find a deep solution to complex positional pressure. So the decision to go into a position where Black has a reasonable chance of setting up a fortress seemed too cautious. At the press conference Gelfand said that he had felt that the position was very close to winning and that Black at some point was going to struggle with zugzwang. None of the grandmasters I talked to during the game shared this view, although some believed that White had real winning chances in practice and the pressure was on Black to come up with a sequence of accurate defensive moves.

The most practical approach was 19.a3, which was suggested by Ilya Smirin and certainly makes a lot of sense. Black is not going to be able to play...b4 or...a3, typical annoying manoeuvres. Breaks with the e-pawn would still lose the exchange and after something like 19...h8 20.f1 the position favours White greatly, not least because of 20...e5? 21.c5! and White will win quickly, pushing the c-pawn forward.

19...g3
Chapter 11 – Fortresses

My own thinking during the game was that it would make sense to play \( \text{Wf3-b7} \), attacking the black queenside. The way I was thinking it would work out was:

19...\( \text{Wb4} \) 20.\( \text{Wb7!} \) \( \text{Wa5} \)

20...\( \text{a3} \) may be safer, but White just plays 21.h3 and as the pawn on a2 is not really hanging, Black does not have any active ideas. White will still have to think deeply and come up with something of his own, of course.

21.\( \text{d6} \)±

If White is allowed to play 22.a3, he will be completely in control, so Black could be tempted to try:

21...\( \text{e5?!} \)

The following line is rather long, but essentially forced:

22.\( \text{f5} \) \( \text{Ec8} \) 23.\( \text{c7} \) exd4 24.\( \text{xd8} \) \( \text{xf5} \)
25.\( \text{xf6} \) \( \text{xf6} \) 26.\( \text{xd4} \)

White would be automatically winning if Black did not have a nice counterattack here.

26...\( \text{g4} \) 27.\( \text{f1} \)
27.\( \text{f3?!} \) \( \text{g5} \)! wins for Black.

27...\( \text{xe1} \)!

This seems to be the only chance. If 27...\( \text{dxe2} \) 28.\( \text{f1d4!} \) \( \text{g4} \) 29.\( \text{f3} \) \( \text{e3} \)
30.\( \text{xe4} \) \( \text{xe4} \) 31.\( \text{exe4} \) \( \text{exe4} \) 32.\( \text{d8} \)\( \text{h7} \)
33.\( \text{f3xe4} \) \( \text{xc4} \) 34.\( \text{ed7} \) White should win the endgame.

28.\( \text{b8} \)\( \text{h7} \) 29.\( \text{g3} \) \( \text{xf1} \)\( \text{+} \) 30.\( \text{xf1} \) \( \text{b1} \)\( \text{+} \)
31.\( \text{e2} \) \( \text{xa2} \)\( \text{+} \) 32.\( \text{d2} \) \( \text{xc4} \)\( \text{+} \) 33.\( \text{d3} \)\( \text{xd3} \)\( \text{+} \) 34.\( \text{xd3} \) \( \text{g6} \) 35.\( \text{d6} \)!

White wins because of zugzwang! If the black king comes to g6, then \( \text{d6} \)-c6-c7 wins. If the knight moves, then \( \text{d7} \) wins.

To me Gelfand is the continuation of a straight line of players starting with Rubinstein, going through Botvinnik to Korchnoi. But when we come to a great hero of mine, I would like to change the wording from “character flaw” to “style”. Gelfand also plays the endgame at an incredibly high level, would rather defend than attack and has a tendency to go for positions that suit these advantages rather than choose the objectively best move.

19...\( \text{bxc5} \) 20.\( \text{dxc5} \) \( \text{xc5} \) 21.\( \text{h7} \)\( \text{h7} \)
22.\( \text{xd6} \) \( \text{xc1} \)\( \text{+} \) 23.\( \text{d1} \) \( \text{ec8} \) 24.\( \text{h3} \)

It is possible that Gelfand could have improved his chances with 24.\( \text{d3} \)\( \text{+} \) \( \text{g8} \)
25.h3 with the idea that after 25...\( \text{e5} \) 26.\( \text{d2} \) \( \text{xd1} \)\( \text{+} \) 27.\( \text{xd1} \) \( \text{d5} \) 28.\( \text{g3} \) Black will find it more difficult to defend the a7-pawn because the bishop can shoot at it. Having said this,
I believe that the ending is probably a draw anyway.

\[ \text{Diagram 1} \]

24...\text{d}e5 25.\text{e}e2 \text{g}6! 26.\text{x}xf6

After 26.g3? \text{h}8c2 the a2-pawn falls, effectively leading to an immediate draw.

26...\text{g}xf6 27.\text{x}xc1 \text{x}xc1+ 28.\text{h}2

If Black had time to set up a defence with the pawn and rook on the 5th rank the game would be a draw immediately. In the game he is forced back to the 7th rank instead.

28...\text{c}c7 29.\text{b}b2 \text{g}7 30.a4 \text{c}c7 31.a5 \text{d}5 32.a6 \text{h}7

Though I was disappointed to see all of White's positional advantages translated into a disputable advantage in the endgame, I started to realize that White actually had real winning chances here. Unfortunately Gelfand played poorly over the next few moves, wasting the chance to challenge the fortress.

33.\text{d}4!?

Personally I preferred 33.g4! at this moment, not giving Black a chance to exchange pawns. White will prepare f2-f4, h3-h4 and perhaps f4-f5 at the right time, with the idea of weakening the g6-square. Whether or not this is enough to win is incredibly hard to say, especially when you have a deadline! I should just point out that Black cannot exploit the weakening of the f4-square in any way. If he plays 33...\text{e}5? White wins instantly with 34.\text{b}b7!, exploiting the knight's lack of stability.

33...\text{f}5!

I do not believe that White has any real winning chances after this move.

34.f4

With this disappears the last chance to annoy Black. It was time to play 34.g4 in order to put immediate pressure on the f5-pawn. Black cannot play 34...\text{g}6? at this point because of 35.\text{d}3! and the f5-pawn will eventually fall. Alternatively, 34...\text{f}4? would fail to h4-h5 and \text{h}2-h3-h4 followed by g4-g5, when the white h-pawn would create serious threats against the black king.

34...\text{x}f4 is therefore forced. After 35.\text{h}xg4 White has serious ideas with f4-f5. Notice that even winning the e6/f7 pawns for the White f-pawn does not guarantee success. Imagine the following position:
35...\texttt{g}4 was Gelfand's original intention, but after 35...\texttt{g}6 Black does not seem to be under serious pressure. For example: 36.\texttt{G}g3 fxg4 37.hxg4 \texttt{f}5 and the draw is getting nearer.

35...\texttt{g}6

This looks a bit unpleasant for Black, but it is not clear if White will be able to achieve anything real with a subsequent advance of his kingside pawns.

36.\texttt{h}8 \texttt{\texttt{f}6} 37.\texttt{b}8 \texttt{h}5 38.\texttt{h}4 \texttt{h}6

41.\texttt{c}8

41.\texttt{f}3 \texttt{f}6!? 42.\texttt{g}3+ \texttt{h}7 could work as a trap, as after 43.\texttt{g}5?? \texttt{e}4! 44.\texttt{x}h5+ \texttt{g}7 there is no defence against ...\texttt{d}7-d8-h8 winning the queen. Anand commented that there are many ways for White to lose, but it was unlikely that he would go looking for them.

34...\texttt{d}7! 35.\texttt{g}3

By now it is obvious that White has not made the most of this endgame.

\texttt{g}4 was Gelfand's original intention, but after 35...\texttt{g}6 Black does not seem to be under serious pressure. For example: 36.\texttt{g}3 fxg4 37.hxg4 \texttt{f}5 and the draw is getting nearer.

35...\texttt{g}6

This looks a bit unpleasant for Black, but it is not clear if White will be able to achieve anything real with a subsequent advance of his kingside pawns.

36.\texttt{h}8 \texttt{\texttt{f}6} 37.\texttt{b}8 \texttt{h}5 38.\texttt{h}4 \texttt{h}6

41...\texttt{f}6 42.\texttt{b}8 \texttt{e}7?!

Anand is playing around a bit. After 42...\texttt{h}6 White cannot make progress either.

43.\texttt{g}4 hgx4 44.hxg4 fxg4 45.\texttt{e}5 \texttt{g}8 46.\texttt{g}5+ \texttt{h}7 47.\texttt{x}g4 \texttt{f}6 48.\texttt{g}2 \texttt{h}8 49.\texttt{e}4 \texttt{g}7

\text{1/2-1/2}

When I later interviewed Gelfand, he said he knew that fortresses were Anand's bread and butter, but he just could not resist winning the queen. If he had, my best guess is that he would have become World Champion rather than join the list of Schlechter, Rubinstein and Korchnoi, among the ranks of great players who should have won the title but didn't.
Chapter 11 – Fortresses

Czarnota – Szczepkowska, Katowice 2012

Nohr – Santos Latasa, Spain (var) 2013

Djuraev – Solomon, Istanbul (ol) 2012

Azarov – Novitzkij, Minsk 2002

Holt – Homa, Wheeling 2012

60...h8? 61.f4! After this Black cannot make progress. She does not have the necessary time to play ...e6-d5-e4, as the king will attack the f5-pawn directly, or win a tempo by attacking the bishop on f6. 61...g7 62.g6 f6 63.h5 f7 64.h6 g7 65.g5 e6 66.g6 c3 67.g5 h8 68.g6 h6 69.h5 f7 ½–½

60...f6† was the winning move. The point is to avoid the drawn position from the game. 61.h4! 62.f3 e5 63.f7 f5! Black wins, as the white king is forced to the 8th rank.


Fortresses can be great defensive resources. Here Korchnoi secured a draw with a nice little combination. 46...bxa4! 46...h4 47.b6+ gives White winning chances. 47.e5†xf6 48.xf6 xe4† 49.xe4 xf6 White has no way through. 50.d4 g7 51.e3 f7 52.e4 g7 53.e5 e5 54.e6† g8 55.d8† f8 56.b6 f5 57.ea6 e8 58.e4 f7 59.d4 e8 60.d6 f7 ½–½


This was a pivotal game in the 2008 Women’s Olympiad. Black has been on her (high) heels throughout the game, but here she has the chance to set up a well-known fortress. 65...h8? 66.g4 hxg4 67.hxg4 g7 68.g5† f5 69.g7 e6 60.g6 is hopeless; White wins both pawns and the game. 68.g5† h7 69.d7?? A horrible blunder. Probably Kosintseva did not believe she would be able to break the fortress and was just making moves. 69.e4 g8 70.xg7†! xg7 71.xd4 leads us back to our favourite winning pawn ending. 69...g8 70.e4 d3 71.exd3 eb2 Black has established her fortress. The game was drawn on move 105. ½–½

65...h7? also fails. The white king can get to g5 and break the fortress: 66.g5 d3 67.d7 d2 68.g4 hxg4 69.hxg4 Black is in zugzwang. She cannot prevent the white king from getting to f7, after which the g6-pawn is lost.

The way to preserve the fortress was with 65...d3!, after which Black will be able to arrange her pieces ideally. 66.g4 hxg4 67.hxg4 d2 The only move, but quite sufficient. 68.g5† e6 69.d7 f6! is also okay for Black. 68...h7 69.d7 g8 70.exd2 e3 Black draws. There is no way for White to infiltrate to f6/f7/f8, and without this, there is no way to attack the g6-pawn.

4. Ruslan Ponomariov – Alexander Morozevich, Moscow (variation) 2006

It is important for Black to be able to enter the long diagonal if White plays b7, and it is important to be able to answer c6-c7 with ...a6. Therefore the only waiting move is: 51...e2! 52.b7 e3 53.a8 e2! Black should not be tempted to play 53...d5??, when after 54.c7 d7 55.f6!! a8x8 56.g7! White wins by a tempo. 54.c7 a6 55.c6 c8= There is no way to improve the White position.


White breaks the fortress by getting into our favourite pawn ending. 58.f4 f1† 59.f3 e1 60.c7 b1 61.c2 b2 62.d3 62.c4! would have got there quicker. 62...g2 63.d7 h2 64.a7 g2 65.c7 d2 66.c4 f2† 67.e4! Preparing to take on f7. 67.e3? would be
wrong on account of 67...\x22xf5. 67...\x22xf5 68.\x22xf7\x22xf7! \x22xf7 69.\x22xf7 \x22xf7 70.\x22d5! White has the opposition and wins. 70...\x22g7 71.\x22e6 \x22h8 72.\x22f6 \x22h7 73.\x22f7 \x22h8 74.\x22g6 \x22g8 75.\x22h6 1–0

6. Wang Hao – Le Quang Liem, Beijing (rapid) 2011
White has to preserve his g-pawn in order to win the game. There is only one way to do so. 75.\x22f6 \x22f5 76.\x22h7! \x22e5 77.\x22e3 \x22f5 78.\x22d4 \x22e6 79.\x22e4 \x22d6 80.\x22f8 The simplest way. White has a few winning methods but they are all, as far as I can see, based on the same theme, namely opposition in the pawn ending. For example: 80.\x22f6 \x22e6 81.\x22g4 \x22d6 82.\x22h6 \x22e6 83.\x22xf7! \x22xf7 84.\x22d5 and White wins. 80...\x22e7 81.\x22xg6! \x22xg6 82.\x22f5! Opposition. Once again this pawn ending is the key to breaking the fortress. 82...\x22f7 83.\x22d6 \x22f8 84.\x22e6 \x22g7 85.\x22e7 \x22g8 86.\x22f6 \x22h7 87.\x22f7 \x22h8 88.\x22xg6 \x22g8 89.\x22f6 \x22h7 90.\x22f7 \x22h8 91.\x22g6 \x22g8 92.\x22h6 \x22h8 93.g6 1–0

Black loses if the king goes to the 7th rank:
128...\x22c7? 129.\x22f8 \x22a2 130.\x22f6 \x22b7 131.\x22d4 \x22b3 132.\x22c5 \x22a7 133.\x22g6 \x22b7 134.\x22g7+ \x22c8 135.\x22b6 White wins.
128...\x22a7? 129.\x22f8 \x22h5 (129...\x22a2 130.\x22f6! is similar to the line above) 130.\x22d4 \x22e2 131.\x22c5 \x22b5 132.\x22f7\x22b8 133.\x22b6 \x22c8 134.\x22a7 White wins again. Thus Black needs to fight to stay on the sixth rank. 128...\x22c6! 129.\x22f8 \x22a2 130.\x22d4 Also after 130.\x22f6 \x22b5 Black is okay. 130...\x22b3 131.\x22f3 \x22g8 132.\x22g3 \x22f7 133.\x22g5 \x22b3 134.\x22a5 \x22b6 135.\x22c5 \x22a2 136.\x22g5 \x22b3 137.\x22c3 \x22f7 138.\x22e5 \x22a2 ½–½

The win is simple, but I like the trap: 58.\x22d7?? The white king is too far from the c-pawn for this to work. 58...\x22xd7\x22e3 One of the best-known fortresses in chess; the c-pawn secures the draw as the white king is in the way. 61.\x22e5 c2 62.\x22b2 \x22d1 63.\x22d4 \x22e2 64.\x22c3 \x22d1 65.\x22d3 \x22c1 66.\x22c6 \x22b2 67.\x22d2 \x22b1 68.\x22b4 \x22a2 69.\x22c3 \x22b1 70.\x22b3f \x22a1 ½–½
The winning plan looks like this: 58.\x22d6 (Note that we are talking about the concept, not the specific moves.) 58...\x22b5 59.\x22b8 \x22a4 60.\x22c5 \x22d7 61.e8=\x22c3 and White wins.

This game must have seemed like a nightmare to the Black player. The position was so easily winning earlier, and then... 59...\x22xe3?? This allows White to set up a fortress. 60.\x22b8 \x22b1+ 61.\x22a7 \x22c2 62.\x22b7 \x22e4+ 63.\x22b8 \x22b4+ 64.\x22a7 \x22c5 65.\x22b7 \x22d5 66.\x22a7 \x22c6 67.\x22b8 \x22b5+ 68.\x22a7 \x22c5 69.\x22b7 \x22xa5 The only try, but White defended flawlessly. 70.\x22c8=\x22b5+ 71.\x22a7 a5 72.\x22c3 \x22e4+ 73.\x22d1 \x22d5 74.\x22d2+ \x22c6 75.\x22h6 \x22c7 76.\x22f4 \x22d8 77.\x22f6+ \x22c8 78.\x22f7+ \x22c7 79.\x22f8 \x22c7 80.\x22f4 \x22c6 81.\x22f6+ \x22c5 82.\x22e5+ \x22c4 83.\x22e2 \x22b4 84.\x22b2 \x22c5 85.\x22e5+ \x22c6 86.\x22e8t \x22c5 87.\x22c5+ \x22c7 ½–½
59...\x22b1! was the only way to win. The white king should not be allowed to come to the b-file. Black needs to be able to take the a-pawn and at the same time pin the c-pawn. 60.\x22d8 60.\x22d7 loses to 60...\x22f5+ 61.\x22d8 \x22a5 and so on. 60...\x22d3+ 61.\x22c8 \x22b5! Black wins the a-pawn.
10. Finn Nohr – Jamie Santos Latasa, Spain (variation) 2013
This position would have happened, had White played 1...e3?! 2...e6 3...h3 4...d6 5...c6 6...e6 is mate! 4...c3! 5...d6 6...b7 7...b4† and wins. 5...c5† 6...e6 7...d5† Black wins.
In the game White defended better and made the draw.

This set-up is usually thought of as completely impregnable. However, if Black is careless and puts his bishop on d4 instead of b2/a1, White will be able to break through on the kingside. (To maximize the confusion we will start in one game and end up in another.)
64...c4! 65...b2 66...g4
Black cannot allow gxh5, when his h-pawn will be doomed. 66...hxg4 67...xg4 68...g4 69...h6 70...g4 71...b6† 72...c6 73...a3 73...xh6 1–0 Srienz – Plachetka, Austria 2007.
67...f7 68...h6 69...xg6† 70...h5 69...g2! White wins a tempo. Black will not be in time to take the pawn on h4 with the bishop, as White would pin the bishop and get the king to e4. After ...gxg5 White will have xh1! and the bishop is quickly lost. 69...d4 This was played in two games. A third went: 69...c3 70...h2 71...e1 72...e6 73...g3 72...h1 74...f2 75...f5 76...e3 74...h2 75...h2 76...h6 77...e7 78...f8 80...f3 81...e7 82...f3 83...d8 84...c2 85...d2 86...h4 (84...b4 85...d8 followed by gxg3 wins slowly) 85...h2# 1–0 Malisiuskas – Staniszewski, Warsaw 1989.
70...h2 71...e5 72...h1 73...e6 74...c7 73...f5 75...d6 74...d1 In a game between two players of near-IM level, White took longer to secure the win: 74...e4 75...f5 76...e7 77...e1 78...c5 79...c1 80...d4 81...c7 82...g4 83...c6† 84...h7 85...h5 86...c4 84...c4 85...f7† 86...g8 87...e3 88...x2 89...e2 89...e2 89...h5 1–0 Heinig – Sieber, Bad Woerishofen 2008.
74...h2 75...d2 76...f4 77...f6 77...g3 78...h3 79...d5† 1–0
In the matches between man and machine, the machine has always had access to all the tools: opening books, endgame tablebases and so on. It is interesting that Komodo, one of the computers that handle the endgame best, does not solve this ending. It takes human knowledge to solve this exercise (or encyclopaedic – but then you are just looking it up). 47...a6? 48.fxg5 This fortress cannot last. 48...e7?? It seems reasonable that the knight should rush to g6. But waiting would actually mean that it would make it to g6 faster, as White would have to lose time in order to force the knight to go there. 48...b7 49.b6 a6 would create the best version of the fortress. White can break it slowly, but should resist the temptation to try and do it too quickly. 50.f4! (50.g6? fxg6 51.f4 looks promising, but once again Black escapes: 51...g5! Clearly the pawn is immune, as the knight would take out both the e-pawn and the g-pawn. 52.e4 e7! 53.xa5 54.xg5 a6= Black is in time and has established a real fortress.) 50.e7 51.d8! The knight has to be pushed to the kingside, or White will not be able to invade with the king via d4-c5. 51...g6† 52.e4 h4 The only move that creates some problems for White. (52...b5 53.d4 h4 54.a6 axa6 55.c5 b7 56.d6 g6 57.xf6 c8 58.c6 Black is in zugzwang and will soon have to resign after 58.f4 59.g6! followed by c6.) 53.g6!! The computer is again completely unconvinced by this move, but for a human thinking in terms of domination, this is the natural move. The black knight is forced backwards and the king wins time to reach d6. 53...xg6 54.xd4 b5 55.f6 White is ready to give up the a-pawn, for example: 55...c6 56.a6 b6 57.a7 c7 58.c5 b7 59.d6 c8 60.g5+– Black is in zugzwang. 49.d8 g6 50.d4 White has achieved everything he could desire. The win requires no artistic measures this time around. 50.e5 51.f6 d4 52.a6! e2† 53.e3 c3 54.a7 d5† 55.e4 b6 56.d8 f4! 58.f4 c6 59.g5 1–0

Instead 47...gxh4 48.fxf4 d4! might look awfully passive, but there is no way for White to make progress. 49.g5 is the only try, but Black draws with 49...xe5! 50.xe5 f5! leading to one of the most basic fortresses in chess.

13. Boris Gelfand – Vassily Ivanchuk, Monte Carlo (blindfold) 2011

Both Gelfand and Ivanchuk are obviously well-acquainted with this ending and have studied the tricks and turns several times over the years. It is interesting to see how Gelfand managed to pose practical problems for his opponent all the time, and how Ivanchuk managed to find the only move several times. 68...d4! This is one of them. Other squares do not work, as Black needs to be able to attack the h-pawn quickly. 68...a1? 69.g2 h7 70.f7 h6 71.xg6† h5 72.g1 d4 73.h1 f2 74.f6++; 68...a3? 69.g2 h7 70.f7 h6 71.xg6† h5 72.a6 b2 73.a2 c3 74.h2 e1 75.f6++; 69.d2 69.e4 f2 70.f6 h7 71.g5 e3† White will have to retreat, after which Black makes the draw. 69.g2 h7 70.f7 does not bring death and destruction this time around. Black plays 70...h6 71.xg6† h5 72.d6 f2 with a draw. 69...c3 70.d3 Black also escapes after 70.g2 h7 71.f7 h6 72.xg6† h5 73.g3 e1 74.h3 xh4 where we can see the value of the extra tempo. If the white king could go to f5 (or f3) in one jump White would win. 70...e1! 70...b2? 71.g3 h7 72.f7 h6 73.xg6† h5 74.g2 wins, as seen in the previous example. 71.f6 71.d4 g7 72.g4 h6 73.f6 h5 74.xg6 was worth a try, but Black does not play 74...xh4?? 75.f5, when White wins a tempo against the bishop on the next move. Instead the simple

I noticed this little combination in the notes to this famous game. Black escapes to a theoretically drawn position after: 47...\textit{f}t!! 48.\textit{x}f6 \textit{f}t

52.\textit{e}4 \textit{e}5 \textit{e}6=\textit{x}d8 55.\textit{x}d8 \textit{d}5 The ending is a theoretical draw.

15. Constantin Lupulescu – Stellios Halkias, Dresden (ol) 2008

White is trying to set up a fortress. In the game he was successful but, with careful play, Black can get to the key position where the fortress is broken by zugzwang. 62...\textit{g}4t?! 63.\textit{g}f3 \textit{b}5 63.\textit{e}3 \textit{e}4 64.\textit{d}2 \textit{a}4 Black is threatening ...\textit{x}a3. White has to play 65.\textit{f}3, when Black produces a zugzwang with 65...\textit{d}2!!.

Halkias gave the following line as a way to break the fortress. 62...\textit{c}1 63.\textit{g}3 \textit{b}5 64.\textit{e}3 \textit{a}4 Black is threatening ...\textit{x}a3. White has to play 65.\textit{f}3, when Black produces a zugzwang with 65...\textit{d}2!!.

62...\textit{b}5 63.\textit{x}g3 \textit{a}4 64.\textit{e}3 \textit{c}1 65.\textit{f}3 is another way to get to the same key position. How we get there does not matter; the point is 65...\textit{d}2!!.


Nakamura was, at the time, extremely weak in the endgame, something he has later corrected. Here he played: 38.\textit{b}4? This allows counterplay with the e-pawn. I actually suspect that Nakamura calculated the following line, but failed to appreciate that the ensuing endgame would be drawn. 38...\textit{e}4! Although this is a nice idea, it was not too hard for Van Wely to find, especially as 38...\textit{c}8? 39.b7 \textit{b}8 40.\textit{c}5 is just hopeless. 39.b7 \textit{e}3 40.\textit{b}8=\textit{e} 41.\textit{g}5t This was Nakamura's idea. White stops the e-pawn before it queens, but the story does not end there.

41...\textit{x}g5 41...\textit{h}6?? allows 42.\textit{x}f8+ \textit{g}5 43.\textit{g}7t followed by 44.\textit{h}6t winning for White. 42.\textit{e}5t+ \textit{f}8! 43.\textit{xc}2 \textit{c}6! We have reached an elaborate version of a well-known fortress. The g- and h-pawns will go. With the rook on e6, Black can never lose. Nakamura tried for 36 moves, but achieved nothing. ½–½

38.\textit{d}2? looks tempting, but also does not win. Black can go passive with 38...\textit{c}8 39.b7 \textit{b}8, when the white king is too far away from the fortress. The main line goes: 40.\textit{d}3 h5 41.\textit{e}4 h\textit{x}g4 42.h\textit{x}g4 \textit{g}6 43.\textit{d}5 \textit{g}5 44.\textit{b}4 f5 45.\textit{xf}5 \textit{xf}5 46.\textit{e}6 e4 and Black is in time to make a draw.

Thus the winning move was the subtile 38.\textit{d}3!!, when after 38...\textit{d}1t White has several ways to win the game. 39.\textit{e}3! 39.\textit{c}4? is a more colourful option. After 39...\textit{e}4 40.b7 \textit{e}3 41.\textit{b}8=\textit{e}2, the white king is better placed on c4 than b4, making 42.g5!! possible. White has a mating attack. The text move is simpler though, and a more natural practical choice. 39...\textit{d}8
39...♗e1+? is met by 40.♕d2 and the b-pawn queens. 40.b7 ♔b8 41.♕e4 ♔g6 42.♕d5 h5 43.♕c6 hxg4 44.hxg4 f5 44...♔g5 45.♔b4 changes nothing. 45.gxf5† ♔xf5 46.♕c7 White wins by a tempo compared to 38.♕d2?. 46...♔e8 47.b8=♕ ♔xb8 48.♕xb8! e4 49.♕c6 ♔f4 50.♕c5 e3 51.♔e8 ♔f3 52.♕d4 e2 53.♕d3 White wins.

17. Hikaru Nakamura – Ivan Sokolov, Wijk aan Zee 2013
Black tried to control the position, but by doing so, he gave White the chance to set up a fortress. 55...♔h5? 56.♖c5 ♔f3 57.♕h2 ♔g4 58.♕b4? White could have held the position with 58.♕b6!, with the point that 58...♖xa3 59.f7! forces Black to give perpetual check. 58...♖f2† 59.♕h1 h2 60.f7 ♖xf7 61.♕xh2 ♖f2† 62.♕g1 ♖e2 63.♕d6 ♖f3 64.♕f1 ♖e4 65.♕g1 ♖e1† 66.♕h2 ♖d1 67.♕b4 ♖d4! 68.♕d6 ♖h4† 69.♕g1 ♖h6 70.♕f8 ♖h8 71.♕d6 ♖h6 72.♕f8 ♖b6 73.♕d6 ♖b1† 74.♕h2 ♖e1 75.♕c7 ♖a1 76.♕d6 ♖d1 77.♕b4 We continue this position in Exercise 31.

The winning method was to exchange the h-pawn for the f-pawn. 55...h2! 56.f7 ♖xf7 57.♕xh2 ♖f2† 58.♕g1 ♖e2 Winning an important tempo. 59.♕d6 ♖f3 60.♕f1 60.♕c7 loses quickly to 60...♖g2†! 61.♕h1 ♖g3 62.♕d6 ♖h3 when White is in zugzwang, and a double threat will soon hit him in the face. Now Black needs to get White into zugzwang and force him to create some weaknesses. 60...♖e3 61.♕g1 ♖e1† 62.♕h2 ♖d1 63.♕b4 We have arrived at the same position as in the game after moves 68 and 77, which is the first half of the exercise.
Chapter 11 – Fortresses

Laznicka – Bologan, Khanty-Mansiysk 2009

18

Mamedov – Manea, Plovdiv 2012

19

Dorfman – Beliaevsky, Lvov 1978

20

Czarnota – Bobras, Polanica Zdroj 2006

A. L’Ami – Brynell, Hoogeveen 2012

21

Danielian – Dzagnidze, Rogaska Slatina 2011

22

23
18. Viktor Laznicka – Viorel Bologan, Khanty-Mansiysk (3.5) 2009

It looks as if Black can put up a fortress with the move played in the game, but White does not have to take the pawn on d2 and can sidestep the checks.

58...\(\text{c5}\)? This loses to a nice little nuance.

59.\(\text{e4}\) Zugzwang.

59...\(\text{g4}\) 59...\(\text{d2}\) was a subtler try. On 60.\(\text{xd2}\) Black has time to play 60...\(\text{exh4}\) with a draw, but White does better with: 60.\(\text{e6}\) 61.\(\text{xd2}\) 62.\(\text{e1}\)!

The king is zigzagging to the kingside, neutralizing the black king and avoiding all checks on the way. From there he can go to the centre without getting checked and decide the game. There are various ways to do this, but the following way looks most convincing to me. 62...\(\text{b7}\) 63.\(\text{f1}\) \(\text{d6}\) 64.\(\text{g2}\) \(\text{b7}\) 65.\(\text{g3}\) \(\text{d6}\) 66.\(\text{f4}\) \(\text{b7}\) 67.\(\text{e5}\) \(\text{d8}\) 68.\(\text{d5}\) \(\text{b7}\) 69.\(\text{e6}\) \(\text{d8}\) 70.\(\text{d7}\) \(\text{b7}\) 71.\(\text{f6}\) \(\text{g6}\) 72.\(\text{e7}\) Black cannot stop both pawns. 60.\(\text{f6}\) 61.\(\text{e2}\)!

Clearly Black missed this idea. Now he has no check on e4, which is necessary to reroute the knight.

61...\(\text{d7}\) 62.\(\text{f7}\) \(\text{f5}\) 63.\(\text{b7}\) \(\text{e6}\) 64.\(\text{f8}\)= 1–0

58...\(\text{d6}\)! was the saving move. 59.\(\text{xd3}\) \(\text{exh4}\) 60.\(\text{f6}\) \(\text{g5}\) 61.\(\text{f7}\) \(\text{xf7}\)! 62.\(\text{b7}\) \(\text{e5}\) 63.\(\text{d4}\) \(\text{d7}\) 64.\(\text{d5}\)= The white king will chase the black knight perpetually.


Black rightfully thought that he could not do anything active. But on the other hand, being entirely passive also does not work, as he experienced in the game. The annotations to this game are unfortunately of the ‘move, move, move’ variety, but part of the explanation is the proof, and here it is rather extensive.

66...\(\text{b6}\)? As the game reveals, Black desperately needed to get his king away from the corner. 67.\(\text{h5}\) 67.\(\text{c5}\)! was even stronger, leading to a quick victory.

67...\(\text{c6}\) 68.\(\text{h8}\) 68.\(\text{c4}\)! was another short cut.

68...\(\text{b7}\) 69.\(\text{e8}\) 69.\(\text{c5}\)! 69...\(\text{c6}\)!

This makes things easier for White. The best try for a defence was 69...\(\text{c6}\) 70.\(\text{e5}\) \(\text{d7}\), but White ends on top, combining domination with zugzwang. 71.\(\text{a8}\) \(\text{c7}\) (71...\(\text{e7}\) 72.\(\text{a7}\) \(\text{f8}\) 73.\(\text{f6}\) \(\text{e8}\) 74.\(\text{b7}\) \(\text{d8}\) 75.\(\text{e5}\) \(\text{e8}\) 76.\(\text{d6}\) \(\text{f8}\) 77.\(\text{b6}\) \(\text{g7}\) 78.\(\text{e7}\) \(\text{g8}\) [78...\(\text{f5}\) allows White to win a pawn by forcing a zugzwang: 79.\(\text{d6}\) \(\text{f1}\) 80.\(\text{d1}\) \(\text{e2}\) 81.\(\text{g1}\) \(\text{g4}\) 82.\(\text{e6}\) \(\text{g6}\) 83.\(\text{e5}\) \(\text{g5}\) 84.\(\text{e1}\) \(\text{g6}\) 85.\(\text{e1}\) \(\text{e2}\) 86.\(\text{e6}\) \(\text{f5}\) 87.\(\text{f6}\) \(\text{g4}\) 88.\(\text{e6}\) \(\text{e2}\) 89.\(\text{g6}\) \(\text{f8}\) 90.\(\text{e5}\) \(\text{b8}\) 91.\(\text{d8}\) \(\text{d7}\) 92.\(\text{a6}\) \(\text{d7}\) 93.\(\text{b6}\) \(\text{c7}\) 94.\(\text{d6}\)! This traps the black king and puts Black in another zugzwang. 74...\(\text{c5}\) 75.\(\text{e6}\) \(\text{f6}\) \(\text{e4}\) 77.\(\text{e7}\) \(\text{d6}\) 78.\(\text{d6}\) \(\text{c7}\) 79.\(\text{h6}\) \(\text{e6}\) 80.\(\text{h5}\) \(\text{c4}\) 81.\(\text{c5}\) \(\text{b6}\) 82.\(\text{a6}\) \(\text{b7}\) 83.\(\text{e5}\) \(\text{c6}\) 84.\(\text{e8}\) \(\text{b7}\) 85.\(\text{e5}\) Black is in a chokehold. He will be pushed to the rim and, soon afterwards, into a final deadly zugzwang. 85...\(\text{c7}\) 86.\(\text{e7}\) \(\text{d8}\) 87.\(\text{e6}\) \(\text{c8}\) 88.\(\text{e6}\) \(\text{d8}\) 89.\(\text{e1}\) Time for the death spasms. 89...\(\text{f6}\) 90.\(\text{e3}\) Black will lose a pawn and the game.

70.\(\text{c5}\)! Black is pushed to the rim. 70...\(\text{c6}\) 71.\(\text{e7}\) \(\text{c8}\) 72.\(\text{d6}\) \(\text{d8}\) 73.\(\text{b7}\) \(\text{c8}\) 74.\(\text{f5}\) \(\text{f5}\) 74.\(\text{c6}\) \(\text{c7}\) puts Black in zugzwang. White will shift his king to h6 and Black will lose material. 75.\(\text{c7}\) \(\text{b8}\) 76.\(\text{e5}\) Simple play. 76...\(\text{c7}\) 76...\(\text{d5}\) 77.\(\text{e5}\) wins. 77.\(\text{xf5}\) \(\text{b6}\) 78.\(\text{f5}\) \(\text{b7}\) 79.\(\text{e8}\) \(\text{f1}\) 80.\(\text{c5}\) \(\text{c4}\) 81.\(\text{e7}\) \(\text{c8}\) 82.\(\text{e8}\) \(\text{d8}\) 83.\(\text{c7}\) \(\text{f1}\) 84.\(\text{b6}\) \(\text{e4}\) 85.\(\text{e5}\) \(\text{d7}\) 86.\(\text{xb5}\) \(\text{xb5}\) 87.\(\text{xb5}\) 1–0

The right way to make a draw was 66...\(\text{d6}\)! 67.\(\text{e5}\) \(\text{f6}\)!. The following try shows how Black can defend.

68.\(\text{e1}\) \(\text{b3}\) 69.\(\text{h1}\) \(\text{c4}\) 70.\(\text{h6}\) \(\text{e6}\) 71.\(\text{c5}\) White is putting a lot of pressure on Black, but the passed f-pawn is an important resource. By pushing it at the right time, he can increase its value. However, if he pushes it too far too soon, the fortress will collapse.

71...\(\text{e5}\) 72.\(\text{h1}\) \(\text{f5}\) 73.\(\text{e1}\) \(\text{f4}\) 74.\(\text{d4}\) \(\text{g3}\) 75.\(\text{e7}\) \(\text{f4}\)!

White cannot make serious progress. Note that if the f-pawn makes it to f3, Black will be able to shift the bishop from c4 to e2/f1 as well; that is, if White finds a way to make any progress at all.
As with so many of the examples in this chapter, there is a specific position that breaks the fortress. This time the key for Black is to get the king either to f1, or to f3 without allowing a rook check on f4. In order to achieve this, he will first have to force the white rook away from e3 so that his king can work its way to e2. 56... \( \text{We}4t \) 57.\( \text{Wh}2 \) \( \text{Wf}5 \) 58.\( \text{We}3 \) \( \text{Wd}5 \) 59.\( \text{Wh}4 \) \( \text{Wh}4 \) 60.\( \text{Wh}2 \) \( \text{Wc}6! \) White is in zugzwang. 61.\( \text{Ba}3 \) 61.\( \text{Bb}3 \) \( \text{Wc}2 \) changes nothing. 61.f3† \( \text{Wh}5 \) 62.\( \text{We}4 \) was a serious try. The winning method involves putting the queen on d2 and then taking squares from the white rook. 62... \( \text{Wc}2t \) 63.\( \text{Wh}4 \) \( \text{Wd}2 \) 64.\( \text{Wc}4t \) \( \text{Wd}6 \) 65.\( \text{Wd}4t \) \( \text{Wd}7 \) The white rook cannot stay on the e-file. 66.\( \text{Wd}4 \) (66.g4 is thematically refuted by 66...g5!! and Black gets a passed pawn.) 66... \( \text{Wc}2 \) 67.\( \text{Wd}4t \) \( \text{Wc}6 \) 68.\( \text{Wd}4 \) \( \text{Wd}5 \) 69.\( \text{Wd}8 \) 69.\( \text{Wf}7 \) \( \text{Wc}6 \) with an invasion on h3 is immediately over. 69... \( \text{Wd}1t \) 70.\( \text{Wg}2 \) \( \text{Wd}2t \) The white king is deprived of the g1-square. 71.\( \text{Wc}3 \) \( \text{Wd}4 \) 72.\( \text{Wc}8 \) \( \text{Wf}2 \) The black queen is on her way to g1. After this it is only a matter of time till f3 falls and the game is won. 61... \( \text{Wf}1 \) Attacking the rook and the f1-square at the same time. 62.\( \text{We}3 \) 62.\( \text{Bb}4t \) \( \text{Wf}3 \) 63.\( \text{Wc}4t \) would be White's preferred set-up, but after 63... \( \text{Wx}f4 \) Black wins the pawn ending, regardless of which of the pawns on f2 or f4 he takes on the next move. 62.f3† would be a different type of concession. With the stronghold on e3 gone, White cannot hold the position. 62... \( \text{Wf}5 \) 63.\( \text{Ba}2 \) \( \text{Wf}1 \) With the threat to the f3-pawn, White has to do something quickly. 64.\( \text{Bb}5t \) \( \text{Wf}6 \) 65.\( \text{Ba}3 \) Black now wins with a nice manoeuvre: 65... \( \text{Wc}2t \) 66.\( \text{Wh}3 \) \( \text{Wd}1 \) 67.\( \text{Wg}2 \) (67.g4 \( \text{Wc}5 \) 68.\( \text{Wh}5 \) \( \text{Wd}4 \) and wins) 67... \( \text{Wc}2t \) 68.\( \text{Wh}3 \) \( \text{Wc}1 \) White is in an unpleasant situation. 69.\( \text{Ba}6 \) \( \text{Wf}5 \) 70.\( \text{Wg}2 \) \( \text{Wc}2t \) Black wins the rook with a check on e2 or on e8. 62... \( \text{Wf}1 \) The threat to the f2-pawn causes White great pain. The next few checks only postpone the inevitable. 63.\( \text{We}4t \) \( \text{Wf}3 \) 64.\( \text{Wc}4t \) \( \text{Wc} \) 65.\( \text{Wd}4t \) \( \text{Wb}1 \) Black is threatening ... \( \text{Wd}2-f1 \). 67.\( \text{Wg}2 \) \( \text{Wc}2 \) 68.\( \text{Wh}6 \) 69.\( \text{Wh}1 \) \( \text{Wf}6 \) And now, to finish his opponent off, Black gives a double threat to win another tempo. 68... \( \text{Wf}1t \) 69.\( \text{Wh}2 \) \( \text{Wd}1 \) White resigned before Black could take on f2 or penetrate to f1. 0–1

White is technically winning, but needs to avoid one of the most bizarre fortresses in endgame theory. In the game she failed to see this possibility and it was drawn. 49.f7? \( \text{Wxh}5 \) 50.\( \text{Wf}xh5 \) \( \text{Wxf}7 \) 51.\( \text{Wg}5 \) \( \text{Wc}6 \) 52.\( \text{Wd}4 \) \( \text{Wc}7 \) 53.\( \text{Wd}5t \) \( \text{Wc}6 \) 54... \( \text{Wc}2t \) 66.\( \text{Wd}h3 \) \( \text{Wd}1 \) 67.\( \text{Wg}2 \) (67.g4 \( \text{Wc}5 \) 68.\( \text{Wh}5 \) \( \text{Wf}4 \) and wins) 67... \( \text{Wc}2t \) 68.\( \text{Wh}3 \) \( \text{Wc}1 \) White is in an unpleasant situation. 69.\( \text{Ba}6 \) \( \text{Wf}5 \) 70.\( \text{Wg}2 \) \( \text{Wc}2t \) Black wins the rook with a check on e2 or on e8. 62... \( \text{Wf}1 \) The threat to the f2-pawn causes White great pain. The next few checks only postpone the inevitable. 63.\( \text{Wc}4t \) \( \text{Wf}3 \) 64.\( \text{Wd}4t \) \( \text{Wc} \) 65.\( \text{Wd}4t \) \( \text{Wb}1 \) Black is threatening ... \( \text{Wc}2-f1 \). 67.\( \text{Wg}2 \) \( \text{Wc}2 \) 68.\( \text{Wh}6 \) And now, to finish his opponent off, Black gives a double threat to win another tempo. 68... \( \text{Wf}1t \) 69.\( \text{Wh}2 \) \( \text{Wd}1 \) White resigned before Black could take on f2 or penetrate to f1. 0–1

22. Elina Danielian – Nana Dzagnidze, Rogaska Slatina 2011
Black cannot put up a fortress; at least, not one that can withstand the huffing and puffing and blowing of the big bad wolf. However, in the game White just took the g6-pawn without a greater insight into the position. Time trouble anyone? 77.\( \text{Wxg}6 \) This allows Black to take all the enemy pawns. 77... \( \text{Wxh}4 \) 78.\( \text{Wxg}7 \) \( \text{Wxf}4 \) 79.\( \text{Wc}4 \) \( \text{Wx}5 \) 80.\( \text{Wd}5 \) \( \text{Wg}6 \) Black takes the remaining white pawn and saves the draw. 81.\( \text{Wd}6 \) \( \text{Wxg}5 \) 82.\( \text{Wd}6 \) \( \text{Wx}5 \) 83.\( \text{Wf}4 \) \( \text{Wx}4 \) 84.\( \text{Wg}8 \) \( \text{Wf}3 \) 85.\( \text{Wg}3 \) \( \text{Wf}4 \) 86.\( \text{Wg}5t \) \( \text{Wh}6 \) 87.\( \text{Wf}5 \) \( \text{Wx}6 \) 88.\( \text{Wg}7 \) \( \text{Wd}4 \) 89.\( \text{Wg}7 \) \( \text{Wh}6 \) 90.\( \text{Wg}5t \) \( \text{Wf}6 \) 91.\( \text{Wf}3 \) \( \text{Wh}5 \) 92.\( \text{Wh}8 \) \( \text{Wf}3 \) 93.\( \text{Wc}4 \) \( \text{Wh}4t \) 94.\( \text{Wx}5 \) \( \text{Wh}4t \) 95.\( \text{Wf}6 \) \( \text{Wf}4 \) 96.\( \text{Wg}5t \) \( \frac{1}{2}–\frac{1}{2} \)

Chapter 11 – Fortresses
77. $\text{Be}4!$ \text{Bxh4} 77... $\text{g}3$ 78. $\text{Ba}4$ $\text{Bxh4}$ 79. $\text{Be}4$ $\text{Bh5}$ 80. $\text{Bf}5$ $\text{Bg3}$ 81. $\text{Bb7}$ $\text{Ba7}$ looks a lot like a fortress; Black can answer $\text{Bf7}$ with ... $\text{Bg4}$ and cannot be put in zugzwang. However, White wins with 82. $\text{Be}6!$ $\text{Bg4}$ 83. $\text{Bf7}$, for instance 83... $\text{Bh4}$ 84. $\text{Bxg7}$ $\text{Bxf4}$ 85. $\text{Bf6}$ and the rook check from the side will be decisive. 78. $\text{Bd}4$ $\text{Bf5}$ 79. $\text{Bc}5$ $\text{Bg4}$ 80. $\text{Ba}4$ $\text{Be}3$ Black's fortress can be brought down in many different ways. One of them is quite elegant: 81. $\text{Bf}6$ $\text{Bg2}$ 82. $\text{Bf}5$! $\text{Bxg5}$ 83. $\text{fxg6}$ Black has no good moves. 83... $\text{Bh6}$ 84. $\text{Be}4!$ dominates the knight. The same is the case after 83... $\text{Be}3$ 84. $\text{Be}4!$, when a possible line goes: 84... $\text{Bf}1$ 85. $\text{Bf}7$ $\text{Bg3}$ 86. $\text{Be}5$ $\text{Bh6}$ 87. $\text{Be}8$ $\text{Bf}5$ 88. $\text{Bh}8$ $\text{Bg}5$ 89. $\text{Bh}1$ $\text{Bg}4$ 90. $\text{Bf}1$ $\text{Be}3$ 91. $\text{Bf}1$! The g7-pawn falls.

23. Pavel Czarnota – Piotr Bobras, Polanica Zdroj 2006

This position arose in my analysis of an otherwise not-too-interesting endgame. I find it quite instructive. 48. $\text{Bb}6$! The only chance. 48. $\text{Be}4$ and similar moves are pointless, as Black's pawns are too strong. 48... $\text{g}3$ 49. $\text{Bc}6$ 50. $\text{Bd}7$ 50. $\text{Bb}5$? also works; we end up the same place: 50... $\text{Bb}8$ 51. $\text{Ba}6$ $\text{g}2$ (51... $\text{Bd}7$ 52. $\text{Bc}6$=) 52. $\text{Bx}b\text{b}8$ $\text{g}1=\text{B}$ All White has to do is to put the knight on $\text{c}6$ or $\text{d}7$ and we have a fortress. However, the third square is poor: 53. $\text{Ba}6$? Now Black can get in with the queen to inflict damage. 53... $\text{Bg}5$ 54. $\text{Bb}6$ $\text{Be}3$ 55. $\text{Bb}5$ $\text{Bd}3$ 56. $\text{Bb}6$ $\text{Bd}6$ 57. $\text{Ba}7$ $\text{Bd}4$! → 50... $\text{g}2$ 51. $\text{Bb}5$ White achieves an active fortress after 51... $\text{Bb}8$ 52. $\text{Bx}b\text{b}8$ $\text{g}1=\text{B}$ 53. $\text{Bd}7$ or 53. $\text{Bc}6$. 
Chapter 11 – Fortresses

Timofeev – Bukavshin, Moscow 2012

Palo – Kristiansen, Helsingor 2013

Dragun – Leniart, Warsaw 2010

Smirin – Givon, Eilat 2012
White can break the fortress using zugzwang and some manoeuvring. 47.d3 e8 48.h4!
Black has to weaken the e6-square. 48...f5 The only move. 48...d6?! 49.f5! leads to quite
a simple win for White, for example 49...gx5 50.e2 e4 51.c7! and Black has to face
the hopelessness of his position after 51...d6 52.xh5. 49.c4 A waiting move. White is
timing his invasion perfectly. 49...d6 50.b5 e8 51.a4 This looked drawish to me at
first, but White has a winning plan: manoeuvring the bishop to h7! 51...d6 52.c7 d4
53.d7 d6 54.c6 The knight cannot go on an adventure, so White does not care that
the g3-pawn is undefended. However, he should not allow 54.e6?! b5! followed by ...d4
with practical drawing chances. 54...e4 55.e6 f6 55...d6 loses immediately to 56.g8
e4 57.h7 when Black's second weakness is exposed. 56.c8 White has to lose a move in
order to achieve zugzwang. 56...e4 57.c7 d6 58.d7 d4 59.e6 f6 Black could have
decided to try something active with 59...c3?!, although his quest is hopeless: 60.g8 b5+
61.b6 d4 62.h7 d6 (62...f6 63.e5 b3+ 64.c6 d4+ 65.c7 b5+ 66.d8 g7 67.xg6 xg6 68.e7 White gets a won pawn ending as the d-pawn will cost Black his
knight.) 63.xg6 xd5 64.xh5 This wins for White, but would at least have allowed Black
to be a bit more active in the meantime. 60.c6 Zugzwang. 60...e4 60...e8 61.d6 and
wins. 61.g8 xg3 62.c7 e4 63.h7 The principle of two weaknesses in action. 63...
g3 White also wins the pawn ending after 63...c5 64.d6+ f7 65.d7 g7 66.xg6! xg6
67.d8=+ e6+ 68.xd7 xe8 69.xe8 f6 70.d7. 64.xg5 d6 65.g6 b5+ 66.b6
c3 66...d6 67.xh5 is equally hopeless. 67.c6 e2 68.c7 c3 69.d6+ e6 70.xf5+ 1–0

25. Kamil Dragun – Arkadiusz Leniart, Warsaw 2010
Black had a once-in-a-lifetime chance to escape from the corner and avoid the mating threats
which, in combination with zugzwang, would break down his defences. 68...c5? 69.c6 a8
On 69...c8 White has to play 70.d7!! to keep the king trapped in the corner. The result is
an immediate zugzwang; either the king is pushed to a7 after 70...b8, or he loses a pawn after
any bishop move is answered by 71.a7 with a double threat of mate and winning a pawn. For
example: 70.a8? 71.a7 b8 72.b7+– 70.h7 b8 71.f7 a8 72.f4 a7 73.a4+ b8 Black is in zugzwang and loses one of the pawns. The remaining moves can better be
described as inertia than as a game of chess. 74.e6 f2 75.xa3 c5 76.e6 e3 77.c4 f2
78.xb6+ e8 79.e5 g3 80.b3 1–0
68...c8! 69.c6 d8 would have saved the game. White can still create inconveniences,
but the black king is out of the mating net.

This endgame arose in a game at the Danish Championship 2013. The analysis will include
positions reached in a few other games, and on move 66 we will change course and follow a
different game where Black defended better than in the present example.

From the initial position, White needs to develop a plan to break through the defence.
Obviously it is too early to think about sequences of forced moves, but we do need to find a
setup that enables us to do something. If we removed the f-pawns, the position would be a
draw, because White does not have enough pawns left to win the game and because there is no
way to bring the king to the vital squares on the f-file. The latter is still the case, but because the players have three pawns each rather than two, White has an additional option of sacrificing two pawns, in order to make something great of the third one. 47.\textit{a}8 \textit{c}5 48.\textit{f}3 \textit{d}4 49.\textit{b}6 \textit{c}5 50.\textit{c}6 \textit{d}4 51.\textit{c}4 \textit{b}6 52.\textit{h}4! Another plan was to get the king to e6 and then put the rook on g2 and play g4. But the plan in the game is in all the books and is known to be winning. 52...\textit{g}7 53.\textit{e}2 \textit{f}7 54.\textit{c}3 \textit{d}4 55.\textit{d}3 \textit{f}6 56.\textit{e}3 \textit{g}7 57.\textit{d}7+ \textit{f}8 58.\textit{d}3 \textit{e}8 59.\textit{b}7 \textit{f}8 60.\textit{c}4 \textit{g}8 61.\textit{d}5 \textit{c}3 62.\textit{b}3 \textit{a}1 63.\textit{e}6 \textit{d}4 64.\textit{d}3 \textit{b}2 We have reached the theoretical position. White is ready and it is time to calculate. Someone had this as mate in 55 on their engine! 65.\textit{g}4! This is in all the books. I was working at the tournament as a commentator and said a lot of rubbish in the earlier part of this endgame, but when we got to this point it dawned on me that I had seen this ending before... When you are sitting with the solution to this exercise, it might all seem rather simple. However, the fact that winning this ending is by no means trivial is underlined by the following game, where a great grandmaster failed to carry out the break in the correct way. 65.\textit{d}8+ \textit{g}7 66.\textit{d}7+ \textit{g}8 67.\textit{g}4? hxg4 68.\textit{h}5 \textit{g}xh5 69.\textit{x}f5 g3! The problem with having the rook on d7 instead of d3. 70.\textit{d}2 h4 71.\textit{g}4 \textit{f}6 72.\textit{g}2 ½–½ Svetushkin – Dreev, Moscow 2009. 65...\textit{hxg4} 66.\textit{h}5 At this point we will depart from the Danish game to focus on the most stubborn defensive try. 66...\textit{gxh5} Black loses more quickly after: 66...\textit{g}7 67.\textit{hxg6} \textit{hxg6} 68.\textit{d}5 \textit{f}6 (68...\textit{c}1 69.\textit{x}f5 \textit{xf}4 70.\textit{xf}4 \textit{g}5 71.\textit{e}5 \textit{g}3 72.\textit{e}4 \textit{g}2 73.\textit{f}8 \textit{h}4 74.\textit{g}8 1–0 Radev – Prighb, Tbilisi 1971.) 69.\textit{x}f5 \textit{h}4 70.\textit{a}5 \textit{f}6 71.\textit{a}8 \textit{g}3 72.\textit{f}5+ 1–0 Palo – Kristiansen, Helsingor 2013. 67.\textit{g}5 \textit{g}7 68.\textit{d}7+ I prefer the following way to keep control: 68.\textit{g}5! \textit{c}1 69.\textit{g}3 \textit{f}7 70.\textit{g}2! White is preparing \textit{hxh5}. Black has to go to the e-file. 70...\textit{e}6 But now White can force the bishop away. 71.\textit{c}2 \textit{a}3 72.\textit{a}2! (An important move. White would have blown it after 72.\textit{hxh5}?! \textit{f}5! with a draw. After the text move White just wins.) 68...\textit{h}6 69.\textit{d}6+ \textit{g}7 70.\textit{g}6+ White could also have won with 70.\textit{g}5 \textit{c}1 71.\textit{d}7+ \textit{f}8 72.\textit{d}1! \textit{e}3 73.\textit{f}6 \textit{g}8 74.\textit{g}6 \textit{f}8 75.\textit{f}5 \textit{g}3 76.\textit{f}6 and so on. 70...\textit{h}7 71.\textit{g}5 \textit{h}4 72.\textit{f}5? The final error. White was still winning after 72.\textit{f}5 \textit{g}3 73.\textit{g}4, which is actually not so hard to find. 72...\textit{h}3! Black holds. 73.\textit{h}6+ 73.\textit{f}6 \textit{c}1! would be an immediate draw. 73...\textit{g}7 74.\textit{h}5 \textit{g}3 75.\textit{x}h3 \textit{e}5 76.\textit{h}1 \textit{d}4! Maybe this was the move Tarjan overlooked. Without it the rook comes around and dominates the black pawn as well as pushing the black king backwards. 77.\textit{f}6+ \textit{xf}6 78.\textit{f}4 \textit{g}6 79.\textit{x}g3 \textit{g}5 80.\textit{b}1 \textit{e}5 81.\textit{f}3 \textit{f}5 82.\textit{b}5 \textit{e}6 83.\textit{e}4 \textit{d}6 84.\textit{b}6 \textit{d}7 85.\textit{d}5 \textit{f}4 86.\textit{b}7+ \textit{c}8 87.\textit{f}7 ½–½ Tarjan – Browne, Lone Pine 1973.

27. Ilya Smirin – Givon, Eilat 2012
White’s chances of winning this game are based entirely on an invasion of the light squares (with a bit of standard zugzwang as spice). For this reason, Black will have to defend the light squares with his pawns and knight. 62...\textit{e}7? 63.\textit{h}4! White will win on the light squares, so he establishes control over them. 63...\textit{f}7 63...\textit{h}5 also does not work. After 64.\textit{h}7 \textit{f}3 65.\textit{x}h5 \textit{x}h4 66.\textit{g}4 \textit{f}7 67.\textit{d}6 \textit{g}6 (67...\textit{g}5 68.\textit{f}7+ \textit{g}6 69.\textit{e}6 White invades.) 68.\textit{h}5 \textit{h}4 69.\textit{d}5+ \textit{f}6 70.\textit{d}4+ Black will have to give up his g-pawn, as 70...\textit{f}7 71.\textit{c}4+ \textit{f}6 72.\textit{g}4! is zugzwang. 64.\textit{h}5 \textit{e}7 65.\textit{e}4+ \textit{d}7 66.\textit{b}1 \textit{c}7 67.\textit{b}4 \textit{d}7 68.\textit{a}4+ \textit{e}7 69.\textit{a}7+ \textit{e}8 70.\textit{c}7 \textit{f}8 71.\textit{d}7 \textit{g}8 72.\textit{e}8+ \textit{h}7 73.\textit{e}4+ \textit{g}8 74.\textit{d}6 \textit{f}8 75.\textit{d}7 \textit{g}8 76.\textit{e}8 1–0.
62...h5? immediately does not work. 63.\(\text{h}7\) h4 64.\(\text{d}6\) leaves Black in zugzwang quite quickly. 64...\(\text{e}7\) 65.\(\text{d}7\) \(\text{f}6\) 66.\(\text{h}5\)\(+\) g6 67.\(\text{h}7\)\(+\) \(\text{g}7\) 68.\(\text{x}h4\) The fortress will break eventually.

62...\(\text{g}6\)! would have prepared a fortress based on the defence of the light squares. Here are two possible lines:

- \(63.\text{c}3\) Another nice fortress occurs after 63.\(\text{g}3\) h5 64.\(\text{e}4\) \(\text{g}7\) 65.\(\text{c}7\) \(\text{h}6\) 66.\(\text{f}4\) \(\text{g}7\) 67.\(\text{d}5\) \(\text{f}5\) 68.\(\text{e}6\) \(\text{d}4\) 69.\(\text{d}7\) \(\text{f}5\) 70.\(\text{e}8\) \(\text{h}7\) 71.\(\text{f}7\) \(\text{g}7\) and the knight will keep the white king away. Nothing can harm Black. 63...\(\text{f}5\) 64.\(\text{c}7\) \(\text{e}7\) 65.\(\text{d}6\) h5 66.\(\text{d}7\) \(\text{h}4\) 67.\(\text{e}6\) \(\text{g}7\) 68.\(\text{c}4\) \(\text{f}5\) 69.\(\text{e}6\) \(\text{g}5\) 70.\(\text{c}7\) \(\text{e}7\) 71.\(\text{e}5\) \(\text{g}8\) 72.\(\text{d}7\) \(\text{h}4\) White is unable to invade with his king via e8 as Black has the ...\(\text{g}7\) resource at all times.
Chapter 11 – Fortresses

McShane – Danin, Moscow 2010

Nakamura – I. Sokolov, Wijk aan Zee 2013

Van Wageningen – Veinberg, Hoogoveen 2012

Maslak – Nechepurenko, Dagomys 2010


When you start in a chess club you are likely to be told at some point that you should be careful with advancing your pawns, as they are the only piece that cannot move backwards. This seems quite simplistic; after all, it is a part of the rules of the game. But the strategic impact is great in this case. **51.h3?** Though it is hard to anticipate, the g3-square will prove to be a vital part of Black’s drawing strategy. **51...h6 52.gxe5 fxe5 53.h4 f5!** Black can still save the game after this, but the safest route to a draw was **55...fxg5†**. White has no way to improve his position. Soon he will have to give up the rook with a check on g5, leading to an immediate draw.

**56.d5 h6 57.b8 g5?** Now the bishop is trapped on the wrong square. Black’s last chance to secure the draw was based on putting the bishop on the ideal g3-square. **58...d2!** Preventing the bishop from getting to c3, but Black has another defensive idea. (58.b7† f8 59.e6 fxe6† 60.xe6 c3 is one of our favourite fortresses.)

58...f4 59.c4 g3 The bishop is extremely happy here. Black’s last chance to secure the draw was based on putting the bishop on the ideal g3-square. **58...d2!** Preventing the bishop from getting to c3, but Black has another defensive idea. (58.b7† f8 59.e6 fxe6† 60.xe6 c3 is one of our favourite fortresses.)

**51.f5!** Immediately is the winning move. White can of course manoeuvre around, but eventually he will have to do this and there are no better circumstances than now. **51...gxh5† 51...gxh5† is taken care of rather easily: 52.d5 h6 53.b8 f4 54.b7† f8 55.e6! fxe6† 56.xe6 g5 57.b4 transposes to the game. The fact that the pawn is on h3 and the king on g8 there makes little difference. The winning method is exactly the same.**

52.e3 f6 52.h4 does not work in this position. The difference is simple: White can get his rook out via the h3-square.

53.f6 f6 54.exf6† f7 55.h8 c5† 56.b3 d4 57.hxh4 xf6 58.h7† and White wins in the long run – or, if Black wants it, rather quickly: 58...g7†? 59.b3! f6 60.xg7† xg7 61.d4 xf6 62.h4 and the pawn ending is a blast. 53.exf6† f7 54.h8! 54.xf8† fxf8 55.g4 f7 56.g5 looks dangerous, but Black secures a draw with 56...h4! 57.h3 f4! 58.xf4 xf6 59.g4 e5 60.xh4 h5 61.g3 g5† 62.f2 e4 63.h4† f5 and so on. **54...d6 55.f4 g6 56.f7 gxf7 57.h5 xg6 58.h4† f6 59.h4 White is winning here. Müller gives a long line proving this, and there is no reason to change any part of it.**

59...f8 60.h5 f7 61.d3 h6 62.g1 f8 63.h1 h6 64.h4 White has frozen the kingside and can now bring the king round to win the game. 64...f6 65.d2 f7 66.d3 f6 67.d4 f7 68.e5 c7 69.h1 d6 69...xf4 70.h6 wins the bishop. 70.c6 e7 70...e5 71.fxe5† xex5 72.xe1† f6 73.h1 wins. 71.h4 f6 72.d6 f8† 73.d7 h6 74.g8 e5 75.fxg5† xex5 76.f7 f4 77.g6 g8 78.h6 xhx6 79.xh6 f3 80.g5 e4 81.f6 e3 82.g4 f2 83.g3 White wins by one tempo.
White could have attempted this fortress in the game and would probably have succeeded in holding, as my engines cannot find the win. I had to seek the wisdom of Karsten Muller and the Lomonossov seven-piece tablebases to find the way. White draws in all lines but one.

73...d2 74...b3! is a draw at once.

73...g1 74...c5 g6 75...f3 Black is not making progress.

73...e1 74...c5 e6 75...g3 is a similar story; as a rule, Black should not allow the white king to go to c5 so soon.

73...b1 74...c5 b3 75...h2† c3 76...h3† b2 77...h6! a3 78...h1! is holding, on account of 78...b2 79...a1† b3 80...xb6 c4† 81...c6. 73...d1 74...c5 d3 75...h2† c3 76...xb6 xd4 is a draw after 77...h4† c3 78...a4!!, for example: 78...b3 79...b5 d4 80...b4†=

73...b2!! is the only way to win. 74...h7 74...g3 c4 wins. 74...c4! 74...c3? would again allow 75...c5, drawing, for example: 75...d3† 76...xb6 xd4 77...h4† e3 78...h3† d2 79...b5 d4 80...b4 d3 81...b3 e1 82...b2 and White achieves a theoretical draw. 75...b7 b4 Finally White is allowed to get the king to c5, but this time around Black has enough time to win the d4-pawn. 76...c5 c3 77...h7 xd4 78...xb6 e4 Black wins.

In the game Nakamura gave the wrong check and failed to prevent the World Champion from setting up a fortress. 58...c3† 59...g4 d4† 60...h3 d3† 60...e3† 61...g3 e5!! was the last try to cause problems, but after 62...b4! xh5† 63...h4 xg6 64...f4! we have an unbreakable fortress. 61...h4 e4† 62...g4 e1† 63...h3 e3† 64...h4 e1† 65...h3 e3† ½–½

The winning line went: 58...d1† 59...c3 59...f2 d4† 60...f3 d5† transposes to the main line. 59...c1† 60...e2 60...d3 f1† 61...e3 xg2 is not a fortress as White cannot hold on to his pawns. For example: 62...b5 c6! and after 63...g7 f7 or 63...f5 e6! 64...d3 c5 Black wins. 60...c4† 60...c7 is a mysterious computer move that wins faster than the others. Let us just ignore it and stick with the human option! 61...f3 White feels the sand sliding under his feet. Eventually there will be a check on the h2-b8 diagonal, winning the rook. Most likely on f4, but there are other candidates as well: 61...d5† 62...f2 c5† 63...f1 After 63...f3 f5† there is a check on e5 on the way. 63...c4† Suddenly the check on f4 is all too real. 64...e1 e4† 65...d1 The white king has been forced away from the pawns. 65...g4† Again checks on f4 and g3 are lethal. 66...c2 xg2† 67...c1 g1† The check on h2 wins the rook.

31. Hikaru Nakamura – Ivan Sokolov, Wijk aan Zee 2013
If White was able to play e5-e6, he would just make a draw. 77...d4! The only way to prevent it. 78...d6 78...e6 is quickly refuted by 78...h4† 79...g1 xb4! when the black pawns queen with check. 78...g4? Allowing White to advance the e-pawn and thus get away with a draw. 78...d2† was the right move. The critical line is 78...g1 (79...h3 f4† is a recurring zugzwang) 79...e1† 80...h2 e1 81...xe7 e2† 82...g1 Now that the bishop is unprotected, Black has a strong twist that brings considerable harm. 82...g1† 83...f1 c2† 83...f2! 84...d6 g8 85...c5† g3 With the strong threat...c8-c1. 86...g1 c8 87...f2† f3 The white bishop has lost its stronghold. Black wins after 88...e1 c5 as the e-pawn is lost. 79...e6 White escapes with a draw. 79...g2† 80...h1 e2 81...e7 g4 82...g1 f5 83...f1 e6 84...f2 g6 85...f3 f7 86...b4 e8 87...c5 d7 88...xb4 b6 89...c5 e6 90...b4 c4 ½–½
White is evidently looking for a fortress. He should have good chances of success, as Black will not be able to break it with an exchange sacrifice. But as always, the great question is where the king is least likely to be caught in a zugzwang based on mating threats. 73.\(\text{Ke3}\)?? The king should stay close to the h3-pawn. Now the bishop can be forced to stay on d7 to protect both pawns, forcing the king to move (remember that mate with rook and king versus king relies entirely on zugzwang; this pattern is a part of breaking this fortress). 73...\(\text{Kf6}\)!! Black played the rest almost flawlessly. 74.\(\text{Ke8}\) \(\text{Kd5}\) 75.\(\text{Kd7}\) \(\text{Ke8}\) 76.\(\text{Ke2}\) \(\text{Ke4}\) 77.\(\text{Kg4}\) \(\text{Kf6}\) 78.\(\text{Ke8}\) \(\text{Kd5}\) 79.\(\text{Kd7}\) \(\text{Kd4}\) 80.\(\text{Kd6}\) \(\text{Ke2}\)† 81.\(\text{Kc1}\) \(\text{Kc3}\) 82.\(\text{Kd1}\) \(\text{Kd3}\) 83.\(\text{Kc1}\) \(\text{Kd2}\) 84.\(\text{Ke5}\)† \(\text{Kc3}\) 85.\(\text{Kd7}\) \(\text{Kd6}\) 86.\(\text{Kb1}\) \(\text{Kd1}\)† 87.\(\text{Ka2}\) \(\text{Ke1}\) 88.\(\text{Kg4}\) \(\text{Ke5}\) 89.\(\text{Kd7}\) After 89.\(\text{Kh1}\) \(\text{Kb3}\) 90.\(\text{Kd1}\)† \(\text{Kc3}\) Black wins. The threat is ...\(\text{Kc5}\)† and ...\(\text{Kc5}\)! winning, and after 91.\(\text{Kf3}\) \(\text{Kc5}\) 92.\(\text{Kg2}\) \(\text{Kc3}\) White is in zugzwang. 89...\(\text{Kb5}\) 90.\(\text{Kc6}\) \(\text{Kb2}\)† 91.\(\text{Ka1}\) \(\text{Kc2}\) 92.\(\text{Kf5}\)† \(\text{Kb3}\) 93.\(\text{Kc6}\)† \(\text{Ka3}\) 94.\(\text{Kd7}\) \(\text{Ke4}\) 95.\(\text{Kd6}\) \(\text{Ke4}\) 96.\(\text{Kb1}\) \(\text{Kh1}\) 98.\(\text{Kh4}\) \(\text{Kxh4}\) 99.\(\text{Kd3}\) \(\text{Kh3}\) 100.\(\text{Kc5}\) \(\text{Kc3}\) 101.\(\text{Kb4}\) \(\text{Kc1}\)† 0–1

73.\(\text{Ke2}\) also does not work. Black would play 73...\(\text{Kf6}\)! 74.\(\text{Kg3}\) \(\text{Kg5}\) leading to zugzwang quickly. So White has to move his h-pawn forward, which is exactly what he wished to avoid. Black is now able to separate the king from the h-pawn with the standard zugzwang method: 75.\(\text{Kg4}\) (After 75.\(\text{Kc8}\) \(\text{Kc4}\) 76.\(\text{Kd7}\) \(\text{Kc3}\)† 77.\(\text{Kf2}\) \(\text{Kf4}\) the white king is in trouble.) 75...\(\text{Kc4}\) 76.\(\text{Kf3}\) \(\text{Kg5}\) 77.\(\text{Kd7}\) \(\text{Kg5}\) 78.\(\text{Kd8}\) \(\text{Kf4}\)! Keeping the king boxed in. 79.\(\text{Kd7}\) \(\text{Kg5}\) 80.\(\text{Kd8}\) \(\text{Kf4}\) 81.\(\text{Kg4}\) \(\text{Kf4}\) Forcing the bishop to a bad square. 82.\(\text{Kd7}\) \(\text{Kg6}\)† 83.\(\text{Kd3}\) \(\text{Kg1}\) Another waiting move. 84.\(\text{Kh2}\) \(\text{Ke4}\) 85.\(\text{Kh3}\) \(\text{Kf4}\) 86.\(\text{Kh4}\) \(\text{Kg6}\) 87.\(\text{Kh5}\) \(\text{Kf6}\) 88.\(\text{Kg4}\) \(\text{Kf4}\) Another beautiful regrouping. 89.\(\text{Kg2}\) \(\text{Kd2}\)† 90.\(\text{Kc3}\) \(\text{Kc2}\) 91.\(\text{Ke4}\) \(\text{Kc3}\)† 92.\(\text{Kg2}\) \(\text{Kg3}\)† 93.\(\text{Kf2}\) (93.\(\text{Kg4}\) \(\text{Kg3}\)→ shows why the bishop had to be forced to e8.) 93...\(\text{Kf4}\) Finally the h-pawn is forced forward, creating more problems for White. 94.\(\text{Kf5}\) \(\text{Kc3}\) 95.\(\text{Ke6}\) \(\text{Ke2}\) 96.\(\text{Kc2}\) \(\text{Kf3}\) 97.\(\text{Kf3}\) \(\text{Kh3}\) The rook comes to \(\text{h2}\), winning.

The solution is thus 73.\(\text{Kg3}\)! The way to stay in the game was to go towards to the h-file. 73...\(\text{Kc4}\) 74.\(\text{Kc4}\) \(\text{Kd6}\) 75.\(\text{Kd7}\) \(\text{Kg6}\)† forces White to the h-file. But here the king can keep an eye on the h-pawn as well as stay safe, as the bishop on d7 conveniently takes away the f5-square from the black king. 76.\(\text{Kh4}\) \(\text{Kf4}\) 77.\(\text{Kd6}\) 88.\(\text{Kd8}\) \(\text{Kd8}\) 79.\(\text{Kf7}\) \(\text{Kg8}\) 80.\(\text{Kf6}\) \(\text{Kf6}\) 81.\(\text{Kh5}\) \(\text{Kf6}\) 82.\(\text{Kh4}\) Black can make no progress. 74.\(\text{Kf3}\) \(\text{Kf6}\) 75.\(\text{Kg3}\) \(\text{Kg5}\) With the black king on the kingside, White needs to shift to the centre/queenside, so that the black king cannot get up close and personal. As mentioned before, the reason this will not happen is that White has control of the f5-square. 76.\(\text{Kf3}\)! \(\text{Kf4}\)† 77.\(\text{Ke3}\)! Black is unable to make serious progress.
Boris Gelfand – Vladimir Malakhov

Sochi 2005

White has an obvious advantage, but it is less important to understand when you are better than it is to understand how to play your position. If you want top strategy, Gelfand is your man. Can you match him in strategic excellence?
Most of what has come before in this book has been exact: tactical and something you can calculate. In this chapter I want to touch on positions that cannot be solved with brute force, but which require strategic thinking.

There are many ways to describe, categorize and explain endgame strategy. A few good books have been written, most famously by Shereshevsky, built on a series of lectures by Mark Dvoretsky.

In 2004 I wrote what I still consider to be a decent book on this topic: Excelling at Technical Chess. In this I had my own list of categories, which looked like this:

1) Schematic thinking
2) Weaknesses
3) Domination
4) Do not hurry
5) Passed pawns
6) Pawns in the endgame
7) Freaky aspects

The last category includes: zugzwang, stalemate, fortresses, attack on the king and the absurd (essentially weird studies). Other chess authors have divided up the skills in a different way, without doing it necessarily better or worse.

In this article I will only briefly touch on these aspects. To look at them in depth would take a book; and I guess Excelling at Technical Chess is not a bad place to start.

1) Schematic Thinking

This is the most important aspect of endgame strategy; the ability to set up possible scenarios in your head and correctly evaluate them. A great endgame player will know that in this position I am making a draw, while in that position I am lost. Being able to understand the subtleties in advance makes it much easier to calculate variations and to decide which pieces to exchange.

One of my personal heroes, Boris Gelfand, is an exceptional strategic player; including in the endgame. The following example is deeply impressive.

Boris Gelfand – Vladimir Malakhov

Sochi 2005

30.g5!!
I originally thought that White could have exchanged the heavy artillery first in order to ensure that the queens were exchanged. But as Gelfand himself points out, this would allow Black to defend: 30...\texttt{xc8} 31.\texttt{xc8} \texttt{xc8} 32.g5 \texttt{e7}!
By putting the bishop here, the g5-pawn is kept under fire for just long enough for the black king to join the defence.

30...\(\text{h8}\)

30...\(\text{xc2}\) 31.\(\text{xc2}\) \(\text{g7}\) is met strongly with either 32.\(\text{d3}\) or 32.\(\text{e5!}\) \(\text{xe5}\) 33.\(\text{xe5}\)\(\text{e8}\) 34.\(\text{h4}\) and White has good winning chances. Still, this was Black’s only chance to save the game.

31.\(\text{xc8}\) \(\text{xc8}\) 32.\(\text{xc8}\)??

32.\(\text{a3!}\) was very strong and would probably have won the game as well. But Gelfand had envisioned the ending and most likely never considered putting the queen on a3.

32...\(\text{xc8}\) 33.\(\text{xb8}\)!

This is the point. Exchanges are, as we all know, all about which pieces remain.

33...\(\text{xb8}\) 34.\(\text{h4}\) \(\text{c7}\)

This is the position Gelfand was aiming for.

35.\(\text{h5!}\)

The black king is one step too far away to come to the defence of the g6-pawn, forcing him to take on h5.

35...\(\text{gxh5}\) 36.\(\text{g3}\) \(\text{g7}\) 37.\(\text{h4}\) \(\text{d6}\) 38.\(\text{xe5}\) \(\text{e8}\) 39.\(\text{e5}\) \(\text{g7}\) 40.\(\text{d3}\)

Repeating the position before taking any action is often a good idea, especially at move 40.

40...\(\text{e7}\) 41.\(\text{e5}\) \(\text{d6}\) 42.\(\text{f4!}\) \(\text{e7}\)

43.\(\text{g6!}\) \(\text{hxg6}\)?? 44.\(\text{xe6}\) \(\text{h8}\) 45.\(\text{f7}\) \(\text{f6}\) 46.\(\text{g5!}\) \(\text{h8}\) 47.\(\text{h7}\)

Taking full control.

47...\(\text{e8}\) 48.\(\text{f6!}\)\(\text{e8}\)

48...\(\text{xf6}\) 49.\(\text{xf6}\) \(\text{d7}\) 50.\(\text{f7}\) \(\text{d6}\) 51.\(\text{e8}\) is a well-known way to do it.

49.\(\text{h5}\) \(\text{g8}\)

Or 49...\(\text{e7}\) 50.\(\text{h7}\) \(\text{f6}\) 51.\(\text{xf6}\) \(\text{xf6}\) 52.\(\text{g8}\) and White wins.

50.\(\text{h6!}\)

Black resigned.

1–0

It is obvious that Gelfand would struggle to calculate twenty moves ahead without falling out of his chair from dizziness. But he is able to imagine possible positions and determine which ones to go for. This is an important skill to develop.
2) Weaknesses

In a book of this level, it is hopefully safe to assume that all the readers will know what a weakness is. In endgame strategy we famously have the principle of two weaknesses, based on the idea that you need to create a secondary target in order to break the defence. I have always preferred to turn it around and say that we need two advantages, as I find it harder to say that the opponent has a weakness because we have an extra pawn, than to say that we have an advantage through his having a weak pawn.

In the following game Harikrishna manages to create extra weaknesses in his opponent's position, thus putting him under serious pressure.

For this reason Harikrishna decided to strike on the kingside, in the hope of creating additional weaknesses.

29.g4!!

White's idea is to put the f5-pawn under pressure. If White is able to give Black an isolated pawn there, he will not only have created a weakness on f5, but also one on h7 (while accepting one on h2).

29...f6?

Black's position is by no means easy. It turns out that by putting the king on this logical square, he is running into tactics.

Black would also be in big trouble after:
29...fxg4? 30.fxg4 dxe4 31.fxg4 xc8 31...d8 32.b4 threatens d4-d5.

32.b4!

32...g2 f8 33.a3 was given by Harikrishna, but Black can optimize his defence with 33...g7!. This looks passive, but when you realize that Black is putting the knight on e8 in order to activate the king, it all makes sense. 34.b5 e8 35.g3 f7 36.xg4 e6 Black's counterplay with the king will yield him fine drawing chances.

32...f8 33.a6!

The threat of d4-d5 makes it impossible for Black to defend c7. Though more moves can
be played, there is nothing to analyse. White is just winning.

Instead Black could have defended solidly with either 29...\texttt{d6} 30.h3± or with 29...\texttt{g7!} 30.gxf5 gxf5 31.\texttt{b4} \texttt{d8:}

It is not so easy for White to prove an advantage as the following tactic shows: 32.f3 \texttt{d2} 33.\texttt{xf5} \texttt{x5} 34.\texttt{f2?} \texttt{xd4!} and Black has equalized. White can play better with 34.\texttt{h1}, but his advantage has been restricted to a minimum.

Also after the natural 32.\texttt{f1} \texttt{g6} 33.\texttt{a7} h5! 34.\texttt{e2} h4 35.\texttt{f3} \texttt{f6} Black should have enough counterplay to draw.

33.\texttt{f2?!}

I am sure that Harikrishna was happy with how things had been developing, not realizing that he was already poised to win the game: 33.\texttt{x5!} \texttt{x5} 34.\texttt{f2} \texttt{h4} 35.\texttt{xh7} (35.\texttt{h3} is also strong) 35...\texttt{g6} 36.\texttt{xg6} \texttt{g7} 37.\texttt{g1} \texttt{h5}

Black is unlikely to hold this ending. The h-pawn combined with the weaknesses on d5 and c7 are too much to deal with. Still, White will have to play good moves to secure the victory.

33...\texttt{f4} 34.\texttt{xf4} \texttt{e7?}

Ivanchuk misses a brilliant defence: 34...\texttt{x5} 35.\texttt{e3} \texttt{b3!} 36.\texttt{a7} \texttt{e6}

It is possible that Ivanchuk rejected this defence on account of the following line: 37.\texttt{x5} \texttt{x5} 38.\texttt{c4} \texttt{a5} 39.\texttt{xc7} \texttt{f6} 40.\texttt{xe6} \texttt{xe6} 41.\texttt{d7}
White threatens to win with 42.d5† followed by a rapid advance of the passed pawns, but Black can resist with: 41...\textit{\textcolor{red}{\textbf{L}}d4}! 42.\textit{\textcolor{red}{\textbf{L}}x\textbf{d}4 h5} Black is obviously still in some danger, being a pawn down in the rook ending. However, all of White’s pawns are isolated, making it possible, just possible, that Black might be drawing.

3) Domination

Domination is a standard theme in most endings. It is often seen through the minor domination of one piece over another, rather than overall domination. It is a very useful think to keep in mind when we have to decide between two squares for our piece, but cannot determine a real difference between them.

But there are also the total domination situations, like the following game:

\textbf{Eduard Andreev – Eduardas Rozentalis}

Cappelle la Grande 2013

Black wins this game on account of the great domination his pieces have. The extra pawn helps as well, but in the end, the theme of domination becomes even more apparent than it is at the beginning.

59...\textit{\textcolor{red}{\textbf{F}}4}

The obvious move, but exchanging pawns without a follow-up is not comfortable.

60.\textit{\textcolor{red}{\textbf{G}}xf4†}

White has to take the pawn on account of 60.\textit{\textcolor{red}{\textbf{A}}a1 e3! 61.\textit{\textcolor{red}{\textbf{A}}a5† \textbf{B}f6 62.\textit{\textcolor{red}{\textbf{G}}xf4}} g3! 63.\textit{\textcolor{red}{\textbf{F}}xg3 \textbf{A}c1} and wins. There are other ways, but this is crystal clear.
60...\textit{\textbf{\texttt{\textcircled{C}f4}}}

60...\textit{\textbf{\texttt{\textcircled{h}4}}} would have concluded the game quickly:

So White needs to try 61.g2, when he is hit by 61...g3! 62.fxe3 \textit{\textbf{\texttt{\textcircled{g}3}}} and ...h2-h1 mate.

The main idea is 61.a1 e3! 62.fxe3 \textit{\textbf{\texttt{\textcircled{g}3}}} and ...h2-h1 mate.

Rozentalis was assuming that his domination was enough to win the game, rather than thinking deeply. Maybe he was under the power of increments?!

The correct winning strategy included keeping a pawn in the g-file in order to have something to use as a shield:

61...e3!

This is less simple than ...\textit{\textbf{\texttt{\textcircled{h}4}}} on the previous move, but it was still the direct way to win.

62.a4t

62.fxe3t \textit{\textbf{\texttt{\textcircled{g}3}}}! and mate is close with either ...\textit{\textbf{\texttt{\textcircled{h}2}}} or ...\textit{\textbf{\texttt{\textcircled{c}7}}}-h7.

62...\textit{\textbf{\texttt{\textcircled{g}5}}} 63.fxe3 \textit{\textbf{\texttt{\textcircled{h}4}}} 64.c4 a2 65.c8 \textit{\textbf{\texttt{\textcircled{g}3}}} 66.h8 a1 67.e4 e2 68.f8

Here Black seals the victory with:

68...\textit{\textbf{\texttt{\textcircled{x}f1}}} 69.xf1 xf1+ 70.f1 \textit{\textbf{\texttt{\textcircled{h}2}}}!

The pawn makes it just in time.

62.fxg3t \textit{\textbf{\texttt{\textcircled{x}g3}}}

Black is still winning, due to his domination over two of White's three pieces.

63.a8 c1 64.a3

64.a1 was worth a shot, at least for the joke of it, but Black remains winning after 64...c7 65.a6 e3 66.e6 c3, effectively transposing to the game.

64...c2?
Missing the immediately winning 64...\texttt{e}e1!.
After having missed a lot of easy wins, things are starting to get difficult for Black.

\textbf{65.\texttt{e}a8 e3 66.\texttt{g}g8+ \texttt{g}g4 67.\texttt{e}e8}

Black appears to have achieved everything, but he has to be careful. Accurate play and continued domination is needed in order to win the game.

\textbf{67...\texttt{e}c3!}
67...e2? 68.\texttt{xe}2 \texttt{xe}2 would land us in a theoretical draw. True, White is in a slightly precarious position; the best defence is 69.\texttt{g}g8+ \texttt{g}g4 70.\texttt{e}f8! when Black will have to play for tricks to win the game.

\textbf{68.\texttt{g}g8?}
After Black made the task difficult for himself, his opponent is making it easy.

The toughest defensive try was:
\textbf{68.\texttt{e}e7}
This leaves us in a situation most commonly inferred when we use the term domination: a position where the white bishop and king are unable to move, while the rook is being pushed around and slowly relieved of all available squares. Here Black would have had to find a really nice win, based on domination of the white rook.

\textbf{68...h}5!
Taking e8 and f7 from the white rook, limiting its options.
\textbf{69.\texttt{e}e6 \texttt{b}3}
A nice waiting move.
\textbf{70.\texttt{e}e5}
70.\texttt{e}e7 \texttt{f}f3 71.\texttt{e}e6 \texttt{g}g4 will soon be followed by ...\texttt{b}b1, when both ...e2 and ...\texttt{h}3 are in the air. For example: 72.\texttt{f}f6+ \texttt{g}g3 and the rook cannot return to the e-file.
\textbf{70...e2!}
This time White cannot reach a drawn ending, as his rook ends up one rank too close:

\textbf{68...\texttt{e}c1 69.\texttt{e}e8 e2 70.\texttt{xe}2 \texttt{xe}2 71.\texttt{h}1 \texttt{x}f1\#}
0–1
4) Do not hurry

This is at times accredited to Rubinstein and is the reverse principle of Steinitz’s idea of “attack or lose your advantage,” which refers exclusively to dynamic advantages. (In the 19th century, other types of advantages hardly existed!)

If, on the other hand, you have a static advantage, your first goal should be to prevent counterplay. The less you need to calculate and the less you need to worry about things, the less risk there is that things will go wrong.

The following example is a good illustration of this. Black is completely winning, with an extra pawn and domination of the white pieces. But with one careless move, the control is relaxed and White is back in the game.

Hou Yifan – Ljubomir Ljubojevic
Amsterdam 2009

61...\texttt{xd3}??
White is suddenly fully in the game again.

The simplest win (but far from the only one) was 61...\texttt{Ed1}!. White’s only active try is: 62.\texttt{Eb2}!!
65...\textit{a}2?! 
65...\textit{a}4! is an easier draw. After 65...\textit{b}6+ 66.\textit{a}5 \textit{d}5 67.\textit{c}8+ \textit{d}4 68.\textit{a}6 we will probably end with a rook vs. knight and pawn, where, if nothing else, rook takes pawn will do the job.

65...\textit{b}6 66.\textit{b}8 \textit{b}4! 67.\textit{x}b6 \textit{a}3+ 68.\textit{b}2 \textit{x}a7

69.\textit{b}8??
A simple violation of the principles of the rook ending. The idea that the white \textit{b}-pawn will be a force, especially with the rook placed (incorrectly) in front of it, is mistaken. White had at least two ways to draw the game:

69.\textit{e}6 
To me this is the most natural move. The rook stays active and the \textit{b}-pawn is ready to move on.

69...\textit{g}7 70.\textit{b}6 \textit{c}5 71.\textit{c}3 \textit{d}5 72.\textit{h}6 \textit{g}4
This is the best winning try, which forces White to find a nice idea.
Instead after 72...\textit{e}4 73.\textit{d}2 \textit{f}3 74.\textit{e}1 \textit{g}4 75.\textit{f}1 \textit{d}7 76.\textit{f}6+ \textit{g}3 77.\textit{e}6 \textit{h}5 78.\textit{e}3+ \textit{h}2 79.\textit{e}2+ \textit{h}3 80.\textit{b}2 \textit{b}7 81.\textit{g}1 White cannot lose.

73.\textit{d}3 \textit{g}3

74.\textit{b}7!! \textit{xb}7 75.\textit{e}3 \textit{b}3+ 75...\textit{g}7 76.\textit{h}1
76.\textit{f}4 \textit{g}2 77.\textit{h}5+
White draws by the skin of his teeth.

69...\textit{c}2!!
This move was suggested by Andrew Greet. It draws in a simpler fashion.

69...\textit{g}4 70.\textit{h}6!
White needs to keep the passed pawns separate (see the next topic!).

70.\textit{d}3? \textit{a}3+! and 71...\textit{h}3! is dangerous for White.

70...\textit{xb}5 71.\textit{d}3
White draws comfortably.

69...\textit{g}7

The \textit{g}-pawn is too strong now. White will lose her \textit{b}-pawn and the game.
Chapter 12 – Strategic Endings

70.\textit{c2} g4 71.\textit{b6} \textit{b5} 72.\textit{d2} g3 73.\textit{b7} \textit{b6} 74.\textit{c8} \textit{xb7} 75.\textit{c1} h5 76.\textit{e2} h4 77.\textit{f1} h3 78.\textit{g1} \textit{c7} 79.\textit{b1}+ \textit{c8} 80.\textit{f1} \textit{e2} 81.\textit{a1} \textit{c7} 82.\textit{h1} \textit{c6} 83.\textit{g1} \textit{c5} 84.\textit{h1} \textit{c4} 85.\textit{g1} \textit{b3} 86.\textit{b1}+ \textit{a2} 87.\textit{e1} \textit{b2} 0–1

5) Passed pawns & 6) Pawns in the endgame

Promoting pawns is obviously a big part of what endings are about. There are ways to optimize your chances and there are ways to diminish them. Creating distant passed pawns is usually a good thing, but nothing beats connected passed pawns. The total is greater than the sum of the parts, once they start marching down the board.

In the next game Black rushed in and created a passed pawn, but at the same time seriously diminished his winning chances.

Hikaru Nakamura – Fabiano Caruana

Thessaloniki 2013

Black has failed to create two passed pawns on the queenside – a great failure. The h4-pawn pins down the black king in the same way as the c3-pawn dominates the white king. If Black has a way to win here, it was at least beyond the reach of an occasional number three in the world.

65...\textit{b1} 66.\textit{e2} \textit{c2} 67.\textit{e3} \textit{e4} 68.\textit{e2} \textit{g7} 69.\textit{e3} \textit{g8} 70.\textit{d7} \textit{e7} 71.\textit{b5} \textit{d6} 72.\textit{e8} \textit{e6} 73.\textit{e2} \textit{f6} 74.\textit{e3} \textit{g7} 75.\textit{e2} \textit{h6} 76.\textit{e3} \textit{b1} 77.\textit{e2} \textit{c2} 78.\textit{e3} \textit{b3} 79.\textit{d3} c2 80.\textit{d2} \textit{g7} 81.\textit{c1} \textit{f6} 82.\textit{d2} \textit{g7} 83.\textit{c1} \textit{f6} 84.\textit{d2} \textit{g7} ½–½

If we remember our themes so far, especially \textit{Domination} and \textit{Do not hurry}, we will see that Black should not have taken such a rash decision with his pawns. Rather, he should have carefully considered their placement.
A human would probably have moved his bishop round a bit, while considering what to do with the pawns; eventually coming back to the same place, knowing that he needed to keep his pawns together.

57... d4!
This was the most stylistically clean move. The white king is stuck on f4, as a retreat would allow the black king to march in. All White can do is wait while Black manoeuvres the bishop around to put pressure on the a2/b3 pawns.

58. e8
Advancing the h-pawn seems like a normal way to try to save the game, but it never quite works, for example:
58. h5 f7 59. h6 g6 60. h7 xh7 61. xf5 g6† 62. f4 g7 63. f1
The white king cannot move from f4, for instance 63. g3 b1 64. a4 c2 65. c4 d3 wins. Therefore White must wait and do nothing while Black improves his position.

60. e8
The simplest way for Black to win is to first improve his pieces to the maximum, then break through on the queenside.

64. a4 f6 65. c4 c2 66. d5 e7 67. c4 d6 68. g8 b1 69. c4
Black is ideally placed and can finally break the white defence with a nice combination:
69... a2! 70. e4 b5!
A theme known from attacking chess: attacking the strongest point in the white defence, thus exposing the weaknesses.
71. axb5 a4 72. d3 xb3 73. f4 xc4† 74. xc4 a3 75. b3 d3
Black wins.

58... d5 59. b5 b7
Black is waiting for the right moment.

60. e8
If the bishop goes to the other diagonal, Black has a nice trick. 60. d3 a4! 61. xf5
The critical move. (61. c4 loses quickly to
Chapter 12 – Strategic Endings

61...\textit{\textit{x}f3} 62.\textit{\textit{x}c2} \textit{\textit{d}5} 63.\textit{\textit{h}5} \textit{\textit{g}7} 64.\textit{\textit{g}5}

\textit{\textit{a}6} 61.\textit{\textit{h}5}

This allows the win most in line with our theme. No better is:

61.\textit{\textit{d}7} \textit{\textit{d}3} 62.\textit{\textit{c}6}

62.a3 a4! is a nice shot.

62...\textit{\textit{b}1} 63.a4 \textit{\textit{c}2} 64.\textit{\textit{d}5}

White is completely paralysed and Black can win any which way. For example:

64...\textit{\textit{d}3} 65.\textit{\textit{e}3} f4\textdagger 66.\textit{\textit{d}2} \textit{\textit{g}6}

White has no counterplay whatsoever.

61...\textit{\textit{d}3}!

Threatening \textit{\textit{b}1}.

61...c4 wins after lots of complications, but why try to play like a computer?

62.\textit{\textit{c}6} b5 63.\textit{\textit{b}7} c4 64.bxc4 bxc4

7) Freaky aspects

On this occasion the freaky aspect will not be mere zugzwang, but mutual zugzwang.

Michael de Verdier – Oleg Korneev

Bunratty 2014
White was probably running short of time and decided that today would not be the day he would beat a player rated 300 points above him. I am sure that if he had seen or even considered that he was about to win, he would have played more ambitiously. But a thing like zugzwang (not to speak of the mutual mutation of it) is seldom present in our minds until it happens on the board. It would certainly improve the technique of many players I know if they were anticipating the possibility of zugzwang on an abstract level, as well as on a concrete level.

The game ended quite quickly:

52.\text{\texttt{Exe2? hxg4}} 53.\text{\texttt{Exg4 Ea3}} 54.\text{\texttt{Ee4 Ef6}}
55.\text{\texttt{Eb4 Ea5}} 56.\text{\texttt{Eb6t Ef7}} 57.\text{\texttt{f5 Eb1}}
\frac{1}{2}-\frac{1}{2}

The winning line is quite double-edged: 52.g5!
\text{\texttt{Eh2}} 53.g6t \text{\texttt{Ef8}} 54.\text{\texttt{Ef6 Eg2}} 55.f5 h4 56.\text{\texttt{Ee3!}}

And we have our mutual zugzwang. White to move would have to think of ways to force a draw, such as g6-g7t. Black to play simply crumbles into dust and gets carried away by a hurricane.

\textbf{A quick point:} because these exercises are about strategic decisions, it does not make sense to say that one side is aiming for a win or a draw, though of course this will be the case in a number of the positions. So don't look for the little '=' sign, though at times you will be on the defensive and aiming for this result.
Chapter 12 – Strategic Endings

Leko – Ivanchuk, London 2012

Leko – Shankland, Khanty-Mansiysk 2011

Andersson – Yusupov, Ubeda 1997

Kamsky – Ki. Georgiev, Khanty-Mansiysk 2007

Averbakh – Bannik, Kiev 1954

Skripchenko – Dzagnidze, Beijing 2011

This game is relatively famous, which makes it tempting for the author to trick the reader by giving the win Leko missed and not the one he found a move later! 32.\(\texttt{Qf3}\)?! This does not lose the advantage, but it is also not the solution. 32...\(\texttt{Qf7}\)?! This falls straight into a decisive break. 32...\(\texttt{Qd8}\) 33.\(\texttt{Qd4}\) \(\texttt{Qc6}\) can of course be tried, but then White is winning with 34.\(\texttt{Qg8}\) again. A lot of criticism can be posed at the Black position after 32...\(\texttt{Qa7}\)\!?. White can, for example, play 33.\(\texttt{Qc8}\) \(\texttt{Qd8}\) 34.\(\texttt{Qd4}\)± with a great advantage. Nevertheless, White still has to work for the win. 33.\(\texttt{Qg5}\)! Black cannot allow \(g6\)\+, so he has to take the pawn. 33...\(\texttt{hxg5}\) 34.\(\texttt{Qxg5}\) \(\texttt{Qxe7}\) 35.\(\texttt{Qg8}\)

Winning a pawn and the game. 35...\(\texttt{Qxe5}\) 36.\(\texttt{Qxg7}\)\! \(\texttt{Qd6}\) 37.\(\texttt{Qxc7}\) \(\texttt{Qxc7}\) 38.\(\texttt{Qxe6}\) \(\texttt{Qd6}\) 39.\(\texttt{Qf4}\) \(\texttt{Qc6}\) 40.\(\texttt{Qd3}\) \(\texttt{Qg4}\)\! 41.\(\texttt{Qf4}\) \(\texttt{Qf6}\) 42.\(\texttt{Qg5}\) 1–0

White wins after 32.\(\texttt{Qg8}\)\!, with the point 32...\(\texttt{Qf7}\) 33.\(\texttt{Qxg7}\)\!\+. After 32...\(\texttt{Qxe5}\) 33.\(\texttt{Qxg7}\)\! \(\texttt{Qf7}\) 34.\(\texttt{Qg6}\)! Black is suffering, for example: 34...\(\texttt{e5}\) 35.\(\texttt{Qc6}\)\! \(\texttt{Qd7}\) 36.\(\texttt{Qxb4}\) With an extra pawn and the better pieces, White is winning.

2. Ulf Andersson – Artur Yusupov, Ubeda 1997

It is well known that a rook on the 7th rank is strong, and that a king limited to the 8th rank is ineffective. So why Artur Yusupov, a master of the endgame, decided to play 34...\(\texttt{b6}\)\! is hard to know. 35.\(\texttt{Qxf8}\)\! \(\texttt{Qxf8}\) 36.\(\texttt{Qd7}\)!\ The threat to the d-pawn is real, and the ensuing endgame is highly unpleasant for Black. Whether it is actually lost, or only a move away at all times, is not clear. What is absolutely clear is that Black did not have to do this to himself, when an equal endgame was within reach. When we are playing chess, we are not trying to prove something, but rather solving problems one at a time. Here, Black created a whole lot of extra problems for himself. To be fair to Artur, he shows his class and manages to dig himself back out of the hole. 36...\(\texttt{Qe6}\)! Black decides that he needs the d-pawn to create counterplay later in the game. 37.\(\texttt{Qf1}\) \(\texttt{Qc5}\) 38.\(\texttt{Qxh7}\) \(\texttt{g5}\) 39.\(\texttt{Qf4}\) \(\texttt{Qf4}\) 40.\(\texttt{Qd7}\) I suspect that White is winning here, but if Ulf Andersson cannot win it, I don’t know who can. 40...\(\texttt{Qe8}\) 41.\(\texttt{Qg7}\) \(\texttt{Qf8}\) 42.\(\texttt{Qb7}\) \(d4\) 43.\(\texttt{Qf2}\) \(d3\)\! 44.\(\texttt{Qf3}\) \(\texttt{Qxe8}\) 45.\(\texttt{Qh7}\) \(d2\)! 46.\(\texttt{Qd7}\) \(\texttt{Qb4}\) 47.\(\texttt{Qa3}\) \(\texttt{Qc3}\) 48.\(\texttt{Qe3}\) \(\texttt{b5}\)! 49.\(\texttt{Qf3}\) \(\texttt{b4}\) 50.\(\texttt{Qa4}\) \(\texttt{Qg6}\) 51.\(\texttt{Qe2}\) \(\texttt{Qf4}\)\! 52.\(\texttt{Qd1}\) \(\texttt{Qh3}\) 53.\(\texttt{Qe2}\) \(\texttt{Qf4}\)\! 54.\(\texttt{Qd1}\) \(\texttt{Qh3}\) 55.\(\texttt{Qc2}\) \(\texttt{Qf2}\) 56.\(\texttt{Qxh2}\) \(\texttt{Qxd2}\) 57.\(\texttt{Qxd2}\) \(\texttt{Qe7}\) 58.\(\texttt{Qe3}\) \(\texttt{Qd1}\)\! 59.\(\texttt{Qe4}\) \(\texttt{Qd6}\)! 60.\(\texttt{Qc8}\) \(\texttt{Qc3}\)\! 61.\(\texttt{Qf5}\) \(\texttt{Qe2}\)! 62.\(\texttt{Qxg5}\) \(\texttt{Qd4}\) 63.\(\texttt{Qf6}\) \(\texttt{Qxb3}\) 64.\(\texttt{Qg5}\) \(\texttt{Qd4}\) 65.\(\texttt{Qg6}\) \(\texttt{b3}\) 66.\(\texttt{Qg7}\) \(\texttt{b2}\) 67.\(\texttt{Qg8}\)\+ \(\texttt{b1}\)=\(\texttt{Qg8}\)\+ 68.\(\texttt{Qd8}\)\+ \(\texttt{Qc5}\) 69.\(\texttt{Qxa5}\) \(\texttt{Qc6}\)\! 70.\(\texttt{Qc3}\)\! 71.\(\texttt{Qd5}\) 71.a\(\texttt{Qa}\)\! 72.\(\texttt{Qf1}\) 72.\(\texttt{Qg6}\) \(\texttt{Qg2}\)\! 73.\(\texttt{Qh5}\) \(\texttt{Qe2}\)\! 74.\(\texttt{Qh4}\) \(\texttt{Qe7}\)\! 75.\(\texttt{Qh3}\) \(\texttt{Qh7}\)\! 76.\(\texttt{Qg4}\) ½–½

The correct continuation is 34...\(\texttt{Qxe8}\)! 35.\(\texttt{Qxe8}\)! \(\texttt{Qf7}\) when Black’s problems are minimal. The king is coming to the centre and the pieces are all well placed.

3. Yuri Averbakh – Anatoly Bannik, Kiev 1954

A simple example of prophylaxis. White should not allow the black knight to get into the game. The threat is to manoeuvre to g6, so: 41.\(\texttt{h4}\)\!\+ \(\texttt{Qh8}\) 42.\(\texttt{h5}\) \(\texttt{Qf7}\) 43.\(\texttt{a5}\)! White is just winning. 43...\(\texttt{Qd8}\) 44.\(\texttt{b5}\) \(\texttt{Qc8}\) 45.\(\texttt{Qe3}\) \(\texttt{Qe8}\) 46.\(\texttt{Qd4}\) \(\texttt{Qe7}\) 47.\(\texttt{Qd3}\) \(\texttt{Qf7}\) 48.\(\texttt{Qa4}\) \(\texttt{xb5}\) 49.\(\texttt{Qxb5}\) \(\texttt{Qd7}\) 50.\(\texttt{Qxd7}\) \(\texttt{Qxd7}\) 51.\(\texttt{Qc4}\) \(\texttt{Qc7}\) 52.\(\texttt{b5}\) \(\texttt{Qd8}\) 53.\(\texttt{Qc3}\) \(\texttt{Qf7}\) 54.\(\texttt{e2}\) \(\texttt{Qd8}\) 55.\(\texttt{Qd4}\) \(\texttt{Qf7}\) 56.\(\texttt{Qxf5}\) \(\texttt{Qd7}\) 57.\(\texttt{Qb6}\) \(\texttt{Qc8}\) 58.\(\texttt{Qa7}\) \(\texttt{Qc7}\) 59.\(\texttt{d4}\) \(\texttt{Qd8}\) 60.\(\texttt{b5}\)\! \(\texttt{Qd7}\) 61.\(\texttt{b6}\) \(\texttt{Qe7}\) 62.\(\texttt{Qc7}\) 1–0
4. Peter Leko – Samuel Shankland, Khanty-Mansiysk (1.1) 2011

55...e4! Fixing the e3-pawn as a weakness and limiting the scope of the white bishop. 56...g6
Leko clearly did not fully get to grips with how he wanted to defend this endgame. This is a
clear symptom of the pressure the 30-second increment puts on players. 56...c5 57...a6 d5
58...f1 d1† 59...g2 d3 60...g6 a3 61...xg5 b4 62...b5 b3 63...b7†? White’s last chance
to stop the b-pawn and thus fight on was 63...e1† when, because of the check on b4, he wins the
time necessary to put the bishop on c3 and stop the pawn for now. White pays a price in losing
the e3-pawn, of course, but anything to keep on fighting. 63...e6 64...g5 f5 65...b5† g6
66...e1 b2 0–1

5. Gata Kamsky – Kiril Georgiev, Khanty-Mansiysk (3.1) 2007

This should be an easy exercise. White needs to have access to the d5-square with the king.
34.exf5! This allows the white king to join the attack on the black pawns. 34...g8 35...c1 g7
35...e7 36...h1 d8 37...d1 and White keeps control. 36...d6 d7 37...e2! White senses
that Black will play ...d5 and prepares to exploit it. 37...e7 37...d5 38...cxd5...xd5 was the last
chance, when at least Black is keeping the white king away from the queenside for now. However,
after 39...h3 d7 40...f4 c7 41...d3!...xd3 42...xd3 exf4 43...e4 the bishop/pawn ending will
win. 38...h4 d8 39...d3 d5 40...cxd5...xd5† 41...c4 The rest is trivial. 41...d7 42...g4...h8
43...b5...f7 44...f6 d7 45...f8 h5 46...g6...h7 47...c4 f7 48...h6†...g8 49...d6...e7
50...c7...g7 51...g6...xg6 52.fxg6...g7 53...d7...f8 54...xb6...xb6 55...a5 1–0

6. Almira Skripchenko – Nana Dzagnidze, Beijing (rapid) 2011

Black has the chance to win a pawn, but she took the inferior one. 21...xf2? This feels natural;
it is with check and Black’s pawns stay connected. But once we start to look at other factors, we
can see that things are not so simple. The white king is allowed to rush to the centre and White
keeps a three-against-two majority on the queenside. On top of this, she wins a few moves to
get active. All in all, the winning chances are rather low for Black. 22...xf2...h5 23...g4...f6
24...d4 24.b3! was even more exact. White wants to play...b2 and...e3 to put pressure on the
e-pawn. I estimate that the draw is not far away. For example, 24...b5? 25...xb5...c3 26...g2
...xb3 27...a4 only leads to exchanges and the threat of...g5. 24...h6 25...e2...c6 26...f5† White
has decent drawing chances here, but she played the ending less than ideally, eventually losing in
48 moves.

21...xb2! was the correct decision. White cannot just recapture, as she would end up two
pawns down, but is instead forced to play 22...xf7†...xf7 23...xb2...c4†, when it is Black who
is really active. Black still needs to display good technique in order to win the game, but she is a
big step closer.
Chapter 12 – Strategic Endings

Jobava – Miton, Skanderborg 2005

S. Ivanov – Kuemin, Stockholm 2004

Baburin – Korchnoi, Dresden 2008

Tiviakov – Romanov, Al Ain 2012

Ivanchuk – Grischuk, Moscow 2002

B. Savchenko – Romanov, Taganrog 2011
7. Bartosz Socko – Dariusz Swiercz, Chorzow 2013
The weakness is on a6 and the counterplay is coming with checks from the black queen. 44...\textit{a4}! Heading for a5 to put pressure on the pawn. 44...\textit{e3} 45.\textit{c7} 46.\textit{d8}! The threat of mate decides the game. 1–0

8. Gata Kamsky – Lou Yiping, Tromso (1.2) 2013
29.\textit{f1} \textit{b1} 30.\textit{c6} 31.\textit{e7} 31.\textit{b3} \textit{c3} 32.\textit{e7} \textit{a1} also enables Black to escape. 31...\textit{xb2} 32.\textit{e2} \textit{b1} Black has enough counterplay and made the draw after an additional thirty moves.

29.\textit{e7}! is the right move. The rook returns to e2 to consolidate, giving White a chance to activate his remaining pieces and win the game.

White won the game by creating a passed pawn. 34.\textit{b5}! \textit{xb5} 34...\textit{d8} 35.\textit{f5}! does not improve Black's situation one bit. White wins after 35...\textit{xf5} 36.\textit{xf5} \textit{exf5} 37.\textit{d5} \textit{e8} (37...\textit{c7} 38.\textit{xf7}) 38.\textit{h8} \textit{b8} 39.\textit{xf8} \textit{xf8} 40.\textit{d8} \textit{g7} 41.\textit{e6} and Black is mated. 35.\textit{xb5} \textit{c8} Activity with 35...\textit{c2} 36.\textit{h7} \textit{a4} does not improve Black's chances: 37.\textit{b6} \textit{c8} (37...\textit{xb3} 38.\textit{b7} 39.\textit{xb2} \textit{c7} 40.\textit{xf7}++) 38.\textit{bxa4} \textit{c5} 39.a5! White keeps his advantage, for example: 39...\textit{d4} 40.\textit{d4} \textit{a2} 41.\textit{xf7} \textit{b3} 42.\textit{xc7}! \textit{b8} 43.\textit{e5} b2 44.\textit{b5} and White should win. The game could end with 44...\textit{xa5} 45.\textit{xb2} \textit{a3} 46.\textit{e2} \textit{f7} 47.\textit{f5} \textit{exf5} 48.\textit{gxf5} \textit{g7} 49.\textit{e6} \textit{a8} 50.\textit{f3} \textit{e8} 51.\textit{c2} \textit{xb6} 52.g4 and so on. 36.\textit{e7} \textit{f8} 37.\textit{e4} White brings the king into the game. 37...\textit{dxe4} 38.\textit{xe4} \textit{c7} 39.\textit{f5}! The f7-weakness is going nowhere, and now the king is coming close. 39...\textit{gxf5} 40.\textit{xf5} \textit{xc5} 41.\textit{xc5} \textit{d4} 42.\textit{d4} Heading for d5. 42.\textit{g5} Maybe not the most accurate defence, but 42...\textit{e6} 43.\textit{h6} \textit{d7} 44.\textit{d5} would also win for White. For example: 44...\textit{b8} 45.\textit{b6} \textit{a4} 46.\textit{bxa4} \textit{e8} 47.\textit{xc4} \textit{xa4} 48.\textit{b5} \textit{xa8} 49.\textit{b7} \textit{b8} 50.\textit{a6} and so on.

43.\textit{d5} \textit{d8} 43...\textit{e7} 44.\textit{xf7} \textit{xf7} 45.\textit{e6} \textit{g8} 46.\textit{xf7} \textit{xf7} 47.\textit{b6} and the pawn queens. 44.\textit{b6} 1–0

10. Dov Zaltz – Vitali Golod, Haifa 2010
I have changed this position slightly from the game. There Black had a pawn on a5 and could take more liberties. He won even if he overlooked his tactical possibility. 38...\textit{d3}!! This is an important tactical opportunity. After 38...\textit{h3}? 39.\textit{g6}! \textit{h8} 40.\textit{h6} \textit{xg5} 41.\textit{xh6} \textit{g7} 42.\textit{h4} Black has no way to prove an advantage. White will play \textit{d3} and \textit{f4}, slowly neutralizing Black's advantage on the kingside. 39.\textit{xd3} There is no choice. 39...\textit{h3} Black is just winning. For example, 40.\textit{e8}! \textit{g7} 41.\textit{e6} might look clever, but a simple solution (among many) is 41...\textit{h2} 42.\textit{h6} \textit{f4} with the idea...\textit{h4} wins the rook.

11. Michalio Oleksienko – Jakob Aabling-Thomsen, Reykjavik 2013
Black's position is overwhelming but, rather surprisingly, it is not only hard for a human to find a win; my engines also struggled so much that I had to give them the first two moves to help them on their way.

38...\textit{d2}? This looks natural, but Black quickly falls into deep trouble. 39.\textit{d4} \textit{a8}! Black needed to play accurately to save the draw. 39...\textit{a4}! 40.\textit{e7} \textit{b3} 41.\textit{c3}! The most challenging. (41.\textit{d7} \textit{d4} 42.\textit{e7} \textit{b4} is a simple draw.) 41...\textit{d1} 42.\textit{xg6} \textit{d4} 43.\textit{xc4} \textit{xc4} 44.\textit{d4} \textit{b4} also draws.) 42.\textit{d1} 43.\textit{d4} 46.\textit{d6} \textit{b8} 47.\textit{b7} A draw should
be agreed. 40.\textit{xe}7 \textit{xb}3 41.\textit{xc}3! \textit{xa}1 This loses trivially. 41...\textit{a}4 offers more resistance, though 42.\textit{e}1! \textit{xc}4 43.\textit{xd}6 \textit{e}4 44.\textit{f}1 \textit{e}4 45.\textit{e}7 should win for White, for example: 45...\textit{a}7† 46.\textit{d}8 \textit{a}8† 47.\textit{c}7 \textit{a}4 48.\textit{e}1!— 42.\textit{xa}1 \textit{b}8 43.\textit{xd}6 \textit{b}1 44.\textit{h}8 \textit{a}1=\textit{w} 45.\textit{xa}1 \textit{xa}1 46.\textit{c}5 \textit{e}2 47.\textit{c}6 \textit{g}xg2 48.\textit{e}7 \textit{f}7 50.\textit{d}7 1–0

38...\textit{c}5? 39.\textit{d}4! leaves Black in a nasty zugzwang, for example: 39...\textit{f}3 (After 39...\textit{h}6 40.\textit{xf}8 \textit{h}5 41.\textit{h}4 Black loses similarly to the game.) 40.\textit{gx}f3 \textit{f}4 The best try, but it gives White an active opportunity. 41.\textit{g}1† \textit{h}5 (Or 41...\textit{f}5 42.\textit{h}4 \textit{h}6 43.\textit{f}7 and \textit{e}7 falls.) 42.\textit{f}7 \textit{h}4 43.\textit{xc}5 \textit{dxc}5 44.\textit{d}6 \textit{e}xd6 45.\textit{e}7— White arrives first.

The winning idea is almost absurd-looking; until the moment you realize that Black's only problem is the vulnerable \textit{e}7-pawn. 38...\textit{f}6†! 39.\textit{d}8! 39.\textit{f}8? offers less resistance, although 39...\textit{g}8! is still quite spectacular. After 40.\textit{e}8 \textit{a}8† 41.\textit{d}7 \textit{a}4! White is in big trouble. Black will play ...\textit{xc}4 followed by ...\textit{e}2 with a winning position. It is important to wait for the moment when White puts his king on the 8th rank, so that there will not be a resource in \textit{a}8 hitting the knight. 42.\textit{h}3 (If 42.\textit{h}8 \textit{h}6 43.\textit{h}7 the bishop is out of squares; 42.\textit{c}5 \textit{dxc}5 43.\textit{d}6 can be tried, but after 43...\textit{a}7† 44.\textit{g}6 \textit{a}6† Black wins.) 42...\textit{h}6 43.\textit{h}4 43.\textit{h}4 \textit{h}5— White is in zugzwang. 39...\textit{g}8! This move looks so stupid, but the pawn on \textit{e}7 is incredibly important! 40.\textit{d}4 \textit{a}4 41.\textit{f}2! White is trying to keep his counterplay against \textit{e}7 alive. 41...\textit{g}7 42.\textit{d}7 \textit{f}8 43.\textit{h}4 \textit{h}6 White is on the road to zugzwang. 44.\textit{h}3 44.\textit{d}8 \textit{a}7! is similar. Black will get his king to \textit{e}8 and force the white king to the \textit{c}-file and beyond. 44...\textit{a}6 45.\textit{e}7 \textit{c}6 \textit{e}4 47.\textit{c}5 \textit{dxc}5 48.\textit{c}6 \textit{f}8! 48...\textit{f}2! 49.\textit{g}xf3 \textit{h}xh4? 50.\textit{xa}2 would lead to a horrible disaster: 50...\textit{g}8 51.\textit{a}8† \textit{g}7 52.\textit{d}6 \textit{e}xd6 53.\textit{g}xg8†! \textit{g}xg8 54.\textit{e}7 and White wins. 49.\textit{e}1 \textit{f}6 50.\textit{xc}5 \textit{g}7 White's counterplay has been eliminated and Black will win over time.

12. Dmitry Andreikin – Michael Roiz, Saratov 2011

White has a slight advantage and can retain it through a transformation into a better opposite-coloured bishop ending. 32.\textit{f}5! \textit{exf}5 33.\textit{dxf}6 \textit{gx}f6 34.\textit{h}8 35.\textit{g}7 36.\textit{c}2 37.\textit{b}3! 37.\textit{xf}5! \textit{xf}5 38.\textit{e}7 \textit{g}7 39.\textit{xd}8 would also give White a nice advantage, though I believe it is greater with the bishops on the board. 37...\textit{ed}7 38.\textit{e}2 39.\textit{e}† 40.\textit{h}4†! 40.\textit{f}3† would have kept the pressure on. Black cannot liberate his position. 40...\textit{h}6 This looks like the only move. White now has time to improve his position gradually. (40...\textit{a}5?! 41.\textit{bx}a5 \textit{xa}5 42.\textit{b}8 is unpleasant for Black; even worse is 40...\textit{b}6? 41.\textit{a}4! \textit{b}5 42.\textit{c}2 when White should win on account of the threat \textit{b}1–a1x\textit{a}6.) 41.\textit{e}3 \textit{g}7 42.\textit{xf}5 \textit{xf}5 43.\textit{x}d8 White has a big advantage, but whether or not it will be enough to win the game is not obvious. 40...\textit{a}5! This offers Black some relief. 41.\textit{b}xa5 45! The liquidation of a lot of pawns brings the draw closer. 42.\textit{b}3 \textit{ed}6 43.\textit{dxc}5 \textit{ed}2† 44.\textit{h}3 \textit{xa}5 45.\textit{e}7 \textit{xb}2 46.\textit{xf}7† \textit{g}6 47.\textit{xb}7 \textit{xc}3 48.\textit{c}6 \textit{h}6 49.\textit{f}4 49.\textit{e}6 \textit{xb}7 50.\textit{x}d7 \textit{e}5 51.\textit{xf}5 might look attractive, but is simply a draw. Black gives up the bishop for the \textit{b}-pawn and draws with the king in the corner. 49...\textit{e}5† 50.\textit{xf}5 \textit{xb}3 51.\textit{e}6 \textit{b}1 52.\textit{f}7 \textit{e}5 53.\textit{b}5 \textit{g}3 54.\textit{b}4 \textit{e}5 55.\textit{b}7 \textit{f}2 56.\textit{e}7 \textit{b}1 57.\textit{b}5 \textit{g}3 58.\textit{d}7 \textit{b}2 59.\textit{c}7 \textit{ed}2† 60.\textit{d}5 \textit{xc}7 61.\textit{xc}7† The game was drawn on move 116.


White has great winning chances with an invasion on the dark squares. This is easily achieved by eliminating the only piece able to defend them. 24.\textit{xc}6\textit{xc}6 24...\textit{xc}6?! would be worse. White plays 25.\textit{xc}6 \textit{xc}6 26.\textit{c}3!± and threatens to invade via \textit{b}4 or \textit{d}4. 25.\textit{e}3 \textit{e}7 26.\textit{g}5 \textit{h}6
27. \( \text{Ke4} \) Ke7 27...Kd7 28.Bxc8 Kxc8 29.Qd6 Kd7 30.Qd4 looks entirely dreadful. 28.Qg4 Qd8 29.Qf6 a5?! 29...Qc8?! 30.Qa3 Qa8 31.Qg8 h5 32.Qxh5 gxh5 is of course deeply unpleasant for Black, but it is a bit harder for White to consolidate his advantage. 30.h4! Fixing the weakness on h6. 30...Qc8 After 30...Qc8 31.Qg8 h5 32.Qxh5 gxh5 33.Qf4! White is not far from a winning advantage. 31.Qg8 h5 32.Qxh5 gxh5 33.Qf6 Qb7 34.Qh5 b4 35.Kc1 Qd7 36.Qf6 Qd8 37.h5 Qb5 38.f4 Qd3 39.Qh1 1–0

This is standard endgame knowledge. If White manages to get the f2, g3 & h4 pawn formation, he will only have one weakness, the pawn on f2. But if Black manages to hold the pawns back, White will always struggle with his pawns. 31...g5?! 32.h4! Desperation. Baburin is a strong endgame player and correctly evaluated his position as dangerous. However, his chosen move does not improve his chances. 32...gxh4 33.Qe4 Qc6 34.Qxb8 Qxb8 35.Ka1 Qb4 36.Qh2 Qe5 37.Qa2 Qg7 38.f3 Qg6 39.Qg4 Qb1 40.Qf2 h5 41.Qa4 Qb2? 41...f5! would probably have won the game. 42.Qa3 B2 43.Qf4 White now holds. 43...Qe5 44.Qxg6 Qxg6 45.Qh4 Qd4 46.Qh3 h4 47.Qg1 Qg5 48.Qf2 Qd2 49.Qf1 f5 50.Qg1 a2 51.Qf1 Qf4 52.Qh4 Qe3 53.Qg1 e4 54.Qxe4 Qa1† 55.Qh2 Qxe4 56.Qg3 a3 57.Qh8 Qd2 58.Qf4 e3 59.g4 e2 60.Qh2 a4† 61.Qf5 Qe3 62.Qxe2† Qxe2 63.g5 ½–½

15. Vassily Ivanchuk – Alexander Grischuk, Moscow 2002
Black should not be allowed to block the d-pawn with the king. White can play Qd4 before giving the check, but it makes more sense not to make this decision yet. 35.Qd6† Qe6 36.Qe3 Qc8 37.Qd5†! Exploiting that the black rook is aiming for activity. 37...Qe5 37...Qxd6 loses to 38.Qb7† Qc7 and here taking on c8 is obviously sufficient, but 39.Qxd7† wins even more simply. 38.Qb3† Qc1† 38...Qc6 was not pleasant, but had to be tried. 39.Qd5† Pushing the king back. 39...Qf6 40.Qd4† Qb1 41.Qe5 White wins easily. 41...f4 42.Qe7 Qxg3 43.Qxg3 Qg4 44.Qf7† Qxg6 45.Qf4 Qg5 46.Qxg4† Qxg4 47.Qd7 Qxb2 1–0

White's positional advantage is undisputed. His bishop is better than the opponent's knight and his king is more active, not to speak of having two pawn islands against three. But what is the best path to convert the advantage? To retain all the advantages without allowing any counterplay, of course! 32.Qb7† I am not so certain about the dictum of queen and knight being better than queen and bishop, but just in case, this can be added to the long list of reasons why this exchange is a good idea. 32...Qf6 33.Qxe7† Qxe7 34.b4 Qf6 35.Qd4 Qg5 35...Qe6 is a better defence, but White's advantage is not in doubt. 36.Qf5! h6 37.c5 bxc5† 38.Qxc5 dx5† 39.Qxc5 Qh5 40.Qa4 Qf4 41.g3 Qe2 42.Qg4 Qc3 43.a5 Qe4† 44.Qc6 Qd2 45.Qb7 Qb3 46.Qa6 Qd6 47.Qd1 Qd4 48.Qxa7 Qc7 49.Qa6 Qc6 50.Qh5 Qc7 51.Qg6 Qh4 52.Qh5 Qf3 53.Qxg4 Qxh2 54.Qe2 Qc6 55.Qg4 1–0

17. Sergei Tiviakov – Evgeny Romanov, Al Ain 2012
There are a few reasons why White should be better: he has the superior bishop, he has an extra pawn on the queenside far away from the kings, and the g7-pawn is fixed in an unpleasant position. On the other hand, Black is about to play ...e5, he is attacking the c4-pawn and, with the queens on the board, it will be harder to maximize the effect of slight weaknesses. 34.c5! White has the chance to go into a favourable bishop ending and should not hesitate to take it. 34...bxc5 35.Qxc5 Qxc5??
35...MBER was the best move. White can claim an advantage after both 36.Bc3? and 36..Bc7 37.Bxc7 Bxc7 38.Ba7 g6 Black judges that he has to eliminate the weakness on g7 immediately. He cannot keep the king near the kingside pawns forever. 39.Bxg6 Bg7? This should lose. A better chance was 39...f4! See the next note. 40.a4? 40.Bxe3! Bxg6 41.a4 is more accurate, preventing the ...f4 counterplay. 40...Bxg6? 40...f4! was the last chance. Tiviakov gives the following line, proving that White is winning anyway. Maybe he is right, but his variation does not do a good job of supporting this claim. At the least, his line is not correct (though the evaluation of this position might be). His lines go like this: 41.exf4 Bxg6! The point is to create a passed pawn, not to take on f4 and allow the a-pawn to shoot forward. 42.a5 43.Bf1 h5 44.Be2 h4 45.Bf3? Bf5 The problem for Black is that he cannot move the bishop on a5 without allowing White to take control of the square. Therefore he ends up in zugzwang. But this is not in itself decisive. 46.Bg2 Bf4 47.Bh3 Bg8 48.Bd2 Bf3 49.Bb4 Bh6 50.f3 Bxe4 51.Bf1 Bf6 52.Bg2 Bg7 56...h3!! 57.Bxh3 Bf3! 58.Bg5 Bxe4 59.Bg4 Bxd5 and Black will give up his bishop for the f4-pawn and hide his king in the corner. But White can improve with 45.Bf3! and I presume he will win in the long run. 41.Bc3 White is winning now. Tiviakov played well and secured the full point. 41...e5 42.d2 f4 43.Bxd5 Bf5 44.fxe5 Bxe5 45.a5! Not falling for the trap. After 45.Bxh6? Bf4 the king comes to c3, drawing. 45...Bd5 46.a6 Bc6 47.Bc3 Now with the black king cut off from the a6-pawn, White has all the time in the world to attack the pawn on h6 (or h5), win it and start pushing his own f2-pawn. And it is a theoretical win for White if he manages to put his pawn on f6 and the king on g6. 47...h5 48.Bg2 Bd8 48...h4 changes nothing after 49.Bh3 Bg3 50.f3! Bc7 51.Bg4 Bc6 52.Bg5?? Bb6 53.Bxb4 and White wins. 49.f4 Bc7 50.f5 Bb8 51.Bh3 Ba8 52.Bf2 Bf6 53.Bh4 Bc3 54.Bg5 Bc7 55.Bh4 Bxa6 56.Bh5 Bb7 57.Bg6 Bc6 58.Bh6 Bb7 59.Bg7 Bb4 60.Bf6 Be6 61.f7 Bd6 62.Bh6 Bb4 63.Bg7 Bf5 64.Bg8 Bg6 65.Bf8 Bc3 66.Ba3 Bg7 67.Bc1 1–0


Black did not focus on the task ahead of him, but queened his pawn in a sort of blindness (to his opponent’s counterchances at least). 30...a2? This throws away a lot of the advantage. 31.Bxe7 Bxe7 32.Bc8 Bc7 33.Bxc8 Bc8 34.e6! White is able to generate more counterplay than Black was expecting. 34...Bxe7? Black would have retained a lot of his advantage after 34...fxe6 35.Bxe7 Bxe7 36.Bxb3 Bb4 37.Bd6 Bxd4 38.Bb3 Bb5 39.Bc2 Bf6, although the game is not decided yet. 35.exf7 Bxf7 36.Bd3 Bf2 36...c5 37.Bxe3 Bxd7 38.Bxe8 Bxe8 39.f4 also allows White significant counterplay. 37.Bc4 Bc5 38.Bf5 Bxf2 39.Bg6 Bf6?? The decisive mistake. Black had a last chance to save the game with: 39...Be7! 40.Bxg7 Bxe6!! 41.Bxe6 Bxc6! 42.Bh7 Bf7 43.Bg5 Be6 44.Be6 Bxc7 45.Bf6 Bxf6 White has perpetual before he ends up worse. 40.Bh5 Bh6 40...Bd6 41.Bd7 Bf8 42.Bc6 also wins for White. 41.Bc4 Bd6 42.Bc6 43.Bg6 44.Bxf8 45.Bd8 46.Bh6 Bxd8 47.Bf5 Savchenko has (as so often) escaped from the tactical skirmish victoriously. The rest is clean sailing. 47...Bxe6 48.Bh4 g6 49.Bd4 Bf4 50.g3 Bh5 51.Bg5 Bxc3 52.Bxc6 Bc4 53.Bf5 Bc8 54.Bh4 Bf8 55.h5 1–0

Black could have quite easily after 30...a8! White’s only try would have been 31.Bxe7 Bxe7 32.e6, hoping for 32...f6?? 33.Bxg7 Ba5 34.Bc4, when Black is mated. Instead Black wins easily with: 32...fxe6! 33.Bxg7 Bxa5—+
Grandmaster Preparation – Endgame Play

Dreev – Bareev, Tallinn 1986

Nakamura – Gelfand, London 2012

Leko – Vallejo Pons, Monte Carlo 2006

R. Kaufman – Shaw, Liverpool 2007

Radjabov – Carlsen, Moscow 2012

Adams – Kryvoruchko, Tromso (2.1) 2013
Chapter 12 – Strategic Endings

Acs – Bologan, Paks 2011

Dreev – Kaidanov, Moscow 1985

Rozentalis – Gronn, Oslo 2011

Mikhalchishin – Chernin, Cienfuegos 1981

Leko – Le Quang Liem, Dortmund 2010

Jakovenko – Bu Xiangzhi, Erguna 2006
If you have grown up learning your technique from Mark Dvoretsky, you would never advance your c-pawn in a position like this. First of all; you might not know if there is an advantage to keeping it where it is; secondly, if you do think about it, you will see that the invasion happens on the dark squares. 32...d1! is therefore the right move. Black has no active options and can only wait for White to improve his position. 32...Ec5 33.Ea3 Ec7 34.Eb4 Ea8 35.Edd3 Slightly inaccurate, but Dreev simply corrects the error. 35...Ed7 Preparing a ...d4 punch. 36.Ed4 Edc7 37.Ef3! Preparing Ed4-d3-c3. 37...Eb7 38.Ed3 d4 Desperation. You might even say compliant, but White should win against passive defence as well. 39.Ef2 Ed8 40.Ed2 Ecd7 41.c3 dxc3 Black resigned. 1–0
Let us just have a quick look at how White would win the bishop ending.

Here 1.g4 with the idea 2.Exg4 and 3.h5 looks good, but I like 1.f5! Eb7 2.fxe6 fxe6 3.Ee2 Ec6 4.Ed3 Ec8 5.c4, when White wins material without losing any of his positional trumps.

20. Peter Leko – Francisco Vallejo Pons, Monte Carlo 2006
Peter Leko has three essential qualities (that I know about). He has a great opening repertoire, he is a greatly gifted technical player and a very nice guy. If he had a good understanding of dynamics as well, he would have been one of the greatest players of our time (rather than just one game away from being World Champion!). In this position he feels the weakness of the f6-square keenly and makes use of it to fix the black pawns on light squares. 27.g5! c4 28.b4 Avoiding giving Black a passed pawn. 28...Ed6 29.Ee2! Excellent prophylaxis. Before making use of his advantage on the kingside, Leko secures his queenside. 29...Ec6 30.Ed4 Ed7 31.Eg3 b6 One engine suggests 31...Eb5?!, but the independent human in me does not want to follow its direction and play 32.Ee2; rather I want to go for good knight against bad bishop. The following line shows an old GM, who is unable to see a two-move tactic, outplaying one of the strongest engines available. 32.EXb5 axb5 33.Ef4 Ec6 34.c3 b6 35.Eg4 f5 36.Ef6 fxe4 37.fxe4 h5 38.Ee5 Zugzwang. Don’t you just love it? 38...Ec8 Notice how the bishop has no targets and cannot defend any of his own pawns. All White needs to do is to break in. 39.Eg8! Ec7 40.Ed6 White is winning: 40...Exg8 41.Exc6 (41.Ec7? would miss the point. Black can then escape with a draw by either 41...Ef5!! or 41...Ec7!!, leading to a drawn queen ending.) 41...Ec7 42.Exb5! Ed7† The only try. 43.Exb6 Ec4 44.b5 Ec6 45.Ed6 White wins. 32.Ed4 Threatening gxf6†; Black has no chance. 32...Exg5† 33.hxg5 b5 Finally it is time to reap the
benefits. 34...g4! b7 34...f7 35.e5 d8 also does not work. White wins after both 36.e3 and 36.xd7 xxd7 37.e5, although there are still a lot of moves to be played. 35.f6 c5 35...h5 loses immediately to 36.gxh6! xf6 37.e5 f7 38.e6 t xe6 39.xe6 g8 40.g5 and White wins easily. 36.bxc5 xc5 37.xh7 e6t 38.e3 b4 39.f6 xg5 40.d5t d6 41.xb4 With the time control passed, Black finally had enough time to accept how bad his position was. 1–0

21. Teimour Radjabov – Magnus Carlsen, Moscow 2012
Black wins the game by exchanging White’s best defender, the bishop on e4. 52...d5! 53.xd5 d3t 54.d2 xd5 55.e3 White has to prevent ...e4, which would quickly win the game. 55...g6 56.a5t e6 57.e4 57.a6t f5 58.xg6 xf6 is hopeless. After 59.b3 cxb3 60.xd3 e4! Black wins, as the two pawns are too far apart. 57...g4t! 58.f4t 59.e3 f1 Radjabov resigned. The rook will come to e2 and decide the game. 0–1

40...f5!! 41.f1 White is also unable to defend the position if Black penetrates after 41.xf5 gxf5 42.axf5 g8! 43.h1 h6 44.d1 g3. The two passed pawns are too strong. 41...b8 42.xf5 42.h4 b4! 43.xf5 gxf5 also looks fantastic for Black. 42...xf5 43.xh5 f6 44.h1 g5 45.d1 h4 46.f1 g8t! 47.h1 g5 48.c2 xh5 49.f2 g3 50.h2 g4 51.g2f1 52.xf1 g5 53.d2 g3 54.e2 h3t 55.g1 f4 56.g2 h2t! A short cut. Black wins no matter what. 57.f1 xe2 58.xe2 e5 0–1

This position is a bit tricky, as the real challenge is to see that the endgame a pawn up is less promising than the endgame with equal pawns. 19...xe5! A neat trick with a deep point. 19...xd1?! is inferior. After 20.xd1 xd1t 21.xd1 xe5 22.b3 c5 23.g4 White is likely to draw, as he will eventually have a strong knight placed on e4. 20.xe5 xd1t 21.e1 The only move. 21.h2? loses to 21...d6!. 21...xe1t 22.xe1d2 23.b3 After a more active defence: 23.xe6 c5 24.e8t f7 we see the point in action. Though he is a pawn up, White is in trouble. 25.e8 (25.e8? drops the rook after a couple of checks.) 25...g6 26.f4t f5 27.h5 g6 28.g3t f4– The white pawns fall. 23...c5 24.xe6 The defence of f2 would lose the b-pawn after ...e2, when White has no chance of saving the game. John Shaw now eliminates all counterplay with terrifying accuracy. 24.xf2 25.h2 b2 26.e8t f7 27.d8 g6 28.g3 xb3 29.e4 e7 Black is home safe. 30.h8 h5 31.h7t e6 32.g7 e3! 33.g3 f6! 0–1

24. Michael Adams – Yuriy Kryvoruchko, Tromso (2.1) 2013
I am not sure why Adams has done poorly in some same-coloured bishop endings recently (look also at page 176 in Chapter 7). Here he missed a big chance in choosing 50.f2?, and after 50...d7 White had no advantage to speak of. 51.c5t g8 52.e3 e8 53.f2 a4 54.d4! Here a draw was agreed. ½–½

50.c5! would have won the game. The main line runs like this: 50...xe5t 50...e7 51.f2 d7 52.xd6+ xd6 53.e3 also wins for White. 51.bxc5 e7 51...d7 52.xd5 c6 is a creative fortress attempt, but I do not believe in it. White should win after almost anything.
52.\textit{f2} \textit{d7} 53.\textit{e3} \textit{c6} 54.\textit{d4} \textit{b5} The critical line. 55.\textit{f5}!! This is the key move to solving the exercise; or at least the move that I think Adams overlooked. 55.\textit{xh5}? is a natural move to calculate, but Black is okay here. 55...\textit{d5} 56.\textit{xh5} \textit{xc2} 57.\textit{c5} \textit{b6}! 58.\textit{xb7} \textit{xb7} 59.\textit{d6} \textit{a5} 60.\textit{c4} \textit{a4} leads to a well-known drawing pattern called the elevator. 61.\textit{de7}! \textit{b6}! 62.\textit{e6}! \textit{b7} with a draw. 55...\textit{xf5} 55...\textit{g4} 55...\textit{xc6}! 56.\textit{xf3} is hopeless for Black. 56.\textit{xf3} \textit{xe5} 57.\textit{xe5} \textit{xf3}! leaves the black king completely dominated. White wins slowly with the king on the kingside. 58.\textit{c4}! \textit{a5} 59.\textit{d5} \textit{a6} 60.\textit{d6} \textit{a3} 61.\textit{xc5} \textit{a4} 62.\textit{c4} \textit{a3} 63.\textit{c4} \textit{a2} 64.\textit{e7} \textit{a1} 65.\textit{f5}! \textit{a1} 66.\textit{g4} \textit{f5} leads to the same result.


32.\textit{e7}?! a5 33.\textit{e5} \textit{d6} is of course sorely unpleasant for Black, but it is not so easy for White to break through; and Black does have an extra pawn after all.

32.\textit{d3}! This forces Black to weaken the e6-pawn, giving White a lot of targets. 32...\textit{f5} 33.\textit{d3} Having created an extra weakness, the rook returns to the open file. 33...\textit{g5}! Black has to look for counterplay somehow. This move does not save the game objectively, but it makes the task of converting White's advantage much harder in practice. (33...\textit{e8} 34.\textit{e6} wins for White.)

34.\textit{hxg6} \textit{g7} 35.\textit{d6} \textit{e8} 36.\textit{xc6} \textit{h5} 37.\textit{e7}! \textit{xf6} 38.\textit{h3} 39.\textit{d7} \textit{h3} 40.\textit{d2}! 40.\textit{c3}! would have won the game easily. The main point is of course that 40...\textit{h2} 41.\textit{xf2} \textit{g4} leads to a queen ending where Black should win.

26. Eduardas Rozentalis – Atle Gronn, Oslo 2011

White can manoeuvre around quite a lot, but the win comes through creating a way for the knight to attack the pawns on the kingside. 49.\textit{g4}?! I am willing to believe that this is still sufficient, though the margin is not great! 49...\textit{f8} 50.\textit{f6} \textit{e6} 51.\textit{e5} \textit{xf6} 52.\textit{xf6} \textit{b4}! 53.\textit{e5} I should probably point out that 53.\textit{xf6}?? \textit{xf6} 54.\textit{a5} \textit{b3} 55.\textit{d3} \textit{b2} 56.\textit{c2} \textit{g4}! leads to a queen ending where Black should win.

53...\textit{e6} 54.\textit{g4} \textit{xf8} My feeling is that White should win this position, but he has to play accurately. 55.\textit{d4} 55.\textit{c5}!! was an interesting winning attempt, but insufficient. 55...\textit{xc5} (55...\textit{g7}?! 56.\textit{c6} \textit{d6} 57.\textit{f5} is a few tempos better than the game and thus wins easily) 56.\textit{dxc5} \textit{f5} 57.\textit{xf5} \textit{e7} 58.\textit{h6} \textit{h8} 59.\textit{h7} \textit{g8} 60.\textit{h6} \textit{a1} 61.\textit{xf7}! (61...\textit{f6} 62.\textit{d4} and 63.\textit{c3} just wins) 62.\textit{c6}! \textit{g7} 63.\textit{c4} \textit{c3} 64.\textit{xf5} \textit{d5} 65.\textit{f6} \textit{e5} 66.\textit{e5} \textit{d6} 67.\textit{e6} \textit{c5}! 68.\textit{xf8} \textit{xf8} White is a pawn up with practical chances, but with correct play, the game ends in a draw. A possible end is 66...\textit{f7} 67.\textit{g5} \textit{e6} 68.\textit{xf6} \textit{d5} 69.\textit{xe3} \textit{c5} and so on. 55...\textit{d6} 56.\textit{c5} \textit{c6} 57.\textit{e5} \textit{c7} 58.\textit{d5} \textit{g7} 59.\textit{g4} \textit{f8} This allows White to give a check on e5, but also fails for other reasons. 59...\textit{d7} is not so easy to refute, but it can be done. Black scraps home with a draw after 60.\textit{c6} \textit{f7} 61.\textit{c6}! \textit{xc6} 62.\textit{f7} \textit{h8} 63.\textit{c6}! At first sight White is completely winning, but Black has: 63...\textit{c5}! (63...\textit{g4} 64.\textit{xf4} \textit{xc5} also holds, but is really just the same idea with a pawn less.) 64.\textit{xf4} \textit{b4} 65.\textit{g8} \textit{xc3} 66.\textit{b6} \textit{xa4} 67.\textit{h7} \textit{b3} 68.\textit{g7} \textit{a4} 69.\textit{h8}=\textit{f8} a3= White has no way to prevent ...a3-a2-a1=\textit{f8}, other than by giving perpetual check. However, White can improve on this line with 61.\textit{c5}! and first exchanging queenside pawns, before winning on the kingside. 60.\textit{c4} This is practical and simple, but 60.\textit{b6}! \textit{c6} 61.\textit{f7}
\textit{Chapter 12 – Strategic Endings \ 351}

\textit{xc5 62.\textit{dxh6 d}d4 63.\textit{d}f5 won immediately. 60...\textit{c}6 61.\textit{e}5f 62.\textit{b}5 63.\textit{g}7 64.\textit{g}4 \textit{h}8 65.\textit{a}c5+ \textit{c}6 66.\textit{c}4 \textit{e}8 67.\textit{d}4 \textit{b}6 68.\textit{d}5 \textit{a}5 69.\textit{e}6 \textit{a}4 70.\textit{f}7 \textit{b}4 71.\textit{dxh6 \textit{b}3 72.\textit{g}4 \textit{c}2 73.\textit{h}6 1–0

49.\textit{d}3 \textit{f}6 50.\textit{f}2 \textit{g}7 has not achieved anything but a transposition to the game.
In the event of 49.\textit{f}6 \textit{xf}6 50.\textit{f}7f 51.\textit{dxh6 \textit{b}4 52.\textit{g}4 \textit{g}7 Black has brilliant counterplay on the queenside, though White still has a pull.
The best continuation was 49.\textit{c}5f 50.\textit{f}6!, which would have won quickly.

27. \textit{Peter Leko – Le Quang Liem}, Dortmund 2010
We were watching this game live in the office and were very impressed with Black's play. The idea is to free the rook on g7 from its passive post. 25...\textit{h}8! 25...\textit{e}c8 looks natural, but White is not penetrating on the c-file, so why exchange pieces and leave yourself with a passive rook? 26.\textit{a}4 \textit{a}5 27.\textit{h}c4 \textit{h}5 28.\textit{c}5 \textit{b}6 29.\textit{c}6 \textit{h}4f Black has an easier game and won on move 59.

28. \textit{Alexey Dreev – Gregory Kaidanov}, Moscow 1985
White has sacrificed a pawn for activity and should win it back without any problems. But in order for him to make anything of his advantage, he needs to be able to attack the key weakness on \textit{f}7. 28.\textit{d}3f+ And this can only be achieved if the black bishop is eliminated. 28...\textit{f}3?! Black still had reasonably drawing chances after 28...\textit{xd}3 29.\textit{xd}3 \textit{e}c8!, when for example 30.\textit{d}7 \textit{e}8 31.\textit{d}2f is promising for White, who will win his pawn back shortly and keep his big positional advantage. I would estimate the chances at 50/50 as to whether the position is objectively winning for White. 28...\textit{g}6f? is slightly worse. White plays 29.\textit{xg}6 \textit{hxg}6 30.\textit{f}2 \textit{f}5 31.\textit{g}2 \textit{e}8 32.\textit{exg}6, which looks like bad news for Black. One line goes 32...\textit{e}1f (32...\textit{e}7 33.\textit{c}6 also looks promising, but this might be Black's only try) 33.\textit{d}2 \textit{a}e8 34.\textit{x}d6 \textit{e}1f+ 35.\textit{c}3 \textit{exh}2 36.\textit{ef}6+ \textit{g}8 37.\textit{xc}5 and White wins. 29.\textit{c}4f \textit{d}5 29...\textit{h}5 30.\textit{xf}7 looks hopeless. 30.\textit{f}2 \textit{e}c8 30...\textit{h}5 31.\textit{xc}5 is more or less winning. Also 30...\textit{xc}8 31.\textit{b}7 \textit{ab}8 32.\textit{xa}7 \textit{a}8 33.\textit{xa}8 \textit{xa}8 34.\textit{xf}3 \textit{xc}4 35.\textit{d}2 is essentially winning. 31.\textit{xa}7 \textit{h}5 32.\textit{f}5 \textit{g}6? The final mistake, after which there is no defence. 32...\textit{xc}4 33.\textit{hx}5 \textit{g}7 34.\textit{f}5 \textit{f}8 looks excellent for White, but Black can still offer quite a lot of resistance. 33.\textit{xd}5 \textit{e}8 34.\textit{b}3 \textit{e}1f+ 35.\textit{b}2 \textit{e}3 36.\textit{a}4 \textit{f}3 37.\textit{d}2 \textit{f}4 38.\textit{a}5 \textit{b}8 39.\textit{d}5 \textit{c}4 40.\textit{a}8 \textit{xa}8 41.\textit{xa}8 \textit{cxb}3 42.\textit{cxb}3 1–0

29. \textit{Adrian Mikhalchishin – Alexander Chernin}, Cienfuegos 1981
Black is intending to defend the c5-pawn with ...\textit{d}7, when his position is not too bad. But White prevents this: 16.\textit{xf}6f! \textit{gx}f6 17.\textit{d}1 White's advantage is huge. The bishop on \textit{e}7 will not be able to defend the many weaknesses on the queenside. 17...\textit{b}8 18.\textit{d}3 \textit{b}4 19.\textit{d}2 \textit{g}8 20.\textit{g}3 The rook on \textit{g}8 has no good route to join the game. 20...\textit{xc}4 21.\textit{xc}4 \textit{g}4 22.\textit{f}4 \textit{h}5 23.\textit{d}2 \textit{h}4 24.\textit{e}2 \textit{hxg}3 25.\textit{hxg}3 \textit{g}6 26.\textit{a}3 \textit{h}6 27.\textit{f}3 \textit{h}1 28.\textit{xa}7 1–0
White is a little better for many reasons, but it turns out that with a passed pawn on the 7th rank he wins a pawn or forces Black to take up a passive position. 21.\textit{W}c7! It is more or less impossible not to exchange queens for Black, but doing so leaves a strong passed pawn on the 7th and a lot of coordination problems. 21...\textit{W}xc7 22.\textit{d}xc7 \textit{g}ac8 23.\textit{A}fc1 \textit{A}fe8 Black is probably just lost. Another line to illustrate this goes: 23...\textit{Q}e8 24.\textit{Q}f3 \textit{B}xc7 25.\textit{B}xc7 \textit{Q}e6 26.\textit{B}c1 \textit{Q}e6 27.\textit{B}xb7 \textit{B}b8 28.\textit{B}xa6 \textit{B}xb2 29.\textit{B}c8\textit{Q}f8 30.\textit{B}e8 and the a-pawn should decide the battle. 24.\textit{A}a3! The target is b7. 24.\textit{B}c5 is met by 24...\textit{B}f8 25.\textit{B}ac1 \textit{Q}e7 and, with ...\textit{Q}e8 coming, Black should be all right. 24...\textit{Q}e7 25.\textit{B}b3 \textit{A}xc7 This loses a pawn by force, but I see no hope in this position. 25...\textit{Q}e8 was the alternative, but White should win after 26.\textit{B}xb7 \textit{B}xc7 27.\textit{B}xc7 \textit{B}xc7 28.\textit{B}f1 \textit{B}f8 29.b4 \textit{g}5 Otherwise \textit{Q}g4 becomes an issue. 30.\textit{B}e1 \textit{B}e8 31.g4! \textit{g}6 32.gxf5 gxf5 33.\textit{B}b6 \textit{Q}a8 Black is hanging on for the time being, but White will slowly but surely pick up all the black pawns and win a long endgame. 34.\textit{B}h6 is a decent start. 26.\textit{B}xc7 \textit{B}xc7 27.\textit{B}xa6! Of course. White did not let go of the c-pawn for no reason. 27...\textit{g}6 28.\textit{B}xb7 The rest is not even a matter of technique, but just about staying awake at the board. 28...\textit{B}c2 29.\textit{B}f1 \textit{g}7 30.a6 \textit{B}c1 31.g3 \textit{e}4 32.\textit{B}b3 \textit{B}c7 33.\textit{B}a3 \textit{B}a7 34.b4 \textit{Q}d5 35.b5 \textit{B}f6 36.\textit{B}b3 \textit{B}b6 37.\textit{B}c3 1–0

28.\(\text{d}5\) White decides to change the position, after which Black can activate his king and secure a draw with correct play. 28...\(\text{xd}5\) 29.\(\text{cx}d5\) \(\text{e}7\) 30.\(\text{f}3\) 30.\(\text{a}6\) \(\text{b}4\) 31.\(\text{d}2\) \(\text{d}8\) 30...\(\text{ex}f3\)† 30...\(\text{d}6\)! also looks fine for Black; there is no great reason to include the white king. But objectively the text move is okay too. 31.\(\text{xf}3\) \(\text{d}6\) 32.\(\text{f}4\) \(\text{xd}5\) 33.\(\text{xf}5\) \(\text{xf}5\) 34.\(\text{xf}5\) \(\text{c}5\) 35.\(\text{xf}6\) \(\text{b}4\) 36.\(\text{b}7\) \(\text{c}6\)? Making Black's job a bit harder. 36...\(\text{a}5\)! 37.\(\text{a}7\)† \(\text{b}4\) would underline White's lack of advantage. 37.\(\text{e}4\) \(\text{xb}3\) 38.\(\text{e}7\)! Posing the most possible problems.

38...\(\text{c}4\)? After this Black has to save a difficult queen ending. The fact that he did not manage to do so underlines how poor this decision was. Black could have held the draw by following a simple endgame principle: passed pawns must be pushed! 38...\(\text{b}4\)! Surely he rejected it on account of 39.\(\text{d}7\), but after 39...\(\text{g}8\) 40.\(\text{xc}6\) \(\text{c}4\)! Black is threatening to win the game with checks on g6 and g7. Therefore White should look towards something like 41.\(\text{d}6\) to get the king over to help the pawns. Black has to play accurately to draw, but powerful play can do this: 41...\(\text{b}3\)! We did not advance the b-pawn with the idea of stopping; the first rank is the finish line! 42.e5 (42.\(\text{e}6\) \(\text{e}3\) 43.\(\text{e}5\) \(\text{b}2\) 44.\(\text{f}7\) \(\text{a}8\) 45.\(\text{e}6\) \(\text{a}1\) [45...\(\text{a}7\)?=] 46.\(\text{e}7\) \(\text{f}1\)† 47.\(\text{g}7\) \(\text{e}1\)=) 42...\(\text{d}8\)†! 43.\(\text{e}7\) \(\text{d}2\)! The simplest; Black either wins a tempo, or ensures that White cannot make an extra passed pawn on the kingside. Bringing the rook to the first rank is also good enough for a draw, but the text move is more forceful. 44.\(\text{h}4\) \(\text{d}3\) 45.\(\text{g}4\) \(\text{d}4\) Black draws easily. 39.e5 \(\text{c}5\) 40.e6 \(\text{b}4\) 41.\(\text{d}7\) \(\text{g}8\) 42.e7 \(\text{b}3\) 43.\(\text{e}8\)=\(\text{e}8\) 44.\(\text{xe}8\) \(\text{c}4\) 45.\(\text{hx}h7\) \(\text{c}2\) 46.\(\text{h}4\) \(\text{b}3\) 47.\(\text{h}5\) \(\text{b}2\) 48.\(\text{b}7\) \(\text{b}1\)= \(\text{f}4\) 49.\(\text{xb}1\) \(\text{b}1\) 50.\(\text{h}6\) \(\text{c}3\) 51.\(\text{h}7\) \(\text{c}2\) 52.\(\text{h}8\)=\(\text{e}8\) \(\text{c}1\)= Though a theoretically drawn position; this endgame is difficult for Black in practice. 53.\(\text{h}7\)† \(\text{a}2\) 54.\(\text{a}7\)† \(\text{b}3\) 55.\(\text{b}6\)† \(\text{a}4\) 56.\(\text{a}6\)† \(\text{b}4\) 57.\(\text{d}6\)† \(\text{b}3\) 58.\(\text{e}6\)† \(\text{b}4\) 59.\(\text{g}4\) \(\text{f}4\) 60.\(\text{e}7\)† \(\text{c}3\) 61.\(\text{g}5\) \(\text{a}4\)† 62.\(\text{f}8\) \(\text{a}8\)† 63.\(\text{g}7\) \(\text{d}3\)? Hey, stay in the corner Keith! That's the drawing method! 64.\(\text{g}6\)? 64.\(\text{c}5\)! would have kept the king in harm's way. 64...\(\text{c}8\)? 64...\(\text{c}2\)! would still make the draw. 65.\(\text{f}6\) White is winning. 65...\(\text{d}2\) 65...\(\text{c}6\)† 66.\(\text{e}6\) \(\text{c}3\)† 67.\(\text{e}5\) \(\text{c}6\)† 68.\(\text{g}6\) \(\text{g}2\)† 69.\(\text{g}5\) \(\text{f}3\)† 70.\(\text{e}6\) is but one line. We can now see why the king needs to be far away. White blocks too many checks with a "right back at ya!". 66.\(\text{g}7\) \(\text{c}6\)† 67.\(\text{e}6\) \(\text{c}3\)† 68.\(\text{f}7\) \(\text{f}3\)† 69.\(\text{e}7\) 1–0

Correct was 28.\(\text{d}2\)! in order to activate the king and take control of the queenside before getting the most out of the pieces. It would immediately threaten to take on b5, so Black's next two moves are more or less forced. 28...\(\text{bxc}4\) 29.\(\text{bxc}4\) \(\text{c}6\) 29...\(\text{e}7\) only makes things worse after 30.\(\text{d}3\), where the knight comes to d5 with check. 30.\(\text{a}6\) Threatening \(\text{xf}5\). 30...\(\text{b}8\) 31.\(\text{a}1\) \(\text{c}6\) 32.\(\text{c}3\)± White is in complete control and it is hard for Black to activate his rook. After a few extra careful moves, White should be close to winning. 32...\(\text{b}8\) 32...\(\text{e}7\) 33.\(\text{a}5\) \(\text{d}6\) 34.\(\text{a}6\) \(\text{e}7\) 35.\(\text{a}1\)! threatens c4-c5 and \(\text{xc}4\) with a decisive attack. If Black tries 35...\(\text{g}6\) 36.\(\text{d}5\) \(\text{c}6\) 37.\(\text{b}6\) \(\text{c}7\), White can either steal a pawn (for the price of the d-file) or increase the pressure with 38.\(\text{c}5\) \(\text{e}5\) 39.\(\text{c}4\)! In either case White is close to winning. 33.\(\text{d}5\) \(\text{b}6\) 34.\(\text{a}6\)! White goes after the f6-pawn. Black is close to lost after 34...\(\text{e}6\) 35.\(\text{f}1\)! \(\text{e}5\) 36.\(\text{e}2\)! when White will slowly improve his position until it is winning.

White is also better after 28.\(\text{cb}5\)! \(\text{xb}5\)† 29.\(\text{d}2\) \(\text{c}6\) 30.\(\text{a}1\) \(\text{e}7\) 31.\(\text{c}3\), but Black's position is freer and his practical chances higher than in the above line.
32. Surya Shekhar Ganguly – Yann Michael Guidez, Dubai 2011

White would love to play b6-b7, but Black can put his knight on c7 as a response. However, White can prevent this with a nice move. 39.g2? This is not it. Actually it is a bit of a time waster (probably played quickly, to avoid losing on time), allowing Black to gain active counterplay.

White had to prepare the pawn push with: 39.c6! e3 40.b7 There are other moves, but nothing clear-cut. 40...c7 40...e7 41.e1 is deadly, for instance 41...xc6 42.dxc6 c7 43.b5 and White keeps control. 41.xd6† Bd7 42.xd7† xd7 43.c4 White is completely winning, for example: 43...d6 44.b6† e5 45.d6 White wins material.

33. Vassily Ivanchuk – Lajos Portisch, Debrecen 1992

White has the advantage because of his better bishops. Black’s rook is active, but it will be exchanged soon enough, so this is of no value. So, with nothing happening in the short term, White needs to understand how the pawn structure impacts the long term in order to secure the best possible winning chances. 44.e6? A mistake that allows Black to fix the pawn structure in a favourable way. 44...a5 45.g2 f6 46.h3 a6 47.gxf2 xf2† 48.gxf2 b7 49.f3 a6 50.e6 b7 51.f2 a6 52.e4 b7 53.g4 hxg4 54.bxg4 a6 55.f3 b7 56.e6 a6 57.g4 b7 58.e3 f8! 58...a6 would have kept the status quo. White has nothing special, for instance: 59.h5 gxh5 60.xh5 f8± 59.h6† f8 60.g5! White wins the ending easily. 60.c7 61.xc7 xc7 62.g5 e4 63.xg6 e3 64.g4 e5 65.e2 f5 66.h5 h3 67.f6 1–0

44.b4!± was the best move. White can both try to make progress by exchanging rooks with c4-c5 later, or by using the heavy artillery actively. The following line is only given to suggest how the game could continue, not to be taken as if this is how the game would continue. 44...g8 Black does not have any great active options, so this waiting move seems natural. White looks to be in excellent shape after both 44...a5 45.g2 f6 46.c5! and 44...f7 45.b2 f3 46.b3 with ideas of c4-c5 coming as well. 45.g2 f7 46.b2? g7 47.c5 bxc5 48.bxc5 dxc5 49.h3! Accuracy is needed. At the moment when the rook cannot return to f3, the bishop goes to e6, where it would not be well placed if the king had to guard f3 from g2, as the d5-pawn would be pinned and the bishop on e6 unsupported. 49...c4 50.e6 c3 51.b3 e7 52.xc3 c7 53.c5±

34. Yaacov Norowitz – Tom O’Donnell, Nassau 2012

White has a promising position and might expect win the game, barring accidents. However, we need to perfect our prophylactic skills to be able to prevent such mishaps. In this case White missed Black’s chance to create counterplay against his king. 42.a5? f5! Surprisingly, Black has enough activity. 43.b7?? With this move White managed to pose some problems for his opponent, but the game stayed within the boundaries of a draw. 43.a6 d2† 44.e3 g5 would secure a draw, for example: 45.c3 d3† 46.e2 d2† 47.f1 e3! 48.fxe3 h2† with perpetual check. 43.g4 f4 leads to similar lines. 43...xb7?? 43...d4† was a bit more accurate. The white king cannot go forward: 44.e3 c2† 45.f4?? xb7 46.d6† f6 47.xb7 g5# 44.d6† e6 45.b6† c5† 45.d5 49.xe4 h5 50.f4 c4 51.g5 g6 52.g3 After 52.xg6 h4 53.a6 g3 54.xg3! hxg3 55.fxg3 c5! Black makes a draw. 52.f6 b4
356 Grandmaster Preparation - Endgame Play

53.a6 a5 54. fxg6 h4 55. hxg6 a6 56. fxh4 f5 57. f5 a4 58. f6 a5 ends in the same result.

52... a5 53. a4 54. hxg5 hxg5 55. hxg5 a6 56. fxg4 64. f6 1/2–1/2

The right move was 42. e3! ±, when the win is close. 42... e4 43. fxe4, White’s advantage is obvious. 42... f3 43. g4! g6 44. fxg5 fxg5 45. a5 wins. Maybe the best chance is 42... g6, but Black is suffering no matter what. 43. d4 c4 44. fxg4 d2 45. d3! ± 1/2

35. Vladimir Georgiev - Manuel Leon Hoyos, Merida 2006

32... g4? Black misses a not-too-hard rearranging of the pieces. He wants to defend g7 and advance the d-pawn. 33. h2 ± 1/2. It was not too late for Black to retrace his steps with 33... e4! ± and then win as given below. 34. g5 f4 35. h1 e3 36. h2 f4 37. g1 e3 38. h2 f4 1/2–1/2

The regrouping is best done with 32... e5!, threatening mate. Then 33. g1 d3 34. g5 d2!, when Black wins due to 35. f4±! mating.


47. f1?? 47. c8? c8c7 48. c7 c7xg1 would give Black fabulous counterplay. Actually, the game should end a draw quickly after 49. a4 h2 50. h8 g3 51. g8 1/2–1/2, though Black may have a few chances to push the chaos button. 47... c7xg1 48. c8xg1 h2 49. c8 1/2–1/2! Making sure that the rook will be defended by the queen! 49... g1? 49... g1 gives Black a theoretical draw after 50. b4 e5 51. h1 g3 52. b5 f4 53. c5 g2 54. xhf2 xh2 55. b6 f3 56. b7 f2 57. b8= c8xb8 58. cxb8= c8 f1= c8, when his king is placed ideally for this ending. However, as we can see elsewhere in this book, it is quite easy to misplay even simple theoretical endings, especially if you do not know them! 49... c8 It is quite easy to calculate 49... g3 50. b7 h8 51. c8= c8xc8 52. c8xg2 53. a4 and White wins a tempo. 50. a4 e5 51. a5?! Simpler was 51. b4! c7xg1 52. c8= c8 h1= c8 53. c4 e4 54. c7 f3 55. c3 f4 56. d2 f3 57. c3 g4 58. e2 g5 59. c8 and White wins. 51... c7 51... e4 is refuted with a brilliant variation: 52. b7 (52. a6? e3 53. b7 g1 54. c4 g3 55. c8= h1= g1 gives Black counterplay.) 52... g1 53. c8= h1= g1 54. c7 f3 55. c3 f4 56. xg1 xg1 57. a6 d1 58. a7 d5 59. c6 xb3 60. c7 f7 61. b8 The computer gives 0.00, but White is winning: 61... f8 62. c8= h3 63. b7= g8 64. c7= f7 65. c6= e6 66. c5= e5 67. c4 White wins by putting his king on b1, when the checks run dry. 52. c8= h1= c8 53. c4 e4 54. c7 f3 55. c3 f4 56. d2 f3 57. c3 g4 58. e2= g5 59. c8= 62. a4 was the quickest way to win. 59... h6 60. c6= h3 61. b4= e1 62. d2 c3 62. d8= f4 63. a6 and White was still winning. 61... g2 62. c4= h8 63. c1 f4 64. c5= 1/2

Everything is going wrong. 64. c4 was the last way to preserve some advantage. 64... g4 65. d1 f3= h3 66. d7= g3 67. d6= h3 68. c6= e6± The rest of the game is slipping away. White should have played 68.d6 f2 69.g5, when Black has to force a draw with 69... g8 70. xf2 h8 71. c6 c3 72. d7 g7 73. c6 c3± and so on. 68... g4! The tide has turned and the body of the white king will soon drift out to sea... 69. c8 d4 70. b5 f2 71. h6= g2 72. c1 d3 73. a4= f1= 0–1
Chapter 12 – Strategic Endings

Gelfand – Delchev, Moscow 2001

Aronian – Gelfand, Dresden (ol) 2008

Zubarev – Sarandos, Porto Rio 2012

A.S. Rasmussen – Robson, Tromso 2009

Aagaard – Andreasen, Aarhus 2011

Bartel – Romanishin, Moscow 2012
37. Boris Gelfand – Aleksander Delchev, Moscow (3.1) 2001

White’s advantages are many; he is first to the c-file, he has control of the c5-square and can put pressure on the b7-pawn, which could prove to be a considerable weakness – especially since it is the sole defender of the c-file.

19.\textit{c}c5? looks natural, but Black will be able to get rid of the most annoying white pieces and indirectly protect his weak b7-pawn, which is holding his entire queenside together. 19...\textit{x}xf3 20.\textit{xf}3 \textit{xc}5 21.\textit{xc}5 \textit{c}6 Black is very close to equality here.

19.\textit{d}2? would be great if Black did not have 19...\textit{f}5!, holding everything together.

There is no invasion without exchanges in this position, which means that White needs to exchange the correct pieces. As b7 is the main weakness, the e3-bishop is the inferior minor piece. Whether Boris was thinking like this or simply calculating variations we do not know; there are always many ways to solve a problem. The trainer tries to emphasize recurring patterns, but whether these are conscious or subconscious during the game is not clear. 19.\textit{c}c5! 19...\textit{xc}5 Black has no nice way to get rid of the pressure. For example: 19...\textit{f}8 20.\textit{b}4 \textit{f}5 21.\textit{g}5± is unpleasant; as is 19...\textit{f}5 20.\textit{xe}7 \textit{f}xe4 21.\textit{g}4 with the threat of \textit{b}4. The best that Black can achieve is 21...\textit{d}5 22.\textit{xc}7 \textit{c}6, although even here after 23.\textit{c}5± the position looks indefensible in the long run. 20.\textit{xc}5 \textit{f}5 20...\textit{b}6 21.\textit{xe}3 is also close to hopeless, for instance: 21...\textit{d}5 (21...\textit{f}5 22.\textit{g}5 \textit{xf}3 23.\textit{xf}3±; 21...\textit{e}8 22.\textit{d}6 \textit{d}8 23.\textit{xc}6 \textit{xd}6 24.\textit{f}3 followed by \textit{b}2-\textit{b}4 wins). 22.\textit{d}6 \textit{xf}3 23.\textit{ex}f3 \textit{d}8 24.\textit{c}2 \textit{g}6 25.\textit{c}8 White wins a pawn on account of 25...\textit{d}7 26.\textit{b}4 \textit{b}7 27.\textit{xa}7. 21.\textit{d}6 \textit{xf}3 22.\textit{ex}f3 \textit{d}8 The only move, though a painful one to make. 22...\textit{b}6 23.\textit{xa}7 \textit{d}8 is even worse (I know, it is hard to imagine, but give it a try...) on account of a nice tactic: 24.\textit{f}7! followed by \textit{g}5 with mating threats and \textit{xc}6 following. 23.\textit{xa}5 \textit{xd}6 24.\textit{xa}7 \textit{d}1±! The natural inclination is towards active counterplay, but here 24...\textit{d}7 was necessary. Black’s position looks hopeless and probably is so. 25.\textit{c}2 \textit{f}1 The idea behind the last move. The fact that returning to \textit{d}7 might have been better is irrelevant for the annotator trying to understand how chess is played. 26.\textit{xb}7 \textit{xf}2 27.\textit{d}3 \textit{xb}2 27...\textit{xf}3 28.\textit{e}2 is a lovely image. 28.\textit{a}4 \textit{h}1 29.\textit{b}3 Classically played, but just moving the pawns up the park would have worked as well. 29...\textit{f}7 30.\textit{a}5 \textit{a}1 31.\textit{a}3 \textit{d}1† 32.\textit{c}4 1–0


25.\textit{d}3? Perhaps White overestimated his chances in the ensuing ending? 25...\textit{xe}5! 26.\textit{xe}5 \textit{d}8 Black regains his piece with pleasant simplifications. 27.\textit{g}5† \textit{f}8 28.\textit{xf}7 \textit{xd}3 29.\textit{e}5 \textit{d}1† 30.\textit{f}2 \textit{d}2† 30...\textit{d}5?! was also sufficient. There is no reason Black should be seriously worried. 31.\textit{e}3 \textit{xb}2 32.\textit{xc}6 \textit{bxc}6 33.\textit{h}4 The h-pawn is White’s only remaining trump. 33...\textit{xa}2 34.\textit{h}5 \textit{a}1!! 34...\textit{a}3† was the direct drawing move. White gains nothing by advancing the king, and after 35.\textit{e}e2 \textit{b}3 36.\textit{h}6 \textit{h}7 37.\textit{g}6 a5 38.\textit{xe}6 \textit{a}7 Black has achieved strong counterplay. For example: 39.\textit{d}d2 a4 40.\textit{c}c2 a3 41.\textit{b}1 a2† 42.\textit{a}1 \textit{g}8 43.\textit{xc}6 \textit{h}7 and Black makes a draw. 35.\textit{g}4 \textit{f}7? 35...a5 36.\textit{e}c5 \textit{g}7 37.\textit{xc}6 \textit{f}6 38.\textit{xc}5 \textit{e}1† 39.\textit{f}3 \textit{e}5 would probably still have held without too much bother, although there is no forced route to a draw here. 36.\textit{c}5? 36.\textit{h}6! would have won the game quickly: 36...\textit{h}1 37.\textit{g}7\textit{f}8 38.\textit{g}5 and White is in complete control. The rook goes to \textit{a}7 and the king slowly advances. The split pawns offer no real resistance. 36...\textit{a}4 37.\textit{f}3 \textit{b}4? Black had one last chance to fight for a draw. The best move was 37...\textit{f}6!±. White should take on \textit{c}6 with real winning chances, but refrain from
the tempting 38.g5†?!, when the game would end in a peculiar draw: 38...\texttt{g7} 39.\texttt{xc6} \texttt{a3}† Black will give checks until the king runs to the queenside. 40.\texttt{e2} \texttt{a2}† 41.\texttt{d3} \texttt{a3}† 42.\texttt{c4} \texttt{a4}† 43.\texttt{b3} \texttt{a5} 44.\texttt{cc7}† \texttt{g8} 45.\texttt{c8}† \texttt{h7} 46.\texttt{g6}† \texttt{h6} 47.\texttt{h8}† \texttt{g7} 48.\texttt{h7}† \texttt{g8} White has no way to make progress. 38.\texttt{xc6} a5 39.\texttt{bc5} a4 40.\texttt{a5} \texttt{xc4} 41.\texttt{g3} \texttt{d4} 42.\texttt{g5} \texttt{d3}† 43.\texttt{f4} \texttt{d4} 44.\texttt{f3} \texttt{d3}† 45.\texttt{e4} \texttt{h3} 46.\texttt{a7}† \texttt{g8} 47.\texttt{e5} \texttt{f3} 48.\texttt{xe6} a3 49.\texttt{h6} \texttt{b3} 50.\texttt{f5} \texttt{b5}† 51.\texttt{g6} \texttt{b6}† 52.\texttt{h5} \texttt{b3} 53.\texttt{h7}† \texttt{h8} 54.\texttt{h6} 1–0

25.\texttt{g3}!! would have ensured White of a significant advantage. The immediate threat is \texttt{d3} followed by \texttt{g5}, \texttt{g2-g3} and \texttt{h2-h4}, simply winning. Black has to get out of the pin. 25...\texttt{f8} 26.\texttt{xe6} \texttt{xe5} Here White has the advantage after 27.\texttt{c4}, though Black can try 27...\texttt{f3}†! splitting the white pawns. A possible improvement is 27.\texttt{c8} b5 28.\texttt{xc3} \texttt{e7} 29.\texttt{b7} \texttt{xb7} 30.\texttt{xb7} when the extra pawn gives White real winning chances, though a big fight lies ahead.

39. Jacob Aagaard – Per Andreasen, Aarhus 2011
I got out of the opening with a lead in development and better pieces and was keenly aware that the right way to approach the position was to prevent counterplay. Unfortunately I did not manage to spot Black’s idea. 17.\texttt{xd3}? \texttt{xe5} 18.\texttt{xe5} \texttt{b5}! 19.\texttt{g2} \texttt{g7} 20.\texttt{a3} \texttt{e7} 21.\texttt{d4} \texttt{c7}† I managed to apply some pressure, but the game ended in a draw after 59 moves.

17.\texttt{d3}?! \texttt{e5}! 18.\texttt{xb4} \texttt{exd4} 19.\texttt{g2} \texttt{g7} 20.\texttt{d5} \texttt{b5}! offers Black counterplay. I still believe that White could be somewhat better here, but it is not a great example of prophylaxis.

17.\texttt{g2}! was the right move. I thought about 17...\texttt{xe5} 18.\texttt{xe5} \texttt{f6} 19.\texttt{d4} \texttt{e5} during the game, but failed to spot 20.\texttt{b6}!! followed by \texttt{c4-c5}. Black is close to losing.

40. Levon Aronian – Boris Gelfand, Dresden (ol) 2008
After 31...\texttt{b6}?! 32.\texttt{xf6} \texttt{h5} 33.\texttt{xf6} \texttt{f5} 34.\texttt{b2} White’s most challenging try is probably to force the bishop ending. 34...\texttt{xf6} 35.\texttt{xf6} \texttt{xf2}† (After 35...\texttt{xa2} 36.\texttt{xa6} \texttt{axb6} 37.\texttt{f2} White holds the draw by a tempo according to the tablebases.) 36.\texttt{xf2} \texttt{xa2} Black is close to winning here. All he need is one tempo (as we shall see below). However, White to play can draw in one way: 37.\texttt{g4} \texttt{g7} 38.\texttt{e3} \texttt{g6} 39.\texttt{f4} The white pawn comes to \texttt{g5}, probably on the next move. The point is that White will bring the king to the queenside when the appropriate moment arises and give up his bishop for the black f-pawn. The most likely variation goes like this: 39...\texttt{b1} 40.\texttt{g5} \texttt{a5} 41.\texttt{c6} \texttt{c2} 42.\texttt{d5}!! \texttt{a4} 43.\texttt{e3} \texttt{b3} 44.\texttt{xf7}†! \texttt{xf7} 45.\texttt{d2} a3 46.\texttt{c2} \texttt{xa2} 47.\texttt{c3} \texttt{d5} 48.\texttt{f2} and a draw by either perpetual or fortress is forthcoming.

31...\texttt{h5}!! Black prepares for the ensuing endgame in the best possible way. 32.\texttt{xf6} \texttt{xf6} 33.\texttt{xf6} \texttt{a5}! This is the key to Gelfand’s idea. Despite the limited material, Black is winning, as the a-pawn is simply too strong. 34.\texttt{f4} Crucially, 34.\texttt{f2} \texttt{xa2} 35.\texttt{xa2} \texttt{xa2} 36.\texttt{f2} is a tempo better for Black than the line after 31...\texttt{b6} Black wins with 36...\texttt{a5}! 37.\texttt{e3} \texttt{a4} 38.\texttt{d2} \texttt{c3} and so on. 34...\texttt{xa2} 35.\texttt{d4} \texttt{a5} 36.\texttt{d5} 37.\texttt{c6} \texttt{b3} 38.\texttt{f1} \texttt{a4} 39.\texttt{d4} prevents Black from quickly advancing the a-pawn, but he can walk his king to \texttt{c5} and win slowly. 36...\texttt{a1}† 37.\texttt{f2} \texttt{a4} 38.\texttt{d2} \texttt{a3} Importantly, White has to give Black another passed pawn in order to go into ano rook ending. 39.\texttt{exf6} \texttt{xe6} 40.\texttt{e3} \texttt{f7} 41.\texttt{g4} \texttt{b6} 42.\texttt{e2} \texttt{g6} when White cannot defend his g-pawn. 42.\texttt{f2} \texttt{c7} 43.\texttt{a2} \texttt{b3}† 44.\texttt{f4} \texttt{b4}† 45.\texttt{g5} \texttt{a4} 46.\texttt{h6} \texttt{e5} 47.\texttt{g5} \texttt{f7} 48.\texttt{g6}† \texttt{g8} 49.\texttt{g5} \texttt{e4} 0–1
41. Allan Stig Rasmussen – Ray Robson, Tromso 2009

White probably thought he was okay at this point. Either Black allows the white king to rejoin the game or he loses a piece. 23...\texttt{c4}!! 23...\texttt{c8}?? 24.\texttt{d2±} would be an entirely different kind of game. After the last move, Rasmussen perhaps felt that he had no way to save the game, but he is a tough fighter and he kept battling until the bitter end. 24.\texttt{b7} 24.a4 \texttt{a}5 does not change things greatly. 24...\texttt{h6} 25.\texttt{f5} \texttt{c7} 26.\texttt{c8=+} \texttt{xc8} 27.\texttt{xc8} \texttt{f8} 27...\texttt{a5}! was a bit more accurate, but Black is okay after the text move as well. 28.\texttt{a6} \texttt{d6}! Black decides to keep the queenside closed, based on the fact that 28...\texttt{c7} 29.\texttt{a4}! intending \texttt{a4-\texttt{a5}} and \texttt{a4} would give White counterplay. True, Black retains an edge after 29...\texttt{c2} 30.\texttt{b1} \texttt{b4±}, when the bishop is trapped, but the game continuation is more convincing. 29.\texttt{b7} \texttt{a5}! 30.\texttt{f3} \texttt{c7} 31.\texttt{a4} \texttt{d4} 32.\texttt{e2} \texttt{f6} 33.\texttt{h4} \texttt{e5} 34.\texttt{b1} \texttt{f4} 35.\texttt{b5} \texttt{d7} 36.\texttt{c3} \texttt{g3} 37.\texttt{g5} \texttt{hxg5} 38.\texttt{hxg5} \texttt{f2} 39.\texttt{h5} \texttt{e1} 40.\texttt{f6} A rather amusing mate arises from 40.\texttt{f3} \texttt{d2} 41.\texttt{e4} \texttt{f1} 42.\texttt{a1} \texttt{b3} 43.\texttt{b1} \texttt{d1} 44.\texttt{xd1} \texttt{e2}#. The final position nicely illustrates the strategic vision Black demonstrated in this game. 40...\texttt{gf6} 41.\texttt{gf6} \texttt{d2} 42.\texttt{a1} \texttt{f2} 43.\texttt{b1} \texttt{f1} Mate follows shortly. 0–1

42. Mateusz Bartel – Oleg Romanishin, Moscow 2012

White should have an advantage because the \texttt{g4}-pawn should fall. However, exploiting this is not easy in practice. 36.\texttt{xd3}?! \texttt{e7} 37.\texttt{xc5} \texttt{bxc5} 38.\texttt{b3} \texttt{c6} 39.\texttt{c3} \texttt{d5±} Black holds with decent play. 40.\texttt{b5} \texttt{c8} 41.\texttt{e2} \texttt{b8} 42.\texttt{d1} \texttt{b4}! 43.\texttt{e2} \texttt{d7} 44.\texttt{c1} \texttt{f3} 45.\texttt{xf3} \texttt{gxf3} 46.\texttt{xf3} \texttt{c4} 47.\texttt{b2} \texttt{xb3} 48.\texttt{xb3} \texttt{xa4} 49.\texttt{b7}+ \texttt{e8} 50.\texttt{b8}+ \texttt{e7} 51.\texttt{c3} \texttt{a1} 52.\texttt{b2} \texttt{a4} ½–½

36.\texttt{xc5}?! \texttt{bxc5} 37.\texttt{xc5} \texttt{xb2} 38.\texttt{e2} might appear to give an advantage, but it is limited: 38...\texttt{b3}?! The best defence. (Even if Black plays 38...\texttt{xa4} 39.\texttt{xa5} \texttt{c6}, I cannot see why his position should be so bad. 40.\texttt{a3} might be digital happiness, but for the rest of us, the outlook of trying to win this ending with four against three on one flank is not too reassuring.) 39.\texttt{f2} \texttt{b2}! 40.\texttt{xa5} \texttt{c6±} Black has a lot of counterplay and I seriously doubt that White can pose real problems.

36.\texttt{a1}!! is the solution, defending the pawn! Even if the rook looks stupid on \texttt{a1}, it is okay, since the rest of the board is under White's control. 36.\texttt{c7} 37.\texttt{e2} \texttt{f5}?! White would also be happy with 37...\texttt{xc3}+ 38.\texttt{xc3} \texttt{c8} 39.\texttt{c4}+ when he can consolidate, take the \texttt{g}-pawn and then manoeuvre around in order to bring the rook back into the game. We should not forget that the \texttt{a}-pawn can be abandoned at some point, if White is ready to take action somewhere else. 38.\texttt{xf6}+ \texttt{xf6} 39.\texttt{g4} \texttt{e5} 40.\texttt{e2±} White has serious winning chances with his extra pawn.
43. Pavel Eljanov – Peter Svidler, Astrakhan 2010

Eljanov did the business in one of his great successes, although he briefly stumbled close to the end. 30.\textit{Qg}5?! \textit{b}4 31.\textit{cx}b4 31.\textit{Qe}6 looks strong, but Black can force a draw by ignoring the threat to the rook: 31...\textit{bxc}3! 32.\textit{Qxc}3 \textit{bxc}3 33.\textit{Qa}1 \textit{cx}d4 34.\textit{Qxd}4 \textit{h}6 and so on. 31...\textit{cx}d4 32.\textit{Qe}6 32.\textit{cx}d4 is well met with 32...\textit{Qxe}6 33.\textit{Qe}8+ \textit{Qe}7 34.\textit{Qa}7 the position is best repeated. 32...\textit{Qc}1† 33.\textit{Qg}2 \textit{dx}e5 34.\textit{Qxf}5 \textit{Qxf}5 35.\textit{Qxe}7+ \textit{Qxe}7 36.\textit{Qd}5 37.\textit{Qf}6 \textit{b}1 38.\textit{Qe}7 \textit{Qe}6 39.\textit{Qd}7† \textit{Qa}4 41.\textit{Qe}7 \textit{Qd}5 42.\textit{Qd}7† \textit{Qe}4 43.\textit{Qe}7 \textit{Qd}5 44.\textit{Qd}7† ½–½

30.\textit{Qe}7† was close to winning. 30...\textit{cx}d4 30...\textit{Qf}7 gives White an enduring initiative after 31...\textit{Qxf}5 \textit{Qxf}5 32.\textit{Qg}5†! \textit{Qf}6 33.\textit{h}4! \textit{Qd}7 34.\textit{Qa}6† \textit{Qe}7 35.\textit{Qe}6† \textit{Qf}8 36.\textit{Qh}7† with great winning chances. 30...\textit{b}7 loses directly to 31...\textit{Qxf}5 \textit{Qxf}5 32.\textit{d}xc5 \textit{Qc}7 33.\textit{Qd}4† and so on. 31.\textit{Qxd}4 \textit{Qxc}3 32.\textit{Qxf}5 \textit{Qxf}5 33.\textit{Qe}6 \textit{Qf}7 34.\textit{Qxf}8 \textit{h}6 35.\textit{Qd}7 White should win, although a few details remain.

44. Sergei Movsesian – Bu Xiangzhi, Nanjing 2008

Bu uses all aspects of his position to create a target for continued play. 25...\textit{b}4!! Bu was proud of this move. The key point is that White will eventually find the c-pawn to be a real weakness. 26.\textit{Qg}4 26.\textit{cx}b4 runs into trouble against accurate play. Black starts by avoiding the rook exchange: 26...\textit{Qh}8! 27.\textit{Qg}2 \textit{Qxb}4 28.\textit{Qa}2 \textit{xe}1 29.\textit{Qxe}1 \textit{Qd}4† The knight will dominate the bishop for the rest of the game. 26...\textit{bxc}3 27.\textit{bxc}3 The c3-pawn is a problem now, while the c6-pawn is not going to be threatened ever. 27...\textit{Qxb}4 28.\textit{Qad}1 \textit{Qc}5 Bu starts a manoeuvre that attacks the c3-pawn and puts Black under pressure. 29.\textit{Qf}3 a3 30.\textit{Qf}2 \textit{Qa}4 31.\textit{Qf}3 \textit{a}6 32.\textit{c}4 \textit{Qb}2! The knight might look a bit strange here, but it forces White to defend the c-pawn passively. 33.\textit{Qc}1 \textit{Qb}4 34.\textit{Qh}2 \textit{Qh}8 35.\textit{Qxh}8 \textit{Qxh}8 36.\textit{Qg}2 \textit{Qd}8 37.\textit{Qh}1† Movsesian is trying to create active counterplay, but it fails. It was better to play 37.\textit{Qc}2† and give the responsibility of coming up with a clear plan to Bu. This requires nerves of steel, but was objectively the best shot. 37...\textit{Qxc}4 38.\textit{Qh}7† \textit{Qd}6 39.\textit{Qa}7 c5 40.\textit{Qh}5 \textit{Qa}5†? 40...\textit{Qc}6 was slightly more accurate. In general Bu does not play the next phase as accurately as was possible; probably under the influence of the lack of time inherent in modern time controls. 41.\textit{Qf}7 \textit{Qac}6 42.\textit{Qxf}6† \textit{Qb}5† 43.\textit{Qh}3? \textit{Qh}8? 43...\textit{Qe}3! would have trapped the white king in a mating net. The first threat is simply ...\textit{Qd}1 followed by ...\textit{Qxd}2† and ...\textit{Qxa}2. 44.g4 seems to be the best try, but after 44...\textit{Qd}2 45.\textit{Qx}e8† \textit{Qb}4 White is just lost, for example: 46.\textit{Qc}6 \textit{Qc}2! 47.\textit{Qc}8 \textit{Qf}1 and wins. 44.\textit{Qf}4 \textit{Qa}8 Black keeps the pressure on after this move, but there was an absolutely amazing winning line: 44...\textit{Qh}8!! 45.\textit{Qb}8 \textit{Qb}7 Black prepares a deadly invasion on b2. White has no defence, for instance 46.\textit{Qf}8 \textit{Qd}2? 47.\textit{Qg}2 \textit{Qf}4 and Black is ready for ...\textit{Qb}4–c3 and ...\textit{Qb}4†. 45.\textit{Qf}7 \textit{Qd}6 46.\textit{Qc}7 \textit{Qc}6 47.\textit{Qh}7 Precise defence, which is quite impressive, even if it is not enough to save the game. 47.\textit{Qg}7 \textit{Qb}6! 48.\textit{Qxb}6 \textit{Qxb}6 49.\textit{Qg}6 (49.\textit{Qx}e5 \textit{c}4) 49...\textit{Ed}8++ 47...\textit{Qb}4!! 47...\textit{Qb}6 48.\textit{Qxb}6 \textit{Qxb}6 49.\textit{Qh}6 \textit{Ed}8 50.\textit{Qf}7 was White’s idea, but Black wins anyway after 50...\textit{Qa}5†–+ supporting the c-pawn. 48.\textit{Qf}4! 48.\textit{Qg}2 \textit{Qb}5 would lose the bishop. 48...\textit{Qxf}4!! 48...\textit{Qxf}4! 49.\textit{Qg}5 \textit{Qg}8 was simpler, even though the win is not entirely forced. 49.\textit{Qe}5 \textit{Qe}8 50.\textit{Qe}6 \textit{Qd}6 51.\textit{Qb}8!! White could have kept himself in the game with a nice tactical defence: 51.\textit{Qb}6! \textit{Qe}7 52.\textit{Qc}7†! \textit{Qxc}7 53.\textit{Qxe}7† \textit{Qd}6 54.\textit{Qg}7 \textit{Qxe}6 55.\textit{Qx}e5. Black should win eventually, but White can still wriggle a bit. 51...\textit{Qxe}6 52.\textit{Qg}6 \textit{Qd}5 53.\textit{Qd}8† \textit{Qc}4 54.\textit{Qf}5 \textit{Qxa}7 55.\textit{Qxc}8 \textit{Qc}3 56.\textit{Qc}6 \textit{Qb}2 57.\textit{Qe}6 \textit{Qe}7 57...\textit{Qh}7† 58.\textit{Qg}2 \textit{Qh}6 was another
way to win the game. The exchange sacrifice is next. 58.\texttt{g2} 58.\texttt{c4} \texttt{e4} 59.\texttt{g8} \texttt{e2} also wins. Black will either play ...\texttt{e1-g3} or sacrifice the exchange on a2. 58...\texttt{xex6} 0–1

45. Hannes Stefansson – Yu Yangyi, Reykjavik 2013
45...\texttt{f8?} 46.d7 \texttt{xd7} 47.\texttt{xf5} \texttt{gx5} 48.\texttt{xf3} \texttt{e5} 49.\texttt{e3}\textsuperscript{+} White held the game after an additional 43 moves. ½–½

Instead Black should have prepared for his opponent’s idea with 45...\texttt{f6}!! White can either play something like 46.\texttt{e2} with obvious problems, or see why it no longer works: 46.d7 \texttt{xd7}! The most accurate, but not the only winning move: 46...\texttt{g4} 47.\texttt{exe6} \texttt{fxe6} 48.\texttt{b6} \texttt{f1}\textsuperscript{+} 49.\texttt{g1} \texttt{d3} would also pick up the pawn, but under inferior circumstances. Still, I would consider this a correct solution if I had found it in a game, so I recommend that you do the same if this line was your intention. 47.\texttt{xd7} \texttt{a1}+ The check can also be given on \texttt{f1}. 48.\texttt{h2} \texttt{xe3} 49.\texttt{xe3} \texttt{e5}\textsuperscript{+} Black wins with his two extra pawns, although not immediately.

46. Vladimir Kramnik – Nikita Vitiugov, Paris/St Petersburg 2013
White has the advantage, but the fact that he is already clearly winning came as a surprise for me. 42.\texttt{d3}! The threat to the a6-pawn is quite powerful. 42...\texttt{c8} 43.\texttt{c4} \texttt{f8} 43...\texttt{e7} 44.\texttt{c5}\textsuperscript{+} \texttt{d7} was another defensive try, but after 45.\texttt{a7}\textsuperscript{+} it is clear that it has failed. 44.\texttt{c5}\textsuperscript{+} \texttt{g8} 45.b5! Creating a passed a-pawn. 45...\texttt{axb5} 46.\texttt{b6} \texttt{f8} 47.a6 \texttt{b4} 48.a7 \texttt{e1}+ 49.\texttt{g2} \texttt{d2}\textsuperscript{+} 50.\texttt{g1} 1–0

47. Ding Liren – Ian Nepomniachtchi, Biel 2013
32.\texttt{d6}? This allows Black to exchange his a- and b-pawns for the c-pawn. True, he will have to suffer for a long time afterwards, but eventually he should hold. 32...\texttt{xc8}! 33.\texttt{xa5} \texttt{b3}! 34.\texttt{b4} \texttt{h6} 35.\texttt{b7} \texttt{e7} 36.\texttt{b5} \texttt{h7} 37.\texttt{xb3}? does not work, and Black wins after 37...\texttt{xb7} 38.\texttt{cxb7} \texttt{xb3}. 36...\texttt{b2}! 37.\texttt{a8}\textsuperscript{+} \texttt{h7} 38.\texttt{xb2} \texttt{xc6} 39.\texttt{b1}+ \texttt{f5} 40.\texttt{a5} \texttt{g6}\textsuperscript{+} Black suffered and suffered, but eventually drew on move 64. ½–½

32.\texttt{c1}\textsuperscript{+} has the idea of meeting 32...\texttt{b3}? with 33.\texttt{c7} \texttt{c8} 34.\texttt{d8}\textsuperscript{+} \texttt{f8} 35.\texttt{d5}\textsuperscript{+} \texttt{f7} 36.\texttt{b7}\textsuperscript{+} winning. However, Black should instead play 32...\texttt{c8}!, when we are likely to reach the same type of ending as in the game.

I found this position deeply fascinating. I was sure that White had to be winning here, even though the engine did not tell me how. So I had to find the win by myself. Later, when I left the engine running for longer, it came up with the same solution that I had found. 32.\texttt{d1}! The start of a nice idea. 32...\texttt{h5} 32...\texttt{h6} works in much the same way. 32...\texttt{c8} loses immediately to 33.\texttt{d8}\textsuperscript{+} \texttt{f8} 34.\texttt{c7}!. White threatens \texttt{xc8}, and after 34...\texttt{f7} White wins with 35.\texttt{d7}\textsuperscript{+} followed by exchanging queens. 33.\texttt{c5}! The main point, intending to bring the rook to the 7th rank. In order to win the game, White needs to combine pushing the c-pawn with threats to the king. 33...\texttt{c8} 33...\texttt{b3} 34.\texttt{c7} \texttt{e8} 35.\texttt{d8} b2 36.\texttt{b5} wins. 34.\texttt{d7} \texttt{g6} Another defensive idea is 34...\texttt{a2} 35.\texttt{e7} \texttt{b1}\textsuperscript{+} 36.\texttt{g2} \texttt{g6}, but after 37.\texttt{c7} White is winning, for example: 37...\texttt{h7} 38.\texttt{f3} \texttt{e8} 39.e4! b3 40.\texttt{d8} \texttt{xe7} 41.\texttt{c8}=\texttt{e} \texttt{h6} 42.\texttt{h8}\textsuperscript{+} \texttt{g5} 43.\texttt{c1}\# 35.\texttt{c4}\textsuperscript{+} This is the engine’s perfection of my idea. I had 35.\texttt{d5}\textsuperscript{+}, which also wins, but only after unnecessary complications. 35...\texttt{h7} 36.\texttt{c7} \texttt{f5} 37.\texttt{e7}! 37.\texttt{d8} also wins, but after some complications.
37...\texttt{h6} 38.\texttt{e4} \texttt{g4} 39.\texttt{h4} White has complete control and will win after something like: 39...\texttt{f8} 40.\texttt{b5} \texttt{c8} 41.\texttt{b8} Followed by 42.\texttt{e8}!, taking control of the 8th rank.
48. Jeroen Piket – Anatoly Karpov, Monte Carlo (3) 1999

32.\(\text{f}2\)! c3! 33.\(\text{xc3}\) 33.\(\text{xc3}\) \(\text{xb4}\) 34.\(\text{xa3}\) \(g4\) would give White problems with his king.

33 ... \(\text{xc3}\) 34.\(\text{xc3}\) \(\text{xb4}\) The game was drawn on move 52.

Piket missed the chance to take the full point with:

32.b5!! \(\text{xb5}\) 33.\(\text{xd5}\) \(\text{e5}\) 33 ... \(\text{d8}\) 34.\(\text{d4}\) \(\text{c6}\) 35.\(\text{b6}\) gives White excellent winning chances. 34.\(\text{d4}\)! \(\text{xd4}\) 35.\(\text{exd4}\) \(\text{d8}\)

35 ... \(\text{c6}\) 36.\(\text{b6}\) wins. 36.\(\text{c3}\) \(\text{c6}\) 37.\(\text{xa3}\) \(\text{xd4}\) 38.\(\text{a6}\) \(\text{d2}\) After 38 ... \(\text{b7}\) 39.\(\text{b6}\) \(\text{c8}\)

40.\(\text{b8}\) \(\text{d8}\) 41.\(\text{e4}\) White is technically winning, though some work remains.

39.\(\text{f1}\)! 39.\(\text{e1}\)? is much worse as Black wins a tempo for getting back with ... \(\text{e3}\)\(\text{t}\). 39 ... \(\text{b7}\) 39 ... \(\text{d3}\)? does not work now. White wins after 40.\(\text{xc6}\) \(\text{xc3}\) 41.\(\text{c8}\)\(\text{t}\) \(\text{g7}\) 42.\(\text{c6}\) and the pawn queens.

40.\(\text{xb6}\) White is close to winning, for example: 40 ... \(\text{d3}\)?! 41.\(\text{b6}\)!

White has an extra pawn and should be heading for a full point, but things turned out to be less than easy in practice. 35.f5? This leads to too many simplifications. Even though White retains his extra pawn, he does not have any winning chances in the ending. 35...Wxd4 Black is happy to secure a draw, even if White can enjoy an extra pawn for the better part of the afternoon. A bit more accurate was 35...g3?, with the idea 36.fxe6 Wxd4 37.Wxd4 Wxb3 and the endgame is easily drawn. 36.Wxd4 exf5 37.Wd5 White could also have tried 37.Wxh4 g3 38.f4, but Black reaches a draw all the same: 38...Wxb3 39.Wxf5 Wxa3 40.Wxa5 b3 41.Wb5 Wxa4 42.c5 Wc4 and White has no real hope of winning. 37.g3 Wxa5 Wxb3 38.Wa6 Wb1† 40.Wh2 Wf6 41.a5 We6 42.a6 Wxa1 43.Wb6† We5 44.c5 Wb6 45.a6 Wxa6 47.Wd3† Wxc6 The game was drawn on move 72.

35.c5? is wrong due to 35...g3 36.Wxf6† Wxf6 37.Wa6 Wxb3 38.Wxa5 Wc4 39.c5 Wc7 40.Wc5 Wf8 and White needs to be careful.

The only serious winning attempt was 35.g4!!, threatening to be a full pawn up without counterplay. After the obligatory 35...hxg3 36.Wg2†, Black has regained his pawn, but he has lost his access to the g3-square, turning a previously active position into a passive one. Suddenly White has two passed pawns and what seems to be a full grasp on the game. 36.Wh6 Even clearer is: 36...Wxd4 37.Wxd4 Wf6 38.c5 Wd7 39.c6 e5 40.Wc4 Wd8 41.fxe5 Wc7 42.h4 and Black is in zugzwang. 42.f5 43.h5 Wd6 44.Wxd3 Wxd3 45.Wc1+ 37.Wf6† Wxf6 38.Wxb3 Wg6† 39.Wh2 Wf6 40.Wd4 White still has to demonstrate strong technical play to win the game, but the extra pawn has been regained and Black is facing a difficult defence.

50. Kamil Dragun – Ilja Golichenko, Krakow 2013

It seems that Black needs a miracle to draw. 38.Wb8? 39.Wd6† We7 40.We8† Wc8 41.Wd6† Wc7 42.Wf5 42.Wxf7 g2 43.Wd6† also wins. 42.Wc6 Desperation. 43.Wxc3 Wd4† 44.Wb1 Wb2 45.Wc1† Wb7 46.Wd6† Wf6 47.Wg1 1–0

38...Wb6† was the only move. The two main lines are fantastic! 39.Wd6† 39.d6 Wd7!! 40.Wxg3 Wxg3 41.Wh1 Wg8 42.Wh7 White continues his initiative, but Black has brilliant counterplay. 42...e4! 43.Wxf7 Wd4! White is able to carry out his threat, but then after 44.cxd7† Wxd7 45.Wf8† Wd8 46.d7† Wxf7 47.d8=W Black has 47...Wg2† drawing with a perpetual. 39...Wb8 An important point – the king escapes from the firing zone. 40.Wxf7 This is obviously the critical test. 40.Wf5 Wxd5! leads to deep complications that I doubt anyone can calculate to the end. Nor do we need to do so, to understand that we have good chances here. The lack of alternatives is enough by far! 41.Wxd5 This is the obvious main line. (I would like to add that 41.Wd6† Wxa8 42.Wxg3 Wd4 43.Wf5 Wf5! 44.Wxd4! exd4 45.We7 Wb6 46.Wd3 Wb5 also should end in a draw.) 41...g2 42.Wd7 g1=Wh 43.Wc7† Wb7 44.Wd6† Wb6 45.Wc4† Wb5 46.Wd6† With a perpetual check. 40...g2 41.Wxe5 Wh2!! This quiet move is absolutely essential. Without it, Black is just lost. 42.Wd3 Wh1 43.Wxe3 Wxd1 44.Wf3 Wf1 45.Wd6† Wc8 46.f7 g1=Wh† 47.Wxg1 Wxf7 Black makes the draw and might even be able to pose White one or two practical problems.

51. Henrik Danielsen – Sebastian Maze, Helsingor 2013

44.Wh2?? Preventing a check on g4 – which does not even seem that dangerous – while
blundering into a counterpunch in the centre. A truly out-of-character move for Danielsen! 44...d5! Getting rid of a weakness and activating the knights at the same time. 45.exd5 ½xd5† 46...e2 ½hf6 46...b4! 47...cc1 e4 with fine counterplay was more to my taste. 47...f3 ½b4? 47...e4 48...g5 ½xg3† 49...f2 ½xf1 50...e6† ½f7 51...xc7 ½fe3 52...d2 ½g4† 53...e1 ½de leaves White without any serious winning chances; compared to the game, Black’s king is much better placed. 48...g5! ½xc2? Black’s ability to conjure tricks is diminished by the exchanging of his rook. The potential of this piece in coordination with the knights could be fantastic. 48...b4! 49...e6† ½h5 50...xc7 ½e4 51...f8± ½d4† 52...d3 ½xg3 53...e8 ½h7 54...f7† ½h6 55...b7? 55...d6! would have retained good winning chances. 55...½d5! 56...f6 e4† 57...d2 ½xh4 58...xb6 ½g2 59...d5 h4 60...b1 The more precise 60...c5! would have kept the balance. The forcing line goes 60...e3† 61...xe3 ½e4† 62...e2 ½xe3 63...xe3 ½xc5 64...b5 and a draw is imminent. 60...b3 61...c5 e3† 62...xe3 ½e4† 63...e2? A second blunder. 63...d3! ½xc5† 64...e2 would easily have held the game. 63...½c3† 64...f3 ½xb1 65...c6 ½d2† 66...g3 ½xe3 0–1

Something like 44...b1? would retain a lot of the advantage, but after 44...b6 White does not have an immediate way to prove it.

44...g5! was the strongest move. It eliminates one of the black knights and makes it much easier for White to use his king actively without fearing all sorts of tricks. After the verbal argument, let’s see the proof: 44...½xg5 44...g4† 45...d3 does nothing to improve Black’s position. The check on e6 is still coming and the knight is doing nothing on g4. 44...b6 45...xh7 ½xh7 46...d3 is a great improvement for White. Black looks lost, for example: 46...½f8 47...xc2! ½e6 48...f7† ½g6 49...f6 ½c5† 50...e3 ½xa4 51...b7 White is winning. His first threat is ½f7, and after 51...½c5 52...e7 ½c8 53...xd6 everything falls apart for Black. 45...xg5 ½h7 46...d1 ½c6 I also do not believe in Black’s counterplay after 46...½xg5 47...xd6 ½f7. White simply takes the pawn and queens his own: 48...xb6 ½f3† 49...e2 ½g3 50...c5 and White should win. 47...c5!! The clever break. 47...xc2? ½xc4 48...xd6 ½xg5 would even favour Black. 47...xc5 48...d2 Black has no counterplay, and White should win with decent technique.

52. Vassily Ivanchuk – Anish Giri, Reggio Emilia 2011

The great technician Ivanchuk missed the only way to play for a win. 25...b5? ½b7 26...xf8† In the event of 26...b6 ½xb6 27...e7 ½c8 the f-pawn is misplaced on f5. 26...xf8 27...d5 cxd5 28...c7 ½f7 29...f2 d4 30...d g5 31...g6† ½xg6 32...e6 ½e8 33...xd4 ½xg4 34...g3 ½g5 35...h4† ½h5 36...d3 ½d7 37...f3 ½e8 38...d5 ½b7 39...b4 ½c8 40...c6 ½d7 41...b8 ½e8 42...d6 ½d7 ½–½

25...f2!! gives White slight pressure, but Black should hold: 25...b7 26...b6 ½xb6 27...e7 ½c8 28...xf8† ½xf8 29...c7 ½f5 30...xc6 ½d5 31...f3 ½b4 25...xf8† ½xf8 26...d5 cxd5 27...c7 d4! Black has adequate counterplay.

25...g3!! was the sensational way to prove a big advantage. 25...b7 No other move really makes sense. 25...b4 is a weird suggestion by the computer. White finds 26...f2± and simply improves his position. 26...b6! ½xb6 27...e7 ½e8 28...xf8† ½xf8 29...c7 Black cannot avoid losing two pawns. 29...d5 29...d7? 30...b7 wins a piece. 30...b6 ½d5 31...e6 White has serious winning chances in this ending, though it is by no means easy to win. The general idea is to create a passed pawn on the queenside and then improve the situation on the kingside to play on both flanks, using the rook’s great mobility on an open board.
The game went: 38.\texttt{f2}\? This looks natural, but Black can defend in a nice way. 38...\texttt{b1}↑ 39.\texttt{h2} \texttt{b2} 40.\texttt{g1} \texttt{c2}! 41.\texttt{a5} \texttt{c5} 42.\texttt{xc5} \texttt{xxc5} 43.\texttt{a6} \texttt{xa5} 44.\texttt{g3} \texttt{a2} 45.\texttt{a7} \texttt{f7}? A horrific blunder. 45...\texttt{c5}! would have left White without a way to improve his position. 46.\texttt{g4}! \texttt{xc2}! This only makes things worse, though I do not believe in Black’s chances after 46...\texttt{g7} 47.\texttt{e8}! \texttt{xa7} 48.\texttt{xe6} \texttt{c5} 49.\texttt{e6} \texttt{a2} 50.\texttt{g3} \texttt{e2} 51.\texttt{e6}, when White should win with his soon-to-be connected passers. 47.\texttt{h5} \texttt{a2} 48.\texttt{hxh6} \texttt{a1} 49.\texttt{xe5} \texttt{a2} 50.\texttt{h6} \texttt{a1} 51.\texttt{h4} \texttt{a2} 52.\texttt{h5} \texttt{a1} 53.\texttt{g5} \texttt{g7} 54.\texttt{h6}↑ 55.\texttt{f6} 1–0

I am not sure that White can win this position against perfect defence, but he can come close with accurate prophylactic play. 38.\texttt{h2}!! The main point is that Black has no easy way to improve his position, as he no longer has ...\texttt{c5}↑ and ...\texttt{d4}, which would protect the e5-pawn while covering the vital a7-square. 38...\texttt{h5}? An attempt to create active counterplay, which has the problem of weakening the pawns as well. I do not believe that this works, but the alternatives are unpleasant too. 38...\texttt{f7} 39.\texttt{a5} \texttt{b2} 40.\texttt{a6} \texttt{a2} 41.\texttt{a7} \texttt{c5} 42.\texttt{xe5} \texttt{xa7} 43.\texttt{xa7} \texttt{a7} 44.\texttt{xc7}± White has excellent winning chances, but probably this is Black’s best defensive try. 38...\texttt{b2} 39.\texttt{a5} \texttt{a2} 40.\texttt{a6} \texttt{f6} 41.\texttt{a7} White is threatening \texttt{f2}. 41...\texttt{c5} 42.\texttt{h8}! (42.\texttt{f2}?! \texttt{xa7} 43.\texttt{e3} \texttt{b3} 44.\texttt{xa7} \texttt{g7} reaches an odd position. I doubt that White can win despite his extra piece.) 42...\texttt{xa7} 43.\texttt{xe6} 44.\texttt{xe5}± White has excellent winning chances. 39.\texttt{a5} \texttt{h4} This looks like an active defence, but the pawns are simply in the firing line. 40.\texttt{f2} \texttt{a4} 41.\texttt{a6} \texttt{e7}? The best defensive try. If 41...\texttt{c5}?! 42.\texttt{e3} \texttt{e7} 43.\texttt{g1}↑ the white king joins the game with decisive effect. 41...\texttt{b4}?! 42.\texttt{a7} \texttt{c5} looks like it might hold, but White wins with a surprising move: 43.\texttt{g4}!! \texttt{xa2} (43...\texttt{hgx3}↑ 44.\texttt{xg3} \texttt{a2} 45.\texttt{e3} \texttt{g6} 46.\texttt{e8} 47.\texttt{a8} \texttt{e1}↑ 48.\texttt{f2}! \texttt{xf2}↑ 49.\texttt{g4} \texttt{xa8} 50.\texttt{xa8}++) 44.\texttt{h1}! (If 44.\texttt{g1} \texttt{c3}! Black survives.) 44...\texttt{a3} 45.\texttt{e3}± White wins. If the bishop moves from b4, the c5-pawn falls and White promotes the pawn. If Black takes on e3, the rook can move from a8. And if White just gets time to take the black pawns, he wins as well. 42.\texttt{e3} \texttt{a1}! 42...\texttt{c5}? 43.\texttt{g1}↑ 43.\texttt{g4} \texttt{hxg3}↑ 44.\texttt{g3} \texttt{a2} 45.\texttt{g4} \texttt{f7} 46.\texttt{e8} \texttt{xa6} 47.\texttt{xc7} \texttt{f8}! 47...\texttt{e8} is weaker, as the king belongs to f8 after 48.\texttt{xc5} \texttt{g5} 49.\texttt{xc5} \texttt{a3}. The point is that when the king is on e8 White can play 50.h4! \texttt{xf3} 51.\texttt{h5} \texttt{f8} 52.\texttt{g6}! \texttt{g3}↑ 53.\texttt{f6} \texttt{g8} 54.\texttt{xe5} \texttt{g5}↑ 55.\texttt{f6}↑, with the point 55...\texttt{hxh5}↑! 56.\texttt{g6}↑ winning. 48.\texttt{xc5} \texttt{g5} 49.\texttt{xc5} \texttt{a3} 50.\texttt{g4}! This time around it makes sense to defend the extra pawn. White is winning as Black will either lose another pawn to \texttt{c5}, or will have to put his rook in an awfully passive position on the fifth rank.
Name Index

**A**

Aabling-Thomsen | 340, 342
Aagaard, G. | 159, 160
Aarefjord | 47, 48
Aaskov | 159, 160, 162, 165
Abrahamyan | 31, 32
Abreu Delgado | 137, 142
Acs | 347, 350, 353, 356
Adams | 45, 46, 57, 58, 116, 176, 177, 186, 346, 349, 350
Adhiban | 33, 35, 255, 258
Akesson, J. | 104, 106
Akesson, R. | 162, 164
Alekseev | 255, 258
Ali | 265, 266
Alsina Leal | 211, 215
Amin | 93, 94, 131, 135
Amonatov | 65, 66
Anand | 16, 17, 33, 34, 71, 72, 116, 117, 127, 128, 133, 192, 194, 217, 219, 296, 297, 298, 301, 319, 321
Andersen | 67, 68
Andersson | 155, 158, 337, 338
Andreasen | 357, 359
Andreev | 328
Andreikin | 69, 70, 340, 343
Antal | 159, 160
Anton Guijarro | 23
Antonsen | 40
Arkell | 353, 354
Arslanov | 237
Arvola | 71, 72
Aryan | 29, 30
Asgarizadeh | 162, 164
Asrian | 61, 63, 101, 103
Atalik | 93, 94
Averbakh | 337, 338
Azarov | 303, 306

**B**

Baburin | 168, 287, 341, 344
Bacrot | 32, 65, 85, 87, 90, 91, 193, 196, 202, 210, 214
Balogh | 61, 62, 263
Bannik | 337, 338
Banusz | 189, 191
Bareev | 130, 132, 346, 348
Barsov | 65, 66
Bartel | 247, 248, 283, 284, 357, 360
Barus | 272, 275
Batkovskyte | 192, 195
Battaglini | 187, 188
Beliavsky | 311, 313
Belokurov | 242, 244
Berbatov | 27, 28
Berg | 49, 50, 63, 64, 123, 125, 242, 244
Berry | 27, 28
Bezgodov | 192, 194
Blauert | 82
Bluvshtein | 69, 70
Bobras | 43, 44, 311, 314
Bogdanovich | 101, 103
Bologan | 61, 63, 64, 80, 123, 125, 225, 226, 311, 312, 347, 350, 353, 356
Borbjerggaard | 256
Borgo | 43, 44
Borisek | 283, 284
Borisenko | 154, 156
Bosnjak | 83
<table>
<thead>
<tr>
<th>Name</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Borvinnik</td>
<td>39, 299</td>
</tr>
<tr>
<td>Braun</td>
<td>47, 48</td>
</tr>
<tr>
<td>Brochet</td>
<td>43, 44</td>
</tr>
<tr>
<td>Bromann</td>
<td>154, 156</td>
</tr>
<tr>
<td>Bromberger</td>
<td>93, 94</td>
</tr>
<tr>
<td>Browne</td>
<td>317</td>
</tr>
<tr>
<td>Brunello</td>
<td>57, 58, 218, 224, 226, 227</td>
</tr>
<tr>
<td>Brynell</td>
<td>197, 198, 311, 313</td>
</tr>
<tr>
<td>Buhmann</td>
<td>127, 128</td>
</tr>
<tr>
<td>Bukavshin</td>
<td>315, 316</td>
</tr>
<tr>
<td>Bulski</td>
<td>307, 308</td>
</tr>
<tr>
<td>Burdylev</td>
<td>221, 222</td>
</tr>
<tr>
<td>Burmakin</td>
<td>67, 68</td>
</tr>
<tr>
<td>Bu Xiangzhi</td>
<td>347, 352, 361, 362</td>
</tr>
<tr>
<td>Cabrera</td>
<td>23</td>
</tr>
<tr>
<td>Cao</td>
<td>33, 34</td>
</tr>
<tr>
<td>Carlsen</td>
<td>9, 10, 11, 47, 48, 116, 131, 135, 182, 217, 218, 247, 249, 251, 252, 283, 284, 346, 349</td>
</tr>
<tr>
<td>Carstensen</td>
<td>75, 76, 307, 308</td>
</tr>
<tr>
<td>Caruana</td>
<td>43, 44, 49, 50, 153, 159, 161, 247, 249, 262, 333</td>
</tr>
<tr>
<td>Cernousek</td>
<td>239</td>
</tr>
<tr>
<td>Chabanon</td>
<td>217, 220</td>
</tr>
<tr>
<td>Chatalbashev</td>
<td>31, 32</td>
</tr>
<tr>
<td>Chatterjee</td>
<td>27, 28</td>
</tr>
<tr>
<td>Chernin</td>
<td>347, 351</td>
</tr>
<tr>
<td>Chernobay</td>
<td>273, 278</td>
</tr>
<tr>
<td>Chirila</td>
<td>265, 266</td>
</tr>
<tr>
<td>Cmilyte</td>
<td>254, 257</td>
</tr>
<tr>
<td>Collins</td>
<td>137, 142, 221, 223</td>
</tr>
<tr>
<td>Cori</td>
<td>279, 282</td>
</tr>
<tr>
<td>Cornette</td>
<td>273, 277</td>
</tr>
<tr>
<td>Cramling</td>
<td>61, 62</td>
</tr>
<tr>
<td>Cuartas</td>
<td>365, 366</td>
</tr>
<tr>
<td>Czarnota</td>
<td>303, 305, 311, 314</td>
</tr>
<tr>
<td>Daly</td>
<td>137, 142, 221, 223</td>
</tr>
<tr>
<td>D'Amore</td>
<td>47, 48</td>
</tr>
<tr>
<td>Danielian</td>
<td>302, 304, 311, 313</td>
</tr>
<tr>
<td>Danielen</td>
<td>71, 72, 365, 366, 367</td>
</tr>
<tr>
<td>Danin</td>
<td>319, 320</td>
</tr>
<tr>
<td>Deepan</td>
<td>211, 216</td>
</tr>
<tr>
<td>De la Villa</td>
<td>4, 8</td>
</tr>
<tr>
<td>Delchev</td>
<td>25, 26, 357, 358</td>
</tr>
<tr>
<td>Demidov</td>
<td>273, 278</td>
</tr>
<tr>
<td>De Ramos</td>
<td>67, 68</td>
</tr>
<tr>
<td>De Ruiter</td>
<td>237</td>
</tr>
<tr>
<td>De Verdier</td>
<td>335</td>
</tr>
<tr>
<td>De Winter</td>
<td>53, 54</td>
</tr>
<tr>
<td>Ding Liren</td>
<td>53, 54, 192, 195, 221, 223, 361, 363</td>
</tr>
<tr>
<td>Djukic</td>
<td>243, 245</td>
</tr>
<tr>
<td>Djuraev</td>
<td>303, 305</td>
</tr>
<tr>
<td>Docx</td>
<td>272, 276</td>
</tr>
<tr>
<td>Domany</td>
<td>254, 256</td>
</tr>
<tr>
<td>Dominguez</td>
<td>143, 144</td>
</tr>
<tr>
<td>Dorfman</td>
<td>311, 313</td>
</tr>
<tr>
<td>Dorrington</td>
<td>271, 274</td>
</tr>
<tr>
<td>Dragun</td>
<td>315, 316, 365, 366</td>
</tr>
<tr>
<td>Dreev</td>
<td>163, 166, 297, 317, 346, 347, 348, 351</td>
</tr>
<tr>
<td>Dvoretzsky</td>
<td>4, 5, 8, 14, 38, 52, 64, 80, 210, 213, 229, 286, 324, 348</td>
</tr>
<tr>
<td>Dworakowska</td>
<td>99, 100</td>
</tr>
<tr>
<td>Dzagnidze</td>
<td>67, 68, 115, 242, 244, 311, 313, 337, 339</td>
</tr>
<tr>
<td>Dzierzenga</td>
<td>61, 62</td>
</tr>
<tr>
<td>Edouard</td>
<td>136, 138, 365, 366</td>
</tr>
<tr>
<td>Ejsing</td>
<td>231, 232</td>
</tr>
<tr>
<td>Eljanov</td>
<td>95, 96, 221, 222, 242, 244, 255, 259, 267, 268, 361, 362</td>
</tr>
<tr>
<td>Elness</td>
<td>242, 244</td>
</tr>
<tr>
<td>Emms</td>
<td>4, 52, 59, 60</td>
</tr>
<tr>
<td>Emodi</td>
<td>254, 256</td>
</tr>
<tr>
<td>Epishin</td>
<td>47, 48</td>
</tr>
<tr>
<td>Erenburg</td>
<td>294, 296</td>
</tr>
<tr>
<td>Ernst</td>
<td>73, 75</td>
</tr>
<tr>
<td>Estrada Nieto</td>
<td>53, 54, 55, 56</td>
</tr>
<tr>
<td>Name</td>
<td>Page Numbers</td>
</tr>
<tr>
<td>------------</td>
<td>-----------------------</td>
</tr>
<tr>
<td>Fazulyanov</td>
<td>269, 271</td>
</tr>
<tr>
<td>Fedorchuk</td>
<td>53, 54, 61, 62, 136, 140</td>
</tr>
<tr>
<td>Fekete</td>
<td>192, 194</td>
</tr>
<tr>
<td>Felgaer</td>
<td>247, 249</td>
</tr>
<tr>
<td>Feller</td>
<td>53, 54, 242, 244</td>
</tr>
<tr>
<td>Fier</td>
<td>251, 252, 269, 271</td>
</tr>
<tr>
<td>Finegold</td>
<td>123, 126</td>
</tr>
<tr>
<td>Fischer</td>
<td>8, 123, 126</td>
</tr>
<tr>
<td>Fluvia Poyatos</td>
<td>37, 40</td>
</tr>
<tr>
<td>Fox</td>
<td>154, 156</td>
</tr>
<tr>
<td>Fressinet</td>
<td>187, 188</td>
</tr>
<tr>
<td>Fridman</td>
<td>155, 158, 192, 194</td>
</tr>
<tr>
<td>Friedel</td>
<td>45, 46, 302, 304</td>
</tr>
<tr>
<td>Frois</td>
<td>25, 26</td>
</tr>
<tr>
<td>Frolyanov</td>
<td>211, 215</td>
</tr>
<tr>
<td>Ftacnik</td>
<td>211, 215</td>
</tr>
<tr>
<td>Furhoff</td>
<td>55, 56</td>
</tr>
<tr>
<td>Gajewski</td>
<td>131, 135, 242, 244, 269, 270</td>
</tr>
<tr>
<td>Gallagher</td>
<td>104, 107</td>
</tr>
<tr>
<td>Galliamova</td>
<td>97, 98</td>
</tr>
<tr>
<td>Ganguly</td>
<td>173, 175, 353, 355</td>
</tr>
<tr>
<td>Gaponenko</td>
<td>211, 215</td>
</tr>
<tr>
<td>Gashimov</td>
<td>95, 96</td>
</tr>
<tr>
<td>Gelfand</td>
<td>15, 63, 64, 104, 106, 265, 266, 296, 297, 298, 299, 300, 301, 307, 308, 324, 325, 346, 349, 357, 358, 359</td>
</tr>
<tr>
<td>Georgiev, Ki</td>
<td>43, 44, 127, 129, 337, 339</td>
</tr>
<tr>
<td>Georgiev, V.</td>
<td>57, 58, 99, 100, 105, 108, 353, 356</td>
</tr>
<tr>
<td>Ghaem Maghami</td>
<td>25, 26</td>
</tr>
<tr>
<td>Giri</td>
<td>29, 30, 49, 50, 200, 202, 243, 245, 365, 367</td>
</tr>
<tr>
<td>Girya</td>
<td>93, 94</td>
</tr>
<tr>
<td>Gislason</td>
<td>247, 250</td>
</tr>
<tr>
<td>Givon</td>
<td>315, 317</td>
</tr>
<tr>
<td>Godena</td>
<td>84</td>
</tr>
<tr>
<td>Golichenko</td>
<td>365, 366</td>
</tr>
<tr>
<td>Golod</td>
<td>45, 46, 272, 274, 340, 342</td>
</tr>
<tr>
<td>Golubev</td>
<td>101, 102, 284, 289, 290</td>
</tr>
<tr>
<td>Gomez Esteban</td>
<td>155, 158</td>
</tr>
<tr>
<td>Graf</td>
<td>55, 56</td>
</tr>
<tr>
<td>Grandelius</td>
<td>122, 124</td>
</tr>
<tr>
<td>Greer</td>
<td>332</td>
</tr>
<tr>
<td>Grigoriants</td>
<td>187, 188</td>
</tr>
<tr>
<td>Grigoryan</td>
<td>272, 274</td>
</tr>
<tr>
<td>Grischuk</td>
<td>93, 94, 130, 132, 143, 144, 341, 344</td>
</tr>
<tr>
<td>Gritsenko</td>
<td>122, 124</td>
</tr>
<tr>
<td>Gronn</td>
<td>347, 350</td>
</tr>
<tr>
<td>Grover</td>
<td>29, 30, 136, 138</td>
</tr>
<tr>
<td>Guidez</td>
<td>353, 355</td>
</tr>
<tr>
<td>Guliyev</td>
<td>25, 26, 211, 214</td>
</tr>
<tr>
<td>Guseinov</td>
<td>59, 60</td>
</tr>
<tr>
<td>Gustafsson</td>
<td>263, 273, 276</td>
</tr>
<tr>
<td>Gyimesi</td>
<td>55, 56</td>
</tr>
<tr>
<td>Hagen</td>
<td>99, 100, 105, 108, 152</td>
</tr>
<tr>
<td>Halkias</td>
<td>307, 309</td>
</tr>
<tr>
<td>Hambleton</td>
<td>93, 94</td>
</tr>
<tr>
<td>Hansen, Cu.</td>
<td>59, 60</td>
</tr>
<tr>
<td>Hansen, S.B.</td>
<td>40, 80, 81, 162, 164, 251, 253, 272, 276</td>
</tr>
<tr>
<td>Hansen, V.</td>
<td>55, 56</td>
</tr>
<tr>
<td>Harikrishna</td>
<td>326, 327</td>
</tr>
<tr>
<td>Haubro</td>
<td>251, 252</td>
</tr>
<tr>
<td>Hawkins</td>
<td>4, 85, 88, 90, 92</td>
</tr>
<tr>
<td>Hebeden</td>
<td>154, 156, 265, 266</td>
</tr>
<tr>
<td>Hector</td>
<td>104, 106, 225, 226</td>
</tr>
<tr>
<td>Heinig</td>
<td>306</td>
</tr>
<tr>
<td>Hera</td>
<td>29, 30</td>
</tr>
<tr>
<td>Hess</td>
<td>265, 266</td>
</tr>
<tr>
<td>Holmsten</td>
<td>82</td>
</tr>
<tr>
<td>Holt</td>
<td>33, 35, 303, 305</td>
</tr>
<tr>
<td>Homa</td>
<td>33, 35, 303, 305</td>
</tr>
<tr>
<td>Horwitz</td>
<td>229</td>
</tr>
<tr>
<td>Hou Yifan</td>
<td>49, 50, 331</td>
</tr>
<tr>
<td>Howell</td>
<td>225, 227, 273, 278</td>
</tr>
<tr>
<td>Hunt</td>
<td>154, 156</td>
</tr>
<tr>
<td>Huschenbeth</td>
<td>127, 128, 187, 188</td>
</tr>
<tr>
<td>Huy Nguyen</td>
<td>130, 132</td>
</tr>
</tbody>
</table>
I
Inarkiev 25, 26, 27, 28, 127, 128, 159, 161, 211, 214, 221, 224, 251, 253, 267, 268, 273, 277
Iordachescu 43, 44, 254, 258
Ipatov 131, 133, 197, 198
Istratescu 101, 103
Iturrizaga 243, 246
Ivanisevic 130, 132
Ivanov 19, 20, 341, 344

J
Jablonski 197, 198
Jakovenko 57, 58, 97, 98, 131, 134, 136, 138, 145, 146, 347, 352
Jaracz 27, 28
Javakhishvili 101, 102
Jelling 119, 121
Jobava 33, 36, 286, 341, 343
Jones 55, 56, 123, 126
Jorgensen 152
Ju Wenjun 67, 68, 115, 211, 215

K
Kabanov 279, 280
Kagambi 53, 54
Kaidanov 347, 351
Kalaitzoglou 95, 96
Kalinitschew 29, 30
Kamsky 33, 34, 57, 58, 104, 106, 251, 253, 337, 339, 340, 342
Kanarek 73, 74
Karalkin 45, 46
Karjakin 16, 17, 99, 100, 119, 120, 136, 138, 159, 161, 265, 266
Karlsson 55, 56
Karpov 31, 32, 155, 158, 297, 361, 364
Kasparov 172, 279, 280, 297, 307, 309
Kaufman 346, 349
Kazhgaleyev 25, 26, 93, 94
Kempen 45, 46
Khachiyan 27, 28
Khairullin 130, 131, 132, 133, 243, 245
Khalifman 251, 253, 273, 278
Khandelwal 71, 72
Khismatullin 154, 156
Khukhhashvili 93, 94
Khiatside 57, 58
Kiewra 27, 28
King 59, 60, 71, 72
Kiriakov 211, 214
Kitaev 242, 244
Kling 229
Klinova 131, 133
Kobalia 57, 58
Kogan 55, 56
Kojima 119, 121
Kokarev 101, 103
Konner 225, 226
Konjicanin 43, 44
Kopylov 192, 194
Korchnoi 165, 247, 250, 291, 292, 299, 301, 302, 304, 341, 344
Kornev 122, 125, 130, 132, 243, 245, 335
Korobov 55, 56, 279, 281
Kosintseva, N. 279, 281, 302, 304
Kosintseva, T. 101, 102
Kotronias 67, 68, 273, 276
Kovalevskaya 97, 98, 99, 100, 189, 191
Koziak 104, 107
Kozul 65, 66
Kramnik 105, 109, 172, 192, 194, 204, 206, 207, 208, 255, 259, 297, 361, 363
Krasenkow 294, 295, 296
Kristiansen 315, 316, 317
Kritz 265, 266
Kryvoruchko 346, 349
Kuczynski 61, 62
Kuzmin 341, 344
Kukov 137, 142
Kurnosov 189, 191
Kuzubov 221, 222
Name Index

L

Lahno 123, 126, 272, 275
L’Ami, A. 311, 313
L’Ami, E. 116, 119, 120, 155, 157, 313
Lamprecht 4, 20
Landa 269, 270
Larsen 302, 304
Lauridsen 254, 256
Laznicka 254, 256, 311, 312, 340, 342
Ledger 265, 266
Leko 272, 276, 337, 338, 339, 346, 347, 348, 351
Lenciart 315, 316
Leon Hoyos 353, 356
Le Quang Liem 279, 281, 302, 305, 347, 351
Le Roux 162, 164
Liu Qingnan 29, 30
Ljubojevic 331
Lobron 104, 108
Lokander 27, 28
Lomineishvili 302, 304
Lou Yiping 104, 106, 340, 342
Lubbe 187, 188
Luch 272, 274
Luft 101, 102
Lupulescu 307, 309
Lu Shanglei 25, 26
Lysyj 39

M

Macieja 122, 124
Magem Badals 267, 268
Malakhov 324
Malisauskas 306
Mamedov, N. 163, 166
Mamedov, R. 311, 312
Mamedyarov 27, 28, 267, 268
Manea 311, 312
Mareco 31, 32
Marrero Lopez 197, 198
Maslak 319, 322
Mastrovasilis 84, 251, 253
Mathiesen 69, 70

Maiorga 31, 32
Maze 365, 366
McGowan 29, 30
McNab 8, 169
McShane 24, 127, 128, 273, 278, 319, 320
Meier 192, 193, 195
Mekhitarian 210, 213
Mekhitarian 47, 48, 69, 70, 143, 144
Mikhalchishin 347, 351
Miles 119, 121
Millyard 25, 26
Milos 243, 246
Miton 341, 343
Moiseenko 49, 50, 273, 277
Molina 197, 198
Monteiro Melendez 247, 249
Morozevich 73, 74, 189, 190, 217, 218, 271, 274, 302, 304
Moskalenko 37, 40
Morylev 162, 164
Movsesian 267, 268, 361, 362
Muir 93, 94, 189, 190
Mueller 3, 4, 6, 18, 20, 69, 71, 320, 321
Munguntuul 162, 165
Murdzio 247, 250
Mushed 65, 66
Muzychuk, A. 67, 68, 167, 168
Muzychuk, M. 31, 32

N

Nabary 265, 266
Naiditsch 254, 256, 267, 268
Najer 61, 62
Nakamura 38, 40, 243, 245, 262, 307, 309, 310, 319, 321, 333, 346, 349
Nakhapetian 119, 120, 122, 125
Narayanan 73, 74
Nataf 217, 220
Navin 211, 216
Nepomniachtchi 319, 322
Negi 47, 48
Nepomniachtchi 55, 56, 61, 62, 105, 109, 279, 280, 361, 363
<table>
<thead>
<tr>
<th>Name</th>
<th>Page Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nielsen, N.</td>
<td>231, 232</td>
</tr>
<tr>
<td>Nielsen, P.H.</td>
<td>93, 94, 122, 124, 127, 129</td>
</tr>
<tr>
<td>Ni Hua</td>
<td>49, 50</td>
</tr>
<tr>
<td>Nikolaidis</td>
<td>95, 96</td>
</tr>
<tr>
<td>Nisipeanu</td>
<td>65, 66, 247, 248</td>
</tr>
<tr>
<td>Nogueiras</td>
<td>53, 54, 55, 56</td>
</tr>
<tr>
<td>Nohr</td>
<td>303, 306</td>
</tr>
<tr>
<td>Nordahl</td>
<td>47, 48</td>
</tr>
<tr>
<td>Norowitz</td>
<td>353, 355</td>
</tr>
<tr>
<td>Novikov</td>
<td>131, 134</td>
</tr>
<tr>
<td>Novitzkij</td>
<td>303, 306</td>
</tr>
<tr>
<td>Nunn</td>
<td>262</td>
</tr>
<tr>
<td>Nyzhnyk</td>
<td>254, 257</td>
</tr>
<tr>
<td>O'Donnell</td>
<td>353, 355</td>
</tr>
<tr>
<td>Oleksienko</td>
<td>340, 342</td>
</tr>
<tr>
<td>Onischuk</td>
<td>163, 166, 193, 195</td>
</tr>
<tr>
<td>Palac</td>
<td>269, 270</td>
</tr>
<tr>
<td>Palliser</td>
<td>269, 270</td>
</tr>
<tr>
<td>Palo</td>
<td>315, 316, 317</td>
</tr>
<tr>
<td>Panchanalathan</td>
<td>45, 46</td>
</tr>
<tr>
<td>Pantualaia</td>
<td>137, 141</td>
</tr>
<tr>
<td>Pap</td>
<td>29, 30</td>
</tr>
<tr>
<td>Papaioannou</td>
<td>162, 164</td>
</tr>
<tr>
<td>Papin</td>
<td>217, 218</td>
</tr>
<tr>
<td>Paragua</td>
<td>97, 98</td>
</tr>
<tr>
<td>Pashikian</td>
<td>154, 156</td>
</tr>
<tr>
<td>Pedersen</td>
<td>67, 68</td>
</tr>
<tr>
<td>Pelletier</td>
<td>75, 76</td>
</tr>
<tr>
<td>Pert</td>
<td>33, 34, 353, 354</td>
</tr>
<tr>
<td>Petrik</td>
<td>155, 157</td>
</tr>
<tr>
<td>Petrov</td>
<td>145, 146, 225, 228</td>
</tr>
<tr>
<td>Piket</td>
<td>361, 364</td>
</tr>
<tr>
<td>Pinaula</td>
<td>45, 46</td>
</tr>
<tr>
<td>Pira</td>
<td>162, 164</td>
</tr>
<tr>
<td>Plachetka</td>
<td>306</td>
</tr>
<tr>
<td>Poghosyan</td>
<td>122, 124, 213</td>
</tr>
<tr>
<td>Pogonina</td>
<td>53, 54</td>
</tr>
<tr>
<td>Poldauf</td>
<td>267, 268</td>
</tr>
<tr>
<td>Polgar</td>
<td>137, 141, 267, 268</td>
</tr>
</tbody>
</table>

Poluektov          | 101, 102     |
Ponomariov         | 93, 94, 247, 248, 255, 259, 273, 277, 302, 304 |
Popov, I.           | 63, 64, 99, 100, 189, 191 |
Popovic             | 59, 60       |
Portisch            | 297, 353, 355 |
Potkin              | 24, 99, 100, 119, 120 |
Predojevic          | 83          |
Pribyl              | 317          |
Prohaska            | 56          |
Rasmusen, A.S.      | 57, 59, 357, 360 |
Rasmusen, K.        | 69, 70       |
Rathlev             | 251, 252     |
Reinderman          | 254, 257     |
Rendle              | 27, 28       |
Reshevsky           | 123, 126     |
Rewitz              | 254, 256     |
Riazantsev          | 122, 125     |
Robson              | 19, 20, 65, 210, 214, 357, 360 |
Roeder              | 104, 107     |
Roiz                | 95, 96, 340, 343 |
Romanishin          | 167, 168, 189, 191, 357, 360 |
Romanov             | 210, 212, 341, 344, 345 |
Romanovsky          | 152, 164     |
Roos                | 43, 44       |
Rowson              | 15, 119, 121 |
Rozentalis          | 328, 329, 347, 350 |
Rubinstein          | 202, 299, 301, 331 |
Rubelevsky          | 365, 368     |
Rustemov            | 69, 70       |
Name Index 375

S

Sachdev  173, 175, 243, 245, 272, 275
Sadler  136, 138
Safarli  93, 94, 221, 222
Sagit  269, 270
Sakelsek  47, 48
Salem  269, 271
Salgado Lopez  25, 26
Salov  291
Sanikidze  137, 141, 211, 214
Santos Latasa  303, 306
Sarandos  357, 358
Sargissian  242, 244
Saric  61, 62, 97, 98
Sasikiran  225, 229
Savchenko  63, 64, 217, 218, 341, 345
Schandorff  57, 59, 233
Schlechter  301
Schnabel  59, 60
Seirawan  307, 309
Shankland  337, 339
Shaposhnikov  187, 188
Shaw  18, 121, 147, 154, 155, 156, 158, 189, 190, 346, 349
Shengelia  122, 124
Shereshevsky  324
Shimanov  61, 62, 225, 227
Shipov  190
Shirov  69, 70, 104, 106, 163, 166, 204, 205, 206, 225, 227, 243, 245
Shomoev  57, 58
Short  28, 65, 66
Sieber  306
Sikorova  192, 195
Skripchenko  337, 339
Smeets  143, 145
Smirin  298, 315, 317
Smith  154, 156, 200
Socko  95, 96, 167, 168, 242, 244, 340, 342
Sokolov, A.  73, 74
Sokolov, I.  217, 218, 219, 265, 266, 307, 310, 319, 321
Solodovnichenko  193, 195
Solomon  303, 305
Solovchuk  155, 157
Spassov  95, 96
Speelman  71, 72
Spence  271, 274
Srienz  306
Stanisiewski  306
Stefansson  154, 157, 361, 363
Steinitz  331
Stevic  272, 275
Strelnikov  154, 156
Studnicka  239
Suba  33, 36
Suliskis  159, 160
Sunder Shyam  154, 157
Sutovsky  136, 139, 243, 245, 272, 274, 276, 286, 289
Svane  122, 124
Sveshnikov  269, 271
Svetushkin  317
Svidler  136, 139, 140, 182, 184, 185, 186, 189, 190, 247, 248, 361, 362
Swiercz  340, 342
Szabo  39, 56
Szczepkowska  303, 305
Szymczak  104, 107

T

Taggart  65, 66
Taimanov  8, 127, 129
Tal  127, 129
Tan Zhongyi  31, 32, 116
Tarjan  317
Teplyi  143, 144, 159, 161
Ter-Sahakyan  197, 198
Teterev  225, 228
Thingslad  33, 34
Tikkanen  225, 226
Timman  135
Timofeev  59, 60, 131, 133, 225, 227, 315, 316
Timoshenko  193, 195
Tiviakov  193, 196, 341, 344, 345
Tomashevsky  211, 215, 269, 270
<table>
<thead>
<tr>
<th>Names</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Topalov</td>
<td>47, 48, 59, 60, 97, 98, 143, 144, 269, 270, 340, 342</td>
</tr>
<tr>
<td>Torre</td>
<td>167, 168</td>
</tr>
<tr>
<td>Tratar</td>
<td>31, 32</td>
</tr>
<tr>
<td>Troff</td>
<td>302, 304</td>
</tr>
<tr>
<td>Turov</td>
<td>243, 245</td>
</tr>
<tr>
<td>Uhlmann</td>
<td>95, 96</td>
</tr>
<tr>
<td>Vachier-Lagrange</td>
<td>143, 145, 202, 203, 236, 242, 244, 279, 280</td>
</tr>
<tr>
<td>Vajda</td>
<td>101, 103, 131, 133, 189, 191</td>
</tr>
<tr>
<td>Vallejo Pons</td>
<td>9, 25, 26, 71, 72, 73, 74, 112, 114, 279, 282, 346, 348</td>
</tr>
<tr>
<td>Vancura</td>
<td>64, 66</td>
</tr>
<tr>
<td>Van den Berg</td>
<td>97, 98</td>
</tr>
<tr>
<td>Van Kampen</td>
<td>130, 132</td>
</tr>
<tr>
<td>Van Wageningen</td>
<td>319, 321</td>
</tr>
<tr>
<td>Van Wely</td>
<td>49, 50, 119, 120, 221, 222, 307, 309</td>
</tr>
<tr>
<td>Vecheva</td>
<td>55, 56</td>
</tr>
<tr>
<td>Venkatesh</td>
<td>73, 75</td>
</tr>
<tr>
<td>Vescovi</td>
<td>210, 212</td>
</tr>
<tr>
<td>Vinh Bui</td>
<td>130, 132</td>
</tr>
<tr>
<td>Vitiugov</td>
<td>127, 128, 271, 273, 274, 278, 361, 363</td>
</tr>
<tr>
<td>Vocaturo</td>
<td>69, 70, 155, 158</td>
</tr>
<tr>
<td>Voiska</td>
<td>279, 281</td>
</tr>
<tr>
<td>Voitsekhovsky</td>
<td>45, 46</td>
</tr>
<tr>
<td>Volkov</td>
<td>33, 35, 137, 141, 159, 161, 279, 280</td>
</tr>
<tr>
<td>Volokitin</td>
<td>49, 50, 242, 244</td>
</tr>
<tr>
<td>Vovk, Y.</td>
<td>43, 44</td>
</tr>
<tr>
<td>Wang Hao</td>
<td>15, 16, 63, 64, 99, 100, 217, 218, 302, 305</td>
</tr>
<tr>
<td>Wang Yue</td>
<td>29, 30, 73, 74, 131, 135, 255, 259</td>
</tr>
<tr>
<td>Wells</td>
<td>279, 280</td>
</tr>
<tr>
<td>Werle</td>
<td>155, 157</td>
</tr>
<tr>
<td>Williams</td>
<td>101, 103</td>
</tr>
<tr>
<td>Wojtaszek</td>
<td>162, 164, 251, 252, 283, 284</td>
</tr>
<tr>
<td>Yemelin</td>
<td>365, 368</td>
</tr>
<tr>
<td>Yildiz</td>
<td>302, 304</td>
</tr>
<tr>
<td>Yusupov</td>
<td>265, 266, 337, 338</td>
</tr>
<tr>
<td>Yu Yangyi</td>
<td>123, 126, 361, 363</td>
</tr>
<tr>
<td>Zagorski</td>
<td>251, 253</td>
</tr>
<tr>
<td>Zaltz</td>
<td>340, 342</td>
</tr>
<tr>
<td>Zaronskih</td>
<td>33, 34</td>
</tr>
<tr>
<td>Zelbel</td>
<td>101, 102</td>
</tr>
<tr>
<td>Zhao Xue</td>
<td>162, 165</td>
</tr>
<tr>
<td>Zherebukh</td>
<td>283, 284</td>
</tr>
<tr>
<td>Zhigalko, S.</td>
<td>119, 120, 122, 125, 155, 157</td>
</tr>
<tr>
<td>Zhou</td>
<td>71, 72</td>
</tr>
<tr>
<td>Zhou Jianchao</td>
<td>25, 26, 53, 54</td>
</tr>
<tr>
<td>Zhukova</td>
<td>53, 54, 136, 140</td>
</tr>
<tr>
<td>Zickus</td>
<td>254, 257</td>
</tr>
<tr>
<td>Zubarev</td>
<td>357, 358</td>
</tr>
<tr>
<td>Zvjaginsev</td>
<td>225, 229</td>
</tr>
</tbody>
</table>
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