

**Herman Grooten**

# **Chess Endgames for Club Players**

**The Essential Skills for a Forceful Finale**

**New In Chess 2022**

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## **Foreword: mastering the endgame**

There are already many endgame books, so what is the point of another one, I hear you ask. But most of them deal with theoretical positions and concepts and are sorted by material. Grooten does this as well of course. But in most books the important motifs and rules of thumb are underrepresented.

Here comes Herman Grooten's real point. He deals with them in deep detail. Of course he fully understands that all guidelines also have exceptions and so he also sharpens the reader's eye for their applications.

He has added exercises, which I think is a very valuable didactical concept and also graphical rules like the winning zones with queen against bishop's and rook's pawn on its seventh rank. I like these graphical rules a lot as they are easy to see and to remember.

Of course Grooten also deals deeply with the very frequent and important rook endings. I would advise you to study these sections several times to make sure that you really remember the relevant theoretical positions and the rules of thumb.

I hope that Herman Grooten's book gives you as much pleasure as it has given me.

GM Dr Karsten Müller,  
Hamburg, September 2022

# Preface

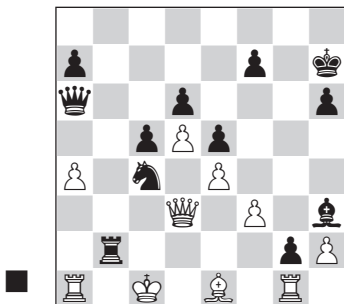
When I saw a chess endgame for the first time in my life, I was surprised by the simplicity and the beauty of the theme. It must have been at my club – someone was showing the final phase of an endgame study. Like most club players I preferred to concentrate on studying openings and solving tactical exercises. I was always told that to become better, you especially needed to work hard on your openings. Although I never studied openings in the way most people do, and I was more interested in the middlegame from an early age, through the years I gradually started noticing that my treatment of endgames was lagging behind considering the level I had reached at a certain point. This changed, however, due to a quite special occurrence.

In 1980, despite being a complete outsider, I managed to qualify for the Dutch Championship that was going to be held in Leeuwarden in 1981. I qualified in the semi-finals, among others because I created a positional zugzwang situation against one of the favourites, the late IM Leon Pliester, in the position given below.

1

**Leon Pliester**  
**Herman Grooten**

Eindhoven ch-NED sf 1980 (2)



Black has sacrificed an exchange to obtain the initiative, but here it looks like White has full control again. The black rook on b2 is more or less hanging in the air (after ♕c3), and it's not clear how Black can create threats against the white king. But with the next move, which I regard as one of the most aesthetically pleasing moves I ever played, I managed to force my strong opponent to his knees:

**31... ♕c8!!**

I have to protect my queen since I want to make a move with the c4-knight in some variations.

While I was considering this bishop move, it took me a while to realize that White finds himself in a kind of positional zugzwang. Each move with a piece will have great drawbacks, so all White is left with are pawn moves, but these cannot avoid the breakdown.

**32.f4**

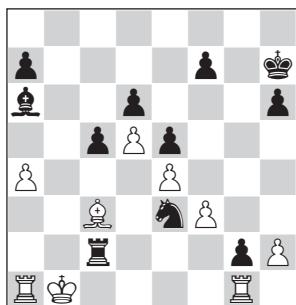
Due to this pawn move, things go rapidly amiss for White.

A) Bad was 32.♖b1 in view of 32...♗a2 when the a4-pawn falls, after which there is no defence;

B) On 32.♖c3 I had prepared 32...♗e2!, with the point that 33.♖d3 is met with the pretty 33...♘e3!, e.g. 34.♖xa6 ♘xa6 and Black threatens 35...♗c2 followed by ...♙d3. Now, 35.♙d2 is met with the quite artistic 35...♗f1! 36.♙a5 ♙d3 37.♗a3 c4 and there is nothing sensible to be found against the threat ...♗xh2-f3;

C) I was very proud of the variation I found after 32.♙c3: 32...♗e3!!.. After this move all Black's pieces are hanging, but it all fits like clockwork!

C1) 33.♖xa6 runs into the zwischenzug 33...♗c2+ 34.♙b1 ♙xa6—+



analysis diagram

and again the black pieces are cooperating fantastically well. There is nothing White can do against this overwhelming force, e.g. 35.♙a5 ♙d3 36.♗a3 ♗f2+ 37.♗xd3 ♗f1+ 38.♙a2 ♗xg1 39.♗xe3 ♗h1 and the pawn queens;

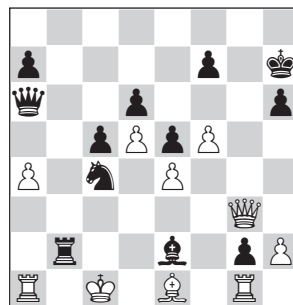
C2) 33.♖xe3 ♗e2 sort of catches the queen. Material is still even after 34.♖d2 ♗xd2 35.♙xd2 but

after 35...♙h3 Black will decide the game on the light squares. An illustrative sample variation runs 36.♗ge1 f5 37.♗e2 ♖c4—+.

**32...♙g4**

Now that White has weakened his light squares, the bishop can enter the position from the other side.

**33.f5 ♙e2 34.♖g3**



White wants to confuse the issue with f5-f6, but Black's attack is in full swing now.

**34...♖b7!**

The final hammer blow.

**35.♖c3**

The only move to prevent an immediate mate, but now White is treated to a 'light-square massage'. After 35.f6, White would have been checkmated first with 35...♗c2+! 36.♙xc2 ♖b2#.

**35...♗b3 36.♖c2 ♙d3 0-1**

Here Leon shook my hand, completely dizzy from the cyclone that had raged over him. During the post-mortem he was very friendly, telling me that he had rarely been beaten in such an elegant way.

A possible continuation is 36...♙d3 37.♖a2 ♗b2 and the curtain falls.

Some time after this, I received a phone call from the then national coach of the Netherlands, IM Cor van Wijgerden. He told me that young players who had qualified for the Dutch Championship were entitled to trainings by him. However, since I was already 22 years old at the time, I wasn't eligible for this since the chess federation 'didn't train elderly people'. This was meant as a joke, and the above game must have helped, as became clear to me when he offered me to visit him on three different days to get trainings.

As I had never received any 'official' training before, I thankfully accepted the proposal. Van Wijgerden quickly added that he 'didn't do openings' and asked me if I had an idea for a training subject. Since I knew that he had just revised an endgame book by Euwe (Volume 3 of the *Theory of the Endgame* series: *Rook Endings*), I suggested that we study solely rook endings. As Van Wijgerden was a great expert on this subject, he opened an entirely new world for me at the time. Not only did he manage to awaken an interest in the endgame in me, but he also gave me some (difficult) exercises to solve at home.

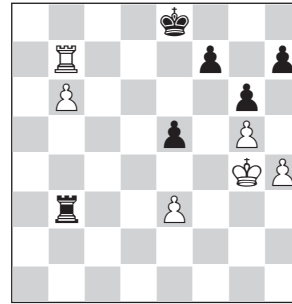
One time, for example, he had been sent an adjourned position from a club match for arbitration. The players from both teams could file a claim – win or draw – and

substantiate it with variations. This was the position in question:

2

### Adjourned position

Cor van Wijgerden



The White player claimed a win, and this claim looks justified. But the Black player appealed, among others since a member of his club had invented an insane defence. They tried to substantiate their assessment with variations.

**1...♖f8 2.♔f3 ♜b4 3.e4! h6!!**

An incredible move that had been found by the analysing team of the Black player. Black wins a crucial tempo by offering the pawn at this moment. The normal move is 3...♖g7 after which the game could continue as follows: 4.♔e3 h6 (first Black has to solve the problem of the potential weakness of his h7-pawn, and then he has to return to e8 with his king) 5.♔d3 hxg5 6.hxg5 ♖f8 7.♔c3 ♜b1 8.♔c4 ♖e8. But White is winning after 9.♔c5. The fact that Black had to spend two tempi to trade the h7-pawn for the g5-pawn proved essential.

#### 4. ♖e3

The pawn capture also leads to a draw: 4.gxh6 ♖g8.

#### 4...hxg5 5.hxg5 ♖e8 6.♔d3 ♔d8

And White cannot win.

Van Wijgerden told me he had spent many hours trying to refute this unusual move, but hadn't managed to find a win for White. In his book, he wrote: 'The following analyses prove that Black can achieve a draw by the skin of his teeth, in spite of the fact that White has indisputable advantages in the diagram position.'

Many years later, I took another look at this position, and I even managed to trace a few new ideas, but I also failed to find a conclusive path to a win for White. Another few years later, I presented the position to my then pupil Loek van Wely (see the anecdote in

Chapter 20) and although he managed to pull out even more ideas than Cor and me had come up with together, he wasn't able to find a win for White either – even though he had found a brilliant move somewhere in one line which received a different assessment as a consequence.

It would take us much too far to discuss this position here due to its high degree of complexity. But with this example, the foundation was laid for my interest in endgames – also because it made me see that in endgames the difference between a half and a full point sometimes depends on an apparently minuscule detail. And isn't that what we are always doing – playing for a half or a full point? In the endgame, the margin between success and ruin is quite small...

### Analysis of endgames

After the Dutch Championship, which was a school of hard knocks for me, my results were a little worse for a while at first, until suddenly I made a giant leap. This was mainly caused by the fact that my endgame knowledge had increased significantly, and my endgame technique had improved considerably. Nevertheless, in practice, playing endgames was still an arduous business. Sometimes you think you know something, but it always turns out to be a lot more difficult to put your knowledge into practice. That can be a hard pill to swallow at times, but I had come to enjoy analysing endgames and studying books on the subject, even consciously liquidating into an endgame now and then to enhance my skills level, and I had one important success in 1984.

In the English spa of Ramsgate, during a two-hour break, I analysed an adjourned position better than my opponent, and also played it better after the resumption, managing to convert a drawn rook ending into a win. This was against no less a player than Julian Hodgson, who went on



to become a strong grandmaster and a four-time champion of England. That was something to be proud of, and something to build on.

Young players of today can hardly imagine it, but in our days there was no Internet, no laptops, and there were neither strong engines nor Tablebases. A chess player would set off with a large suitcase filled with chess books and only a toothbrush. Games were adjourned (as recalled above) and you could analyse them before the resumption. On such occasions, precisely because it was your own game and you wanted to achieve an optimal result, you dived deeply into the secrets of a position. This demanded energy and could give you sleepless nights, but it strongly improved your understanding of the game, especially the endgame. Adjourned games could turn into adventures, emotional roller-coasters in which you were hovering between success and failure.

### **Training/coaching**

There was yet another aspect in my career that caused me to focus increasingly on endgames. In my student years, I had applied for two trainer courses, enabling me to acquire the necessary documents, ratified by the federation, to go through life as a qualified chess trainer. It hasn't done me any harm; my entire life I've been working as a trainer/coach with great pleasure. And during my work as a trainer, I found out that a lot of profit can be gained in the endgame. This is true not only for junior players, but also for club players – for anybody, in fact! If you have a certain knowledge of the endgame, you will also play better in the middlegame – this is a known fact. It's just that many players do not seem to have this interest in the endgame – and this, in turn, has to do with knowledge. Without knowledge you are groping in the dark... it's the well-known chicken-and-egg problem.

Sometimes you need to have someone who can help you remove the deadlock – and that someone can be your trainer/coach. I've always regarded it as my job to convey my love for the endgame to my chess students. I try to do this as lively as possible, by presenting the 'tedious theory' to them in constantly varying ways. Thus, I hoped to awaken an interest in my chess students by giving them a couple of 'handles' in the endgame. If you increase the skills of your pupils, they will be more successful. Also, success is often the key to more pleasure. One thing I have also noticed during my career as an active player: if you're having fun, the rest follows automatically. And the pleasure I have always experienced in the study of endgames has brought me immense benefit. I hope that with this book I can convey, besides the theoretical stock-in-trade that every club player should have, especially the pleasure that

comes with analysing endgames. If, for example, during a training you can invent an expressive analogy that clarifies the Vancura principle (by introducing the notion of the ‘bus stop’, see Chapter 20), and more than twenty years later you meet one of your former students and he’s still talking about it, then you know you’ve fixed something in his mind at least!

### **Endgame studies**

The reader will notice that this book contains a substantial number of endgame studies. This has been done with a clear idea in mind. In my career as a trainer I gradually found out that good training involves having good examples at your disposal. To illustrate the theme at hand, an example for instruction should, in my opinion, be clear and transparent – it should contain as little ‘noise’ as possible. With ‘noise’ I mean factors that distract the student from the things that you really want to convey.

Of course, it is also important to show examples from tournament practice, and this is what I have also done in this book – preferably games by my pupils. But in my experience, while you are discussing tournament games, you often get ‘in-between’ questions like ‘Why can’t I play this?’, ‘Why can’t Black defend in this way?’, etcetera. Critical pupils often had a point with such questions, but this meant that we were soon distracted from the central theme. Side variations would start playing first fiddle all of a sudden. When at the end of the lesson I asked ‘What have we learned today?’, often there was no-one who could give a good answer...

What I find important in endgame studies is that they contain play, counterplay and hidden defences, but above all a clear path to the win (or to the draw) with a highly aesthetic character that not only shows the theme in its full glory, but also shows, in my view, how beautiful chess can be. This, too, is an important goal of this book: to demonstrate the pure beauty that is often hidden in an endgame.

At this point, I would like to offer my apologies to various study composers. In many cases I have removed the complicated and sometimes laboured ‘foreplay’ phase in order to put the spotlight on the point, the basic idea immediately. This is often regarded as a ‘deadly sin’. Such ‘operative interventions’ may cut to the heart of some composers, but my aim as an instructor is entirely different from theirs. To bring to the fore the main themes that fit into the didactic frame of this book, I sometimes have to resort to such rigorous measures.

Naturally, I haven’t omitted including many games from tournament practice but also from club players, in which you can see the trial-and-error experiences that are so familiar to every chess player. That is why

I have created separate sections everywhere that I have called ‘**This endgame in practice**’.

The reader will also notice that I have used many endgames by Magnus Carlsen – the reason is that, in my opinion, the Norwegian World Champion often plays the endgame almost perfectly. And not only that – he also pursues crystal-clear strategies to obtain victory. So clear, sometimes, that playing through these endings is a feast for the eye and for the mind.

Ultimately, the purpose of working through the examples in this book is that the main themes become ‘anchored’ in your memory. By demonstrating the themes as clearly as possible, I hope to achieve that the reader will be actually successful with them in practice.

### **Endgame skills**

What I wrote above brings me to another aspect of chess training which has perhaps been chronically underestimated. Many trainers/coaches put the emphasis on increasing knowledge, trusting that more knowledge will automatically lead to more points. In my opinion, this is a misconception, and it often leads to disappointment. In chess, every move is a decision. Then why does an International Master often make better decisions than a club player? And why, in turn, does the grandmaster frequently do a better job than the IM? And why do elite players outsmart most other players in the world? Because our game is so complex and the situation can sometimes change on the next move. This demands flexibility, orientation, knowledge, insight, intuition, and often also quite a lot of skill, for example, to convert an advantageous position into a win. In fact, knowledge and skill are your two main guides on the road to success. A chess player needs both! This is precisely what determines differences in playing strength.

If we apply this principle to the endgame, then we can say that even if we know that a certain ending is a win, this is not yet a guarantee that we can actually convert the position at hand to a win. That is why in this book I have offered an impetus to the training of a couple of endgame skills – the usefulness of which, naturally, depends on which type of ending there is on the board. We can classify many endgame skills by formulating different techniques in the endgame. To make this more explicit, I have split the material into:

 **Rules of thumb**

 **Techniques**

With the help of a rule of thumb (what are the clues we can find in a position?) we can force a win or a draw with a certain technique (what should we pay attention to? which plan should we choose?). Isn't that what every chess player wants?

Improving your skills is not something you do by reading a book. You have to do some active work. For this reason, I have made up a number of exercises for you to work on. The American top player Hikaru Nakamura has become so strong by playing blitz games all day, alternated with solving chess puzzles on the Internet. I once talked to a coach who had worked with him; he was amazed by what Hikaru didn't know... If you would like to see how Nakamura can convert a winning position into a full point lightning-fast and with almost perfect play, take a look at Hikaru's Twitch channel (<https://www.twitch.tv/gmhikaru>).

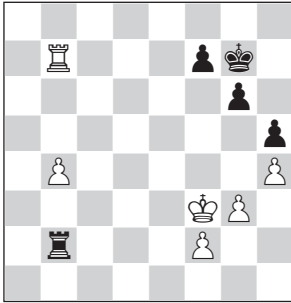
To practice at home, therefore, you have to play out certain positions. This can be done in different ways:

- against a sparring partner
  - physically, on a chessboard with a clock
  - online
- against your own trainer/coach, individually or in a simul
- against a chess computer

If this book can serve as an important tool in this way, then this means that one of my main aims has been achieved.

## Conclusions

I would like to conclude with a small anecdote. When in the 1990s I worked as a 'top sport coordinator' on behalf of the Dutch Chess Federation to assemble the training programme for talented junior players, it seemed like a good idea to make use of the know-how we had available in our country. I succeeded in trapping GM Jan Timman into giving a number of guest lectures at a central location. When he went outside after a certain training session and I asked him how things had gone, he replied that there was a lot of talent, but that he was amazed by their lack of 'elementary knowledge' of rook endings. When I asked him what he meant by this, Timman said he was talking about the 'standard rook endings' with 3 vs 3 pawns on the kingside and one pawn on the other side of the board (see diagram). 'On my question which is the most favourable pawn for White, they couldn't give the right answer,' Timman said. The diagram shows what the right answer is...



Portisch-Petrosian, Palma de Mallorca ct m 1974

What is ‘standard’ for Timman, usually isn’t for ordinary humans. This type of ending can be so complex that we will not pay attention to it in this book. Perhaps in a future edition? The point of departure for this book is that it first offers the basics of most ending types. I have tried to present the required basic techniques in every case, to show the student the best way to treat those endings. Practising these endings is also stimulated by focused exercises. Above all, I want to emphasize that the endgame shows us so many beautiful things that, even if our results may not be satisfying at a certain moment, enjoyment of the beauty of the game should prevail over our craving for success. For if there is one area in chess in which simplicity and beauty go hand in hand, it is the endgame!

I am very honoured that one of the greatest endgame specialists in the world, GM Karsten Müller, has been found prepared to write a foreword. I also want to express my gratitude and appreciation for the club players and endgame lovers Michel Hoetmer and Armin Kohlrausch (the latter unfortunately passed away highly unexpectedly on 25 March 2022), who have not only taken care of the correction work for the original manuscript, but have also provided me with a lot of advice, ideas and beautiful examples. Finally, I would like to thank several of my students, among them Sascha Kurt, Andrew Imbens and again Armin Kohlrausch, for patiently studying (online) various subjects I showed them for this book. Their reactions sometimes provided me with new insights, stimulating me to rewrite certain passages.

Herman Grooten,  
Eindhoven,  
September 2022

## CHAPTER 5

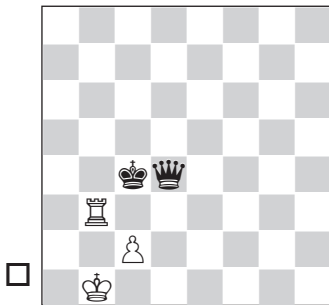
# Fortresses in practice

Analysing with strong(-er) players will always provide you with new insights. I have done this during my entire career as a chess player, and I know that these new insights have made me stronger. But what can you do with this as a tournament player? That is the big question. However, it is clear to me by now that if you are interested in something – or, even better, intrigued by it – then you will store an image of it somewhere in your memory. It has happened to me fairly frequently that I was able to use such an image to my advantage later. A kind of ‘hatch’ is opened in your memory, enabling you to get access to the knowledge you need to determine, for instance, whether a chess position is a win or a draw. I have the same situation with pop music. When I hear a certain song, I get spontaneous associations with situations that occurred earlier in my life.

The notion of a ‘fortress’ was a huge eye-opener when I first acquainted myself with it.

18

**Fortress** ♖+♙ vs ♚



It is possible to hold a draw with rook + pawn vs queen in certain positions.

The conditions are quite easy to understand:

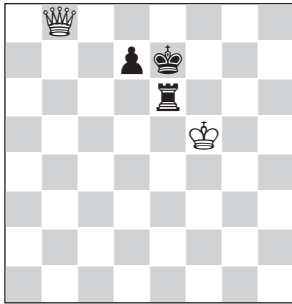
- the side with the rook must always have tempo moves at its disposal;
- the enemy king should not be allowed to enter;
- the pawn should be on the second rank, so that the enemy queen cannot enter the position from the rear. This means that pawns on your third rank are no good.

In this position, White has tempo moves along the third rank with the rook, where it cannot be won with a check. Preferably, White moves the rook to and fro between the protected squares b3 and d3.

1. ♖d3 ♚e4
2. ♖b3 ♚e1+
3. ♙b2 ♚d2
4. ♖d3 etc... 1/2-1/2

19

**Fortress** ♖+♙ vs ♚



Philidor already proved in 1777 that the side with the rook can also draw with a central pawn. He always has two moves with the rook at his disposal: ...♖c6 and ...♖e6 – provided that it keeps occupying the sixth rank to prevent the white king from crossing it. If the white king could approach the black king on the seventh rank, e.g., on g7, the position would be lost.

So these positions in which a queen cannot beat a rook + pawn are intriguing. There is a whole arsenal of positions here that you can find – should you be interested – in chess literature or on the Internet. As a chess player, you will always be curious about the ‘limits’ of the game, and these are amply expressed in the notion of a ‘fortress’.

I have always been interested to know where these limits lie, and there is no way to learn this better than by hearing it from absolute top players – hence the following anecdote.

Once I was in the Swiss lakeside resort of Lugano, where a strong Open was played annually. In one of those years, former World Champion Boris Spassky and World Championship candidate Viktor Kortchnoi played there. Apparently, both gentlemen were not at war with each other at the time, as they were later during one of their matches. In Lugano, they were getting on quite well.

I was intrigued by a game Kortchnoi was playing against someone – I think it was the American Jay Whitehead. The latter had been lost with White for half of the game, but the Swiss GM hesitated a few times to deal the decisive blow. Several times, he did not go for a certain sharp breakthrough in the centre because he saw something that was ‘not clear’. As it turned out later, the American had hardly been aware of all this. But in the meantime, Kortchnoi had made a bad mistake, and he had a losing position at the adjournment.

When, during the post mortem, Whitehead naively asked why Kortchnoi hadn’t played a certain move, the latter played a long variation on the board, shouting, ‘What do you mean, didn’t I see this variation? Yes, of course I calculated this variation. But after this, this and this I win. But why didn’t I play it? Because of this, this, that, this and then this!’ For a moment, the American was speechless under this

torrent of violence, but he didn't allow himself to be overwhelmed, and a little later he tried another move he had considered.

Seated next to Kortchnoi, Spassky was following the analysis, and when Kortchnoi failed to produce an answer at some point, this time the American was instantly given a ready-made answer by the former World Champion. These moves too were played on the board at a furious pace and with great cogency, with a triumphant look in Spassky's eyes, saying something like 'what makes you think that we world top players wouldn't see something like that...'

As said, Kortchnoi had blundered just before the time control, and after 40 moves the adjourned position was totally losing for him. The game would be resumed two hours later. While his opponent went for a bite to eat, Kortchnoi remained seated at the board to analyse. I wanted to leave too, but I was also very curious how this would end. I followed the scene from some distance.

Kortchnoi got help from another grandmaster – the Romanian Florin Gheorghiu, if I remember correctly. Kortchnoi asked Gheorghiu to try to beat him from that winning position. And here it became clear how strong – more importantly, how tenacious Kortchnoi was in the endgame. The Romanian hardly managed to prove a win for White, even though all of those who

had gathered around them were completely convinced that there was one.

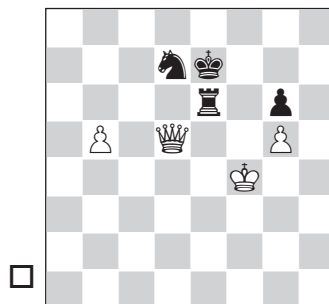
The game continued, and when I returned later in the evening, they were still playing. As it turned out, Kortchnoi had been forced to give up material, but he was building a fortress now. When Whitehead didn't play optimally, Kortchnoi got what he had aimed for: an impregnable fortress.

Of course, the question is: what is a fortress? Let's start with the type of fortress Kortchnoi got.

20

**Fortress** ♖+♘+♙ vs ♚+2♙

**After Whitehead-Kortchnoi**



The type of fortress that came on the board between Whitehead and Kortchnoi had the form of this position, constructed by me. Black's rook and knight work together to control the b6-square. Both pieces are protected by the black king, and there is no way for the white king to cross the e-file. The fortress characteristic that the weaker side should not be put into zugzwang applies here as well. The knight can



shuttle endlessly between b6 and d7. There is no way through, even though modern engines indicate scores of around +3 for White.

Back to the struggle of queen vs rook. An analogous case from grandmaster practice appeared on the board in the famous Wijk aan Zee tournament, also between two endgame virtuosos.

21

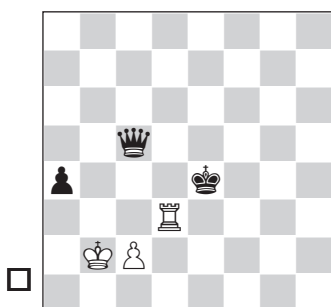
**Jan Timman**

2655

**John Nunn**

2590

Wijk aan Zee 1982 (2)



In this position, Black even has an extra a-pawn, but funnily enough this doesn't make a difference; it is still a draw.

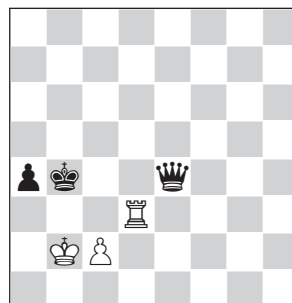
**63. ♖a3**

White being allowed to play the rook to this square (of course, the b3-square is not available) is one of the reasons why this position is a draw: White has this square at his disposal since the rook is also protected here.

**63... ♜b4+ 64. ♕a2 ♖d5 65. ♖d3+ ♕c5 66. ♖a3 ♜c4+ 67. ♕b2 ♕b4**

Slowly but surely, Black has put his pieces where he wants them, but the position is still a draw.

**68. ♖d3 ♜e4!**



A nasty move, though there is still no problem for White. But now there is only one good move, and White has to find it:

**69. ♕a2??**

Wrong! And losing after all.

The only good move was 69. ♖a3! after which it is still a draw – also, of course, because 69... ♜xc2+ 70. ♕xc2 ♕xa3 does not win.

**69... a3!**

Now White loses his pawn. Timman resigned immediately; the queen vs rook ending is winning. How it is to be played is another story – we will work this out further on in this book.

Another possible variation is 70. ♖b3+ (70. ♕b1 ♜e1+ 71. ♕a2 ♜c1, and the c2-pawn is again lost) 70... ♕c4 71. ♖d3 (71. ♖xa3 ♜xc2+ 72. ♕a1 is a theoretical loss) 71... ♜e2 72. ♕b1 a2+, and Black wins. Accidents can easily happen...

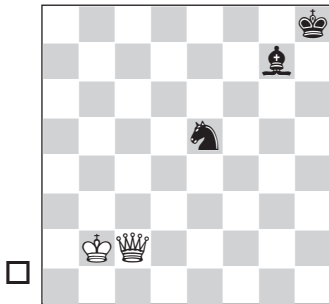
Sometimes, a picture tells more than a thousand words. Therefore, I

will now present to you a collection of positions that are useful to peruse and store in your memory. Experience teaches us that there will come a moment when you will be able to use one of these cases in your own practice – perhaps to make a draw or otherwise to prevent it from appearing on the board.

Obviously, you will never get most of these cases on the board. But precisely the knowledge of such positions may help you in your decision to steer clear from such obscure cases, or, on the other hand, to steer for them when you are in trouble – like Kortchnoi did!

22

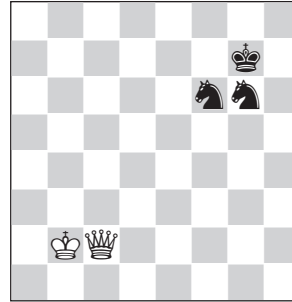
**Fortress** ♙+♘ vs ♚



Black holds the draw with two minor pieces vs a queen with this set-up. The knight covers important squares, preventing the white king from coming nearer. The knight is protected by the bishop, which, in turn, is protected by the king. Since the king will always have sufficient moves at its disposal, Black can never be put in zugzwang.

23

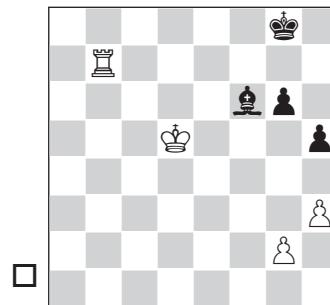
**Fortress** ♞+♞ vs ♚



Two knights are also able to keep a queen at bay, provided that they are neatly placed next to each other, close to their own king, so they can control a whole series of squares. White can do no better than draw. This elicited a joke from the Dutch grandmaster Hein Donner, who said, ‘these days a queen is worth nothing. Here you can take it off the board and put it back again – the position is a draw either way!’

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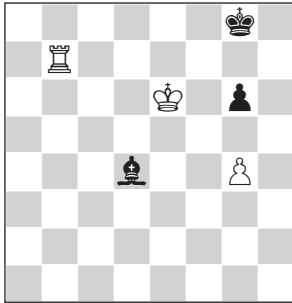
**Fortress** ♖+2♙ vs ♙+2♙



A position in which White is a ‘full exchange’ up (rook vs bishop) can quite easily be a draw, even with two pawns on both sides. I once

managed to escape with a draw in such a situation. It is essential here that the pawns are placed on light squares (g6/h5) and that the bishop can stay on the long diagonal.

**1. ♖e6 ♜d4 2.g4 3.hxg4**



Black can continue making moves with the bishop along the a1-h8 diagonal.

**3... ♜c3**

Of course not 3... ♜h8?!, when Black's pieces are so unfortunately placed that White wins anyway:

4. ♖b8+ ♜h7 5. ♖xh8+! ♜xh8 6.g5, and White wins the remaining pawn ending.

There is still a big snake in the grass if White tries to slip inside with his king via g5. He can try this as follows:

**4. ♖d5 ♜f6 5. ♖e4 ♜c3 6. ♖f4**

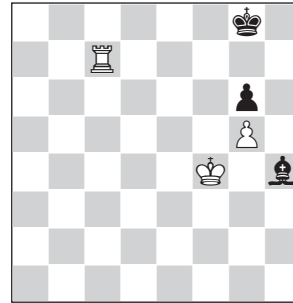
Black has to prevent ♖f4-g5 under any circumstances. He can do this in two ways, with both ... ♜d2+ as well as the main line (maintaining the bishop on the long diagonal):

**6... ♜f6 7. ♖c7**

Here, Black has to take great care: there are only two moves that hold the draw.

**7... ♖f8**

And White cannot make progress. 7... ♜h4 also saves Black. However, this is a very strange square for the bishop, and therefore I wouldn't advise playing such a move during a game: 8.g5

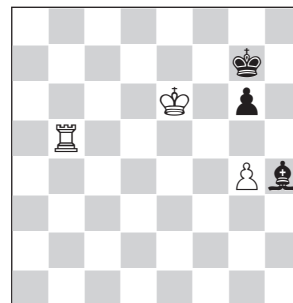


analysis diagram

8... ♜e1! (absolutely the only move already, which makes you think...)

9. ♖d7 (now White has 'bad luck', since the king cannot move to e5 in view of 9... ♜g3+) 9... ♜c3 10. ♖e4 ♜b2, and White doesn't get any further.

But after 7... ♖h8?, Black would lose after all!: 8. ♖f7! ♜h4 9. ♖e5 ♜g5 10. ♖e6 ♖g8 11. ♖b7 ♜h4 12. ♖b5 ♖g7



analysis diagram

13.g5! and after 13... ♜e1 14. ♖b7+ ♖g8 15. ♖f6, White gets the f6-square for his king and wins.

Interposing the rook in reply to a check with 3.♖h4 and ♖f4 is also useless, since the resulting pawn ending is a dead draw.

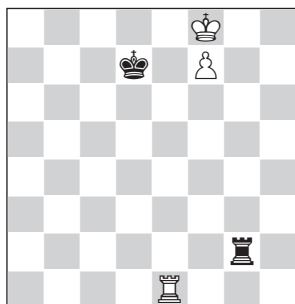
3...♜f1+ 4.♚e5 ♜e1+ 5.♚d6 ♜d1+  
With a draw.

## § 20.6 Building a bridge (Lucena)

If things go wrong for the defender, a position may arise as in the following diagram. The winning method was named after the Spaniard Luis Ramirez de Lucena, even though this position does not feature in the book he wrote on chess, *Repeticion de Amores e Arte de Axedrez* (in 1497).

### Lucena position 1

#### Characteristics with White to move



We can specify a few characteristics of this ‘Lucena position’:

- The pawn has reached the penultimate rank, with its own king standing in front of the pawn.
- The defender’s king is on one side of the pawn, keeping the attacking side’s king from vacating the promotion square of its pawn.
- The defender’s rook covers the file on the other side of the pawn, preventing the escape of the stronger side’s king on that side.

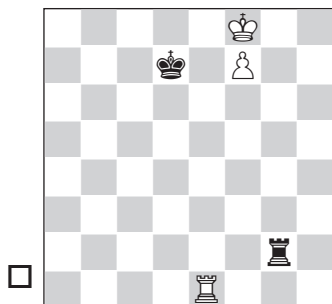
To win, the stronger side uses the technique of ‘building a bridge’:

#### 📖 **Technique: ‘building a bridge’**

In the diagrammed position, the stronger side can only win by:

- driving the enemy king at least one more file away from the pawn
- playing his own rook to a certain rank from where it can be used as a ‘shield’ against enemy checks
- moving the king to the rear of its own pawn in such a way that the rook can be placed in between. This is what we call ‘building a bridge’.

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**Lucena position 1**

White would like to promote his pawn, but how can he manage that? Black's rook cuts off the g-file for the king, and Black's king is keeping the door locked on the other side. Of course, there is something White can do about the latter:

**1. ♖d1+**

With this check, Black's king is driven off and space is created for White's king.

**1... ♖c7**

This is the most normal reply, after which we will see the technique of 'building a bridge' in practice.

There is one alternative that loses immediately: 1... ♖e6? 2. ♖e8, and White queens on the next move.

The king can also move towards the centre, and this leads to a slightly different picture: 1... ♖c6 2. ♖d4 (White sticks to the same technique as presented in the main line. There are various other winning methods, but we will leave them aside to avoid confusion) 2... ♖c5 3. ♖d8!. This is the simplest method. White

maintains the vertical cut-off of the black king and protects the promotion square f8. This means that the king will soon be able to appear into the open and zigzag in the direction of the black rook, as follows: 3... ♖c6 4. ♖e7 ♖e2+ 5. ♖f6 ♖f2+ 6. ♖g6 (of course, White has to protect the pawn!) 6... ♖g2+ 7. ♖h5 (now, the 'zigzagging' can start) 7... ♖h2+ 8. ♖g4 ♖g2+ 9. ♖h3 ♖f2 10. f8♚.

**2. ♖d4**

The 'safest' way is to play the rook to the fourth rank, to be able to interpose it later on.

After 2. ♖d5, the rook gets harassed by 2... ♖c6.

At this moment, it doesn't make sense for White to move the king out of its hiding-place. The 'checking distance' between Black's rook and the king is large enough: 2. ♖e7 ♖e2+ 3. ♖f6 ♖f2+ 4. ♖e6 ♖e2+ 5. ♖f5 ♖f2+, and White's best option is to put the king back on f8 and then start all over again.

**2... ♖g1**

Black doesn't have anything much better than this waiting move.

**3. ♖e7**

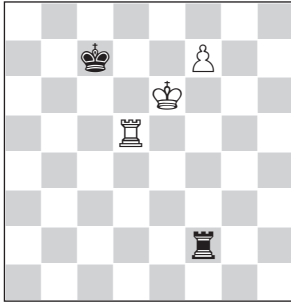
And now His Majesty emerges in the daylight!

**3... ♖e1+ 4. ♖f6 ♖f1+ 5. ♖e6**

Of course, the king shouldn't leave the pawn to its own devices.

**5... ♖e1+**

Black can also play a waiting move, since 6. f8♚ is not a threat at this moment: 5... ♖f2, and with 6. ♖d5 (6. ♖e4 ♖d8)



analysis diagram

the rook can move up another rank to build a bridge on f5: 6...♖e2+ 7.♜e5 ♜f2 8.♜f5 ♜e2+ 9.♚f6, and the pawn walks on unhindered.

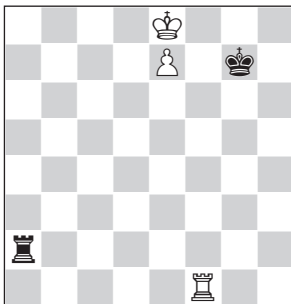
**6.♚f5 ♜f1+ 7.♜f4**

Completing the bridge! In this final position, Black's rook cannot accomplish anything and his king is too far away as well. **1-0**

If in the previous Lucena position we switch the positions of Black's king and rook, moving the rook to the 'long side', the 'checking distance' is sufficient for a draw.

### Lucena position 2

#### Characteristics with Black to move



Since the situation here is different than in the previous two diagrams, we will formulate the characteristics of this new situation:

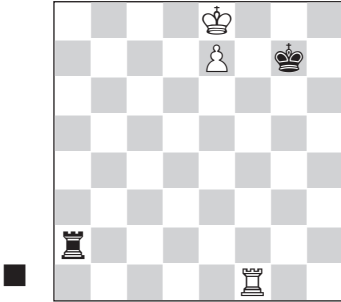
- The pawn has reached the penultimate rank, with its own king standing in front of the pawn.
- The defender's rook is far removed from the pawn (preferably on the edge of the board) to harass the enemy king with checks from the side.
- This only makes sense if the door on the other side is locked due to the presence of the defender's king.
- The weaker side can defend successfully with so-called 'side checks' if the 'checking distance' is minimally three lines (between the file on which the rook is standing and the file on which the pawn is standing).

 **Technique: ‘Side checks’**

In the rook + pawn vs rook endgame, the weaker side can sometimes defend by playing the rook to the side to harass the enemy king from there with checks. A condition for success is that the ‘checking distance’ is at least three files (see also Vancura below).

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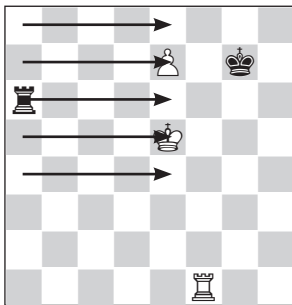
**Lucena position 2**



**1...♖a8+ 2.♔d7 ♜a7+ 3.♔e6**

Both 3.♔c6? ♜xe7 and 3.♔d6 ♜a6+ 4.♔d5 ♜a5+ 5.♔c4 (in view of 5...♜e5) don't make any sense; in both cases, White loses his pawn.

**3...♜a6+ 4.♔e5**



Thus, White can make one more attempt to confuse his opponent.

**4...♜a5+ 5.♔d4 ♜a4+ 6.♔c5 ♜a5+!**

This check is still necessary! If Black puts his rook behind the pawn with 6...♜e4??, he will lose after all: 7.♔d6 ♜d4+ 8.♔e5 ♜d2

9.♜f8! (White's rook protects the promotion square, thus forcing the win) 9...♜e2+ 10.♔d6 ♜d2+ 11.♔c5 (the king walks into the open field) 11...♜c2+ 12.♔b4 ♜b2+ 13.♔c3+-.

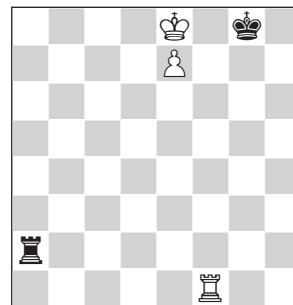
**7.♔b6 ♜e5**

And the draw is secured.

Again, we make a small mutation in the previous starting position. This time Black's king is on g8 instead of g7. This minuscule difference again turns the draw into a loss. The king is so unfortunately placed that Black can't avoid losing – provided that White plays well, of course. The solution is still a bit surprising:

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**Lucena position 3 (exception)**



Now that the king is on g8, you might think that at some point White can play ♜f8+ to reach the back rank with tempo and win.

However, it turns out that this is not the right idea. White wins in an entirely different manner that is very instructive!

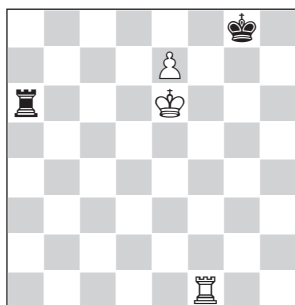
### 1... ♖a8+

Black is more or less forced to give side checks. If he wants to remove his king from the unfortunate g8-square with 1... ♖g7, he gives the move to White. The winning method after this will be shown in the next example.

### 2. ♔d7 ♖a7+ 3. ♔e6

You might think that 3. ♔d6 ♖a6+ 4. ♔d5 ♖a5+ 5. ♔c4 is the right method, since Black's rook cannot get behind the pawn due to 6. ♖f8+. But Black defends with 5... ♖a8, after which White can switch to the other winning method with 6. ♔c5!.

### 3... ♖a6+



An important moment. What does White want here, actually? His second idea is to cross the f-file with his king, on its way to the g-file, to interpose the rook if Black gives check. This 'crossing' of the f-file has to be done with care.

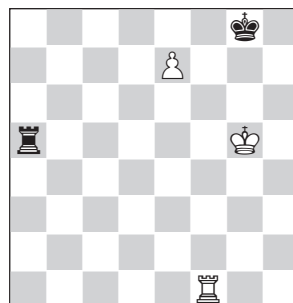
### 4. ♔e5!

4. ♔f5? is a draw after 4... ♔f7 5. ♖e1 ♔e8.

### 4... ♖a5+ 5. ♔f6

Now the king can cross; Black doesn't have the defence with 5... ♔f7 here.

### 5... ♖a6+ 6. ♔g5 ♖a5+



### 7. ♔g6!

This move is important too. Once more, White's king dominates Black's.

### 7... ♖a6+ 8. ♖f6

The rook can be interposed – again, a bridge has been built!

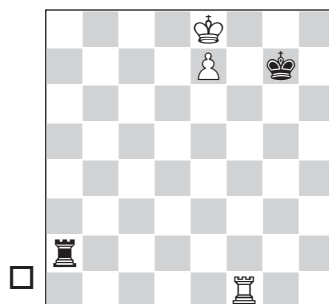
### 8... ♖a8 9. ♖d6

This ends it all quickly.

In position 3, we saw a variation in which Black gave the move to his opponent by playing ... ♔g8-g7. If it's White's move, he wins fairly easily:

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### Lucena position 4





**1. ♖g1+**

Again, Black's king is driven away from the pawn, allowing White to build another bridge – on the other side of the pawn this time:

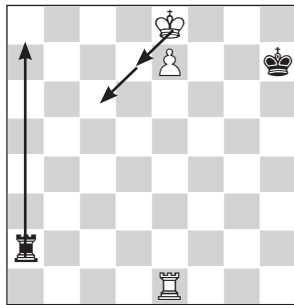
**1... ♖h7**

1... ♖f6 2. ♖f8.

**2. ♖g4**

It is also interesting to show another winning method: putting the rook behind the pawn and then walking into the open field with the king:

2. ♖e1!?



analysis diagram

Rook behind the passed pawn!

A) 2... ♖d2. Black tries to prevent White's king from escaping via d7, but now it emerges on the other side: 3. ♖f7 ♖f2+ 4. ♖e6!, and the job is done;

B) Side checks are no use since the pawn is protected by its own rook. If 2... ♖a8+, White wins with 3. ♖d7 ♖a7+ 4. ♖c6 ♖a6+ (4... ♖a8 5. e8♔) 5. ♖b7;

C) Also, moving back with the king, to hold off White's king, doesn't help now: 2... ♖g7 3. ♖d7 ♖d2+ 4. ♖c6 ♖c2+ 5. ♖b5 – the checks will be exhausted soon, and

of course 5... ♖c8 doesn't help in view of 6. e8♔.

2... ♖d2 3. ♖f7 ♖f2+ 4. ♖e6 ♖e2+

5. ♖f6 ♖f2+ 6. ♖e5 ♖e2+ 7. ♖e4

Again – the bridge. White wins!

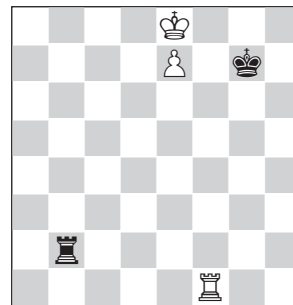
We finish with a study by Grigoriev from 1937 in which Black can give side checks, but his 'checking distance' is too short. We will see that the win is not trivial here.

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**Lucena position 5**

**Study by Nikolay Grigoriev**

Shakhmaty v SSSR 1937



Unfortunately for Black, his rook is not on the a-file, but on the b-file. Even though he realizes that the 'checking distance' is too short, he starts by giving checks anyway:

**1... ♖b8+**

Spending a tempo to put the rook on the a-file with 1... ♖a2 is too slow; White wins in the same way we have seen in the previous position.

**2. ♖d7 ♖b7+ 3. ♖d6 ♖b8**

The only move, parrying the 4. e8♔ threat. The new check 3... ♖b6+

phases in this ‘multi-stage planning’ cements how he intends to achieve these goals.

Botvinnik once said that a player always has to be able to formulate which plan he wants to pursue. As a trivial example, he gave the way you intend to checkmate a lone enemy king with king plus queen. ‘No mate without a verbal rendition of this checkmating process’ is the message. Apparently, the former World Champion considered this verbalization essential.

To see whether this could be learned, I once practised this with both a group of young junior players and a group of adults. Both groups thought it was difficult – on the whole, the latter group did better at it than the former group. I think this has to do with the ‘abstractness’ of the thinking lines. The ‘young ones’ (most of them primary school kids) were hardly capable of thinking in this way. Only after the transfer from primary to secondary school, where they are taught mathematics (i.e. abstract thinking!), did it turn out that this process gradually went better for them.

Nevertheless, we can’t get around the fact that especially endgames should be approached in this way. Eventually, it will be clear that this procedure enables us to determine concrete goals, and every club player can use this to his advantage. As it turns out, this way of thinking is harder to learn for ‘calculators’

than for ‘strategists’. Even so, there are many roads leading to Rome, and we can learn from model examples how we can actually convert favourable positions to a win. As it turns out, in endgames too, besides abstract thinking, variations often have to be calculated very concretely. I think that the following example may appeal to the reader’s imagination. We see how a favourable ending is gradually converted into a win through various phases, with the help of concrete goals.

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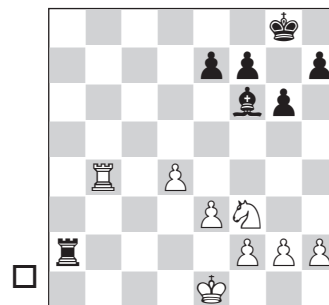
**Loek van Wely**

2632

**Alexei Shirov**

2726

Monaco rapid 1999 (1)



White is a pawn up, but all the pawns are on one wing. He does have another advantage: the knight is stronger than the bishop here, since it is helped by the fact that the pawns are not standing on two wings; the black bishop is, as it were, ‘biting on hot air’.

**34.g4!**

A typical move to gain space, but also to vacate the g2-square for the king, allowing White to escape the rook checks.

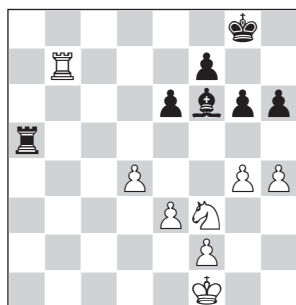
**34...e6 35. ♖b7**

Looking at the further course of the game, the question arises whether White should have played 35.g5 here: 35... ♗e7 36. ♖b7 ♗d6 37.h4, and in this way White could have achieved the plan for which he had to go through so much trouble later on.

**35...h6 36.h4 ♖a5**

Black prevents g4-g5.

**37. ♔f1**



**37...e5**

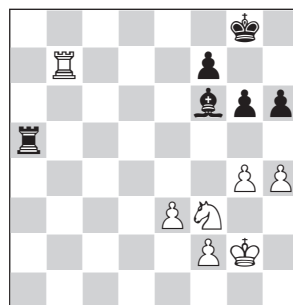
Black seizes the opportunity to exchange two pawns, thus reducing the winning margin. This is always an important strategy for the defender: the side that is behind in material should exchange pawns, and the superior side mostly wants to exchange pieces.

**38.dxe5 ♗xe5 39. ♔g2**

After the exchange of knight for bishop, there would be a great chance that the resulting rook ending is a draw.

**39... ♗f6**

### Phase 1



White wants to carry through the g4-g5 push. For that purpose, the king has to go to f4. White has to make a few preparations for this: rook to e4.

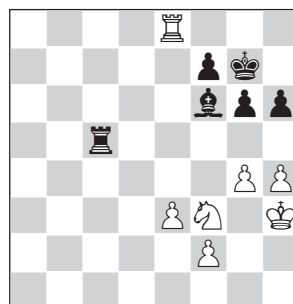
**40. ♖b4 ♔g7 41. ♔g3 ♗e5+**

Black makes things as difficult as possible for his opponent.

**42. ♔h3 ♗f6 43. ♖e4**

White plays systematically: he prevents Black's ... ♗e5 and now enables the manoeuvre ♔h3-g3-f4, to carry through the g4-g5 push.

**43... ♖c5 44. ♖e8**

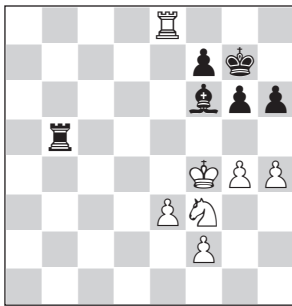


**44... ♖d5?!**

English GM Glenn Flear, who also commented on this game, let this moment pass by unnoticed.

I think Black had a better defence here.

It is interesting to see what happens if Black ‘passes’: 44...♖a5 45.♔g3 ♗b5 46.♕f4.



analysis diagram

This should be the plan, but unfortunately this position contains a little trick: 46...♕xh4! (46...♖b4+ 47.e4 ♗b5 (here too, 47...♕xh4 should be examined: 48.♖xh4 g5+ 49.♕g3 gxh4+ 50.♕xh4, and even though White has a favourable pawn formation, the position should still be within drawing margins) 48.g5 hxg5+ 49.hxg5, and White has carried through his plan) 47.♖xh4 g5+ 48.♕g3 gxh4+ 49.♕xh4, and this rook ending should be a draw, as we already concluded above.

**45.♕g3 ♕d8**

Shiro transfers the bishop to c7 to harass the white king from there.

**46.♕f4 ♕c7+ 47.♕e4 ♖a5**

The rook is put on a more active square, forcing White to react in the right way.

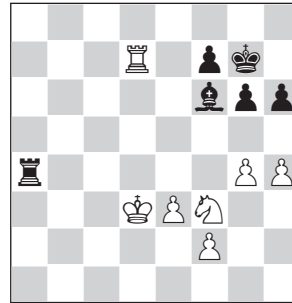
**48.♗e7**

Not 48.g5?, as was the plan, since after 48...hxg5 49.hxg5 ♗a2, White can no longer protect the f2-pawn.

**48...♖a4+ 49.♕d3 ♕d8**

If Black keeps giving checks with the rook, White’s king will take a stroll to g2: 49...♖a3+ 50.♕e2.

**50.♗d7 ♕f6**



**51.g5!**

White has manoeuvred his rook to a favourable square, and can now finally pursue his plan.

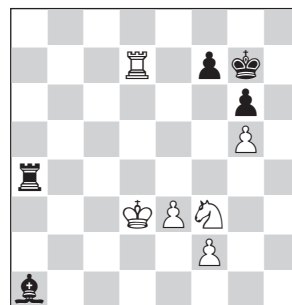
**51...hxg5**

Black is obliged to trade on g5.

True, another set of pawns leaves the board now, but also the h-file is opened. It was hard to foresee that this will cause problems later on.

**52.hxg5 ♕a1**

### Phase 2



Now, it’s three pawns vs two on one wing, but the cooperation between White’s three pieces is superior to that of Black’s. White has to put a pawn on f4 to give the g5-pawn its natural protection.

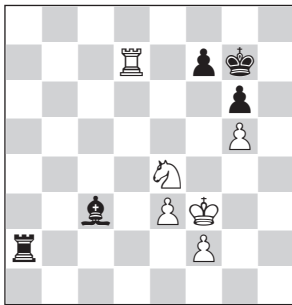
**53. ♖d2**

The start of White's new plan. To enable him to play f2-f4, the knight has to move.

**53... ♖a3+ 54. ♔e2 ♖a2**

Now, White has to watch out: Black is threatening 55... ♗c3 since after the trade of the light pieces, it's a draw! In general, any piece or pawn trade is favourable for Black, except the trade of all the pieces: the pawn ending is winning for White.

**55. ♔f3 ♗c3 56. ♖e4**

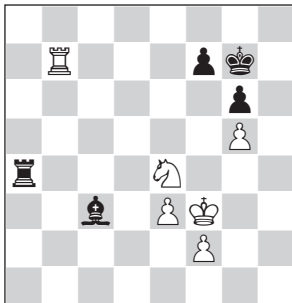


Van Wely has seen correctly that the knight is like a king on this square! Not only does it control f6, but it also covers the potential weakness on f2.

**56... ♗b4 57. ♖b7 ♖a4 58. ♖f6**

A 'poke': suddenly, White threatens mate in two!

**58... ♗c3 59. ♖e4**



The knight returns empty-handed. The question is: why did Van Wely play like this? He is following Capablanca's ancient principle of 'Don't hurry!' Apart from the fact that White isn't spoiling anything with his move, the repetition also has a psychological effect: the opponent gets to 'feel' who is calling the shots in the game. Moreover, he can also make a mistake, and this is what White is testing. Bobby Fischer too often made use of this 'twofold repetition'.

**59... ♗b4 60. ♖d7**

Threatening 61. ♖d4, with a lethal pin.

**60... ♖a5**

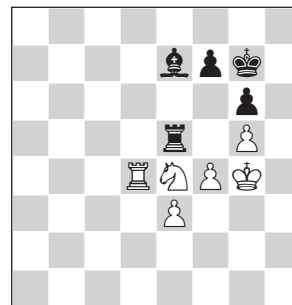
60... ♖a2 61. ♔g4.

**61. ♔g4**

A good moment to finally achieve the formulated sub-goal: White is ready for f2-f4.

**61... ♖e5 62. ♖d4 ♗e7 63. f4**

**Phase 3**

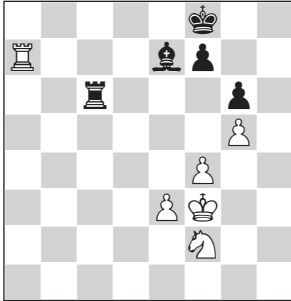


The second phase of the plan has been concluded.

Phase 3: White is going to try to push his pawn from e3 to e5, to

be able to play the knight to f6, enabling mate threats.

63...♖e6 64.♔f3 ♕f8 65.♙a4 ♜c6  
66.♙a8+ ♖g7 67.♙a7 ♕f8 68.♔f2



Preparing not only ♔f2-g4, but also e3-e4-e5.

68...♜c8?

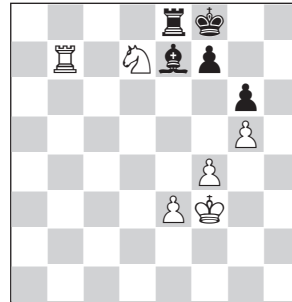
Black persists in passive defence. 68...f6! seems to me to be the only way to defend successfully. As said, Black is helped with any exchange, especially if it's pawns leaving the board. This way, he also removes later mating patterns from the position:

69.gxf6 ♕xf6. It is known that a rook ending with white pawns on e5 and f4 vs a black one on g6 is drawn in principle; with knight vs bishop added, it looks like White has significantly better winning chances, but I doubt if the balance has really been broken. Of course, the white player could keep on trying endlessly.

69.♔g4 ♜b8 70.♔e5

White (temporarily) abandons his plan to hand out another 'poke'. You never know if during the blitz phase someone might fall for a knight fork trick...

70...♜c8 71.♜b7 ♜e8 72.♔d7+



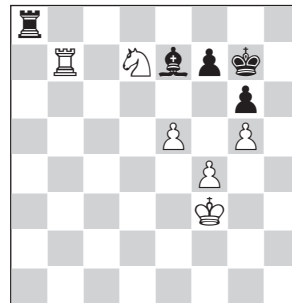
Now, the march of the e-pawn becomes topical.

72...♖g7 73.e4 ♙a8

Here, 73...f6?? was impossible already: 74.♔xf6, with an immediate win.

74.e5

#### Phase 4



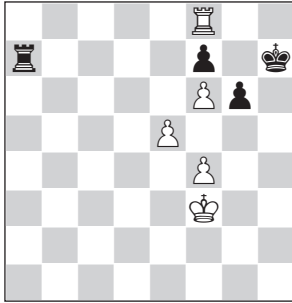
Phase 3 has been concluded. Phase 4 is determining the right moment for the knight to jump to f6, after which mating threats will abound.

74...♙a6 75.♔f6

And that moment comes quickly!

75...♕f8

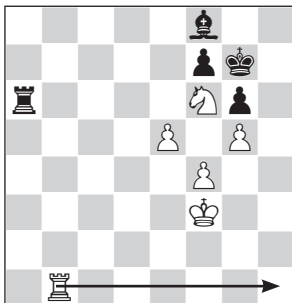
After the light-piece trade with 75...♕xf6 76.gxf6+, the rook ending is lost since White's pawns have advanced very far already: 76...♖g8 77.♜b8+ ♖h7 78.♜f8 ♙a7.



analysis diagram

White has a wonderful pawn phalanx, and he can break through as follows: 79.♔g4 (this king move is essential, as we will soon see) 79...♞b7 80.e6 fxe6 81.♞e8, and since White threatens to force a pawn ending with 82.♞e7+, Black's rook has to leave the seventh rank, after which f6-f7 decides. Important also is that 81...♞f7 fails to 82.♔g5, when Black is in zugzwang: 82...♞a7 83.♞e7+ ♞xe7 84.fxe7.

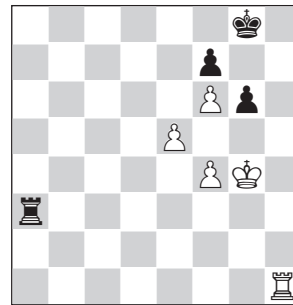
**76.♞b1**



Now that the h-file is open, the rook threatens to invade there. **76...♞a3+ 77.♔g4 ♕e7 78.♞h1 ♕xf6** Now Black can pack it in after all. The resulting rook ending is winning for White, since now there are breakthroughs in the position.

**79.gxf6+ ♔g8**

Phase 5

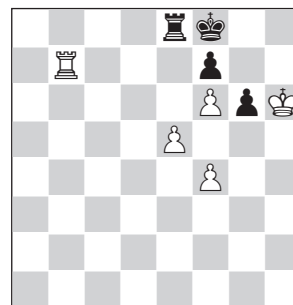


Phase 4 is over. In the remaining rook ending with the giant pawn on f6, White tries to force a pawn breakthrough.

**80.♞b1 ♞a8**

Shirov doesn't allow 81.♞b8+ – we already know the consequences of having a white rook on the back rank.

**81.♞b7 ♞e8 82.♔g5 ♔f8 83.♔h6!**



White's king surprisingly penetrates via the h6-square.

**83...♞c8**

83...♔g8 is met by 84.e6! ♞xe6 (84... fxe6 85.f7+) 85.♞b8+–.

**84.e6!**

At just the right moment, White liquidates into a rook ending with a passed f-pawn.