

# Endgame Studies as a Training Tool

(by IM Herman Grooten)

An unexpected reunion with an old comrade on the chessboard, Peter Boll, the man behind ARVES has led to the fact that the link between the wonderful world of endgame studies and tournament practice may once be made. At least, that is what Peter managed to convince me of and hence this article. At one point during our student days I saw Peter almost every week to work together with another strong chess player (IM Johan van Mil) over a cup of tea (which gradually turned into a couple of beers 😊) to improve our analysis skills by looking at positions together.

## To improve chess skills

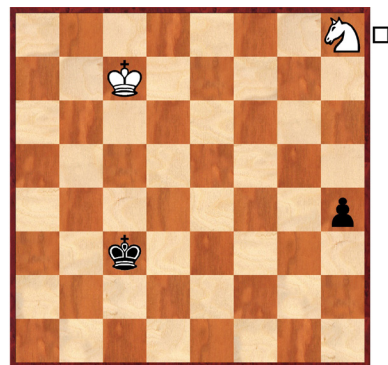
Having already had a fondness for endgame studies later on as a chess trainer, I increasingly came to realize that studies can be an ideal tool for chess training of talented players. If we think about what kind of skills a player needs during a game, endgame studies meet them almost perfectly. Briefly at a glance:

- - *Compiling a tree of variations*
- - *Visualizing positions after a variation*
- - *Discovering (hidden) tactics*
- - *Detecting (hidden) defenses*
- - *Creativity*
- - *Perseverance*

The latter skill is more mental and falls outside the chess-technical aspects, but anyone who has ever sat staring at a board with a position knows how difficult it can be when you sit and calculate the same variations over and over again, without getting one step closer to the solution. Going in “circles in your thought process” will not sound unfamiliar, and yet it is precisely sometimes necessary to force yourself to have to think in a totally different direction every now and then in order to track down the solution.

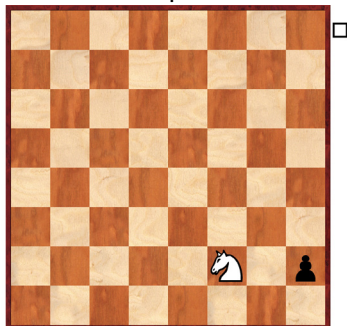
The other skills mainly come into play when the chess talent takes over an endgame study on a real chess board with the clock next to it (to simulate the match situation) and then tries to write down as many variants as possible in as short a time as possible in the hope of getting closer to the solution. A trainer should then ideally also vary the forms of work - especially in groups - a bit. Let me take you to a training of talented youngsters (about 10-12 years old) in which I focused on the endgame of 'knight against pawn(s)'.

The youth players all received a sheet of paper with three diagrams on it. The first position is an endgame study by Grigoriev that I, as a trainer, will play out against them simultaneously later. White faces the difficult task of stopping the black h-pawn. He has the problem that his knight and king seem to be in a rather unfortunate position.

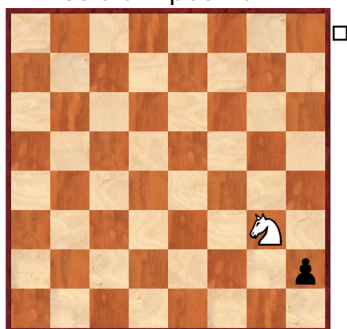


The other two diagrams are the so-called auxiliary positions:

Assistant position 1



Assistant position 2



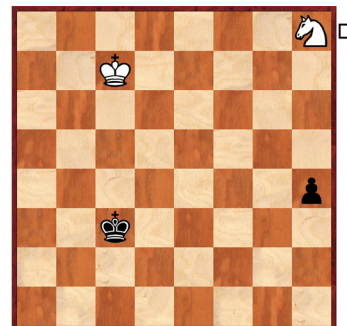
Since the important thing later is that the black king approaches the knight, I asked the pupils to put crosses on the squares that the enemy king is not allowed to enter (either because he is then in check, or that he then loses the pawn via a fork).

Then began the (educational) simultaneous game which is characterized, that all players are allowed to move back and make a new attempt.

Below is the elaboration of this nice study, which also ended up in my book [“Chess Endings for Club Players.”](#)

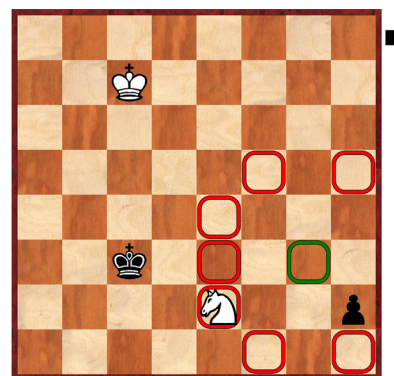
With an ingenious knight-barrier, White manages to save himself in the nick of time. A knight-barrier is a kind of fence through which you cannot go with the enemy king because you will either be in check or lose the pawn through a fork.

Study by Grigoriev  
Knight vs Pawn 2007



1. ♖f7!

The more obvious continuation 1. ♖g6 leads to loss. The pawn can no longer be stopped. 1... h3 2. ♖f4 h2.



Position after: 3. ♖e2+

Since the knight must now move to g3, the black king can anticipate it. He can bypass the knight barrier with 3... ♔d2! 4. ♖g3 ♔e1 The king now approaches the knight very quickly... 5. ♔d6 ♔f2 6. ♖h1+ ♔g2 The knight is lost and the white king is too far away to enclose the black king in the corner.

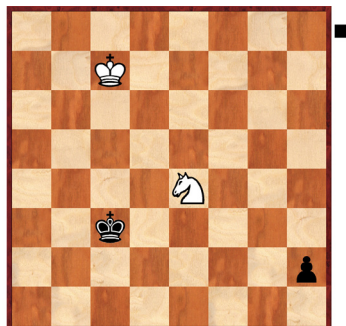
1... h3

Forced, otherwise the knight gets in front of the pawn.

2. ♖g5 h2 3. ♖e4+!

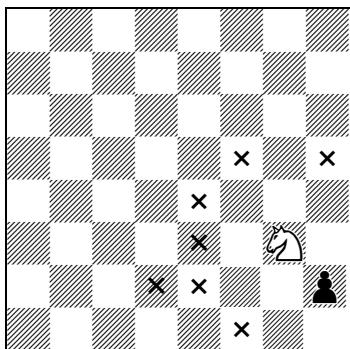
This is the difference from the first variation. From this square, white has the choice of putting the knight on f2 or on g3 to stop the pawn. It depends on the next king's move.

We have previously used the auxiliary diagrams in which we looked at two cases. In the first case, we put the knight on g3 in our minds and then see what the barrier looks like by making crosses:

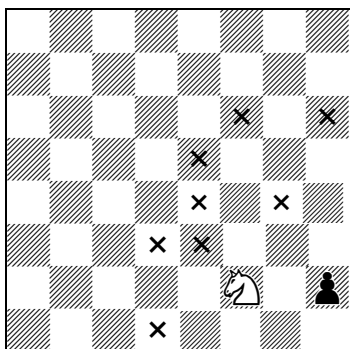


Position after: 3. Nf2+

Only through this intermediate check can White attempt to save itself. Depending on where Black moves the king, White moves the knight to a square to stop the pawn.



In the second case, we place the knight on f2 and then also put crosses again:

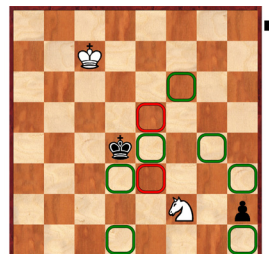


The crosses make it clear where the enemy king cannot enter and that is why it is called the "knight barrier. Actually, it is a kind of 'fencing' around the knight where the enemy king is shut

out. Now that we know this, we can easily solve the study:

**VARIATION 1)**

After the other king move 3... Kd4 White must respond differently: 4. Nf2!



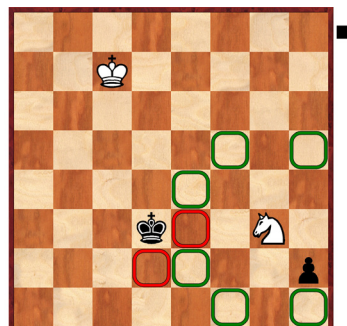
Analysis after: 4. Nf2!

The black king must now move all the way around. This goes as follows: 4... Kc3 5. Kd6 Kd2 6. Ke5 Ke2 7. Nh1 Kf3 8. Kd4 Kg2 9. Ke3 Kxh1 10. Kf2 and White is just in time!

Or 3... Kc2 4. Ng3 Kd1 5. Kd6 Ke1 6. Ke5 Kf2 7. Kf4=

**VARIATION 2)**

3... Kd3 4. Ng3!



Position after: 4. Ng3!

And again black has to take too much of a detour, allowing the white king to get to the knight in time.

4... Kc2

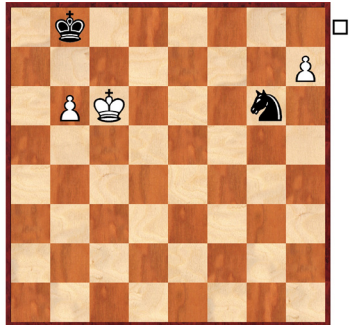
4... Kd4 5. Kd6.

5. Kd6 Kd1 6. Ke5 Ke1 7. Kf4 Kf2 8. Kg4

And White keeps it simple and draws. ½-½

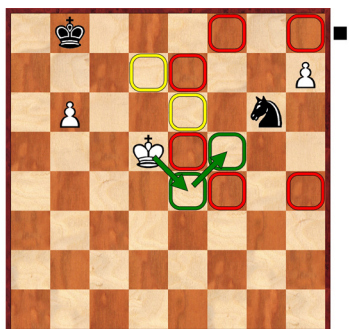
A wonderous whole!

In my book, I myself have constructed a position (study?) in which the solver must (in his mind) rig a knight barrier to see how to maneuver with the king to walk to the enemy horse.



In this position composed by myself, White must determine how best to direct the king toward the black knight. This seems like a piece of cake, but practice proves more unruly.

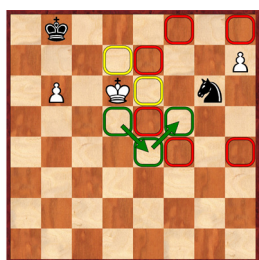
1. ♔d5!



Position after: 1. ♔d5!

Only this move with the king wins for White. In the picture you can immediately see where the barrier is located and how the white king must play “sneak-through-creep-through” to chase the knight away.

A) With 1. ♔d6?



Analysis after: 1. ♔d6?

White loses a crucial tempo that prevents him from performing the race to the corner quickly enough. The diagram makes it clear what is going on here. The squares indicated with a red circle are directly covered by the knight and therefore cannot be entered by the king. The squares indicated with a yellow circle cannot actually be approached by the king either because black then has ...♞f8+ with gain of the pawn at hand. Actually Black has erected a kind of fence with the knight so that the king cannot pass easily. The visual image does indicate immediately where the fencing falls short. Via e8 (cannot be reached) or via e4-f5 there is a hole in the fence value king can crawl through to attack the knight. An example: 1... ♔b7 2. ♔d5 ♔xb6 3. ♔e4 ♔c6 4. ♔f5 ♞h8 5. ♔f6 ♔d7 6. ♔g7 ♔e7 7. ♔xh8 ♔f7 And Black got the draw in the nick of time.

B) 1. ♔d7? immediately costs the most essential pawn after 1... ♞f8+.

1... ♔b7

Black must first defuse pawn b6, and that costs him one move too many to save the game.

2. ♔e4

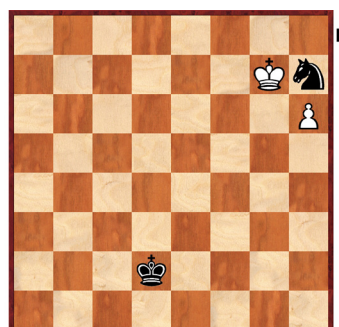
So, also not 2. ♔e6?? due to 2... ♞f8+.

2... ♔xb6 3. ♔f5 ♞h8 4. ♔f6 ♔c6 5. ♔g7 ♔d6 6. ♔xh8 ♔e7 7. ♔g7

and White has the spoils.

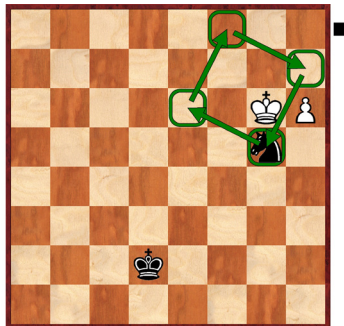
1-0

Also essential in many “knight versus pawn” endgames is the so-called “knight carousel” which looks like this.



If the knight can stop the pawn just before the penultimate rank, it still holds a draw! We call this the *knight carousel*.

1... ♞g5 2. ♔g6



Position after: 2. ♔g6

2... ♞e6! 3. ♔f6

3. h7 ♞f8+ with a draw.

3... ♞f8 4. ♔g7

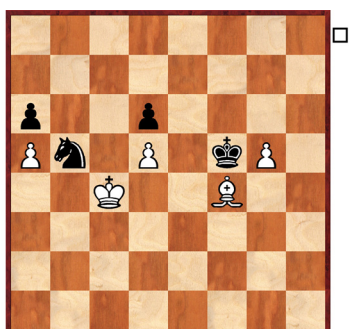
4. ♔f7 ♞h7=

4... ♞e6+ =  
½-½

## Defending an ending

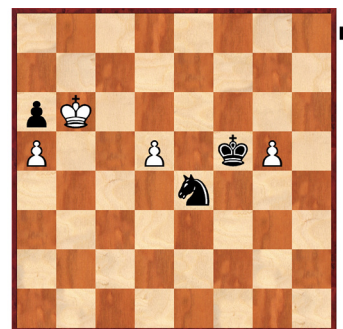
Of course, as a party player it is also useful if you can use this knowledge in practice. And that became clear once again when I was put to the test by a strong lady from the Eastern Bloc.

♁	Mamedjarova, Zeinab	(2318)
♁	Grooten, Herman	(2387)
♁	Hooegeveen Essent op 2006	



The following game was played in Hooegeveen, where the tournament hall was almost empty at this point. My opponent was Zeinab Mamedyarova from Azerbaijan. There was a time scramble phase in a position where White had a healthy extra pawn. While I was thinking about my next move, I suddenly saw my opponent's brother, the famous Shakhriyar Mamedyarov (who was playing in the crown group) enter. He immediately started a conversation with his sister — no arbiter in sight... At that moment I thought: 'Now I'll also have to face 2750+ rating points in this miserable endgame...' But that's not how one should think, and so I naturally assumed they were talking about the weather instead of the game! The fact was that White couldn't see a clear way to make progress with normal means. So, she sacrificed the bishop to bring her king in. Black now had to make some tricky decisions with little time on the clock.

58. ♔xd6!? ♞xd6+ 59. ♔c5 ♞e4+ 60. ♔b6



Position after: 60. ♔b6

This is the first moment to determine how Black can best defend. Afterward, it turned out there were multiple ways to secure a draw, but during a game, a player has to make choices. Dutch grandmaster Jan Timman once said that a player should choose one line they trust most and try to calculate it all the way through. If they can determine that this line achieves the desired outcome, they should play it after verifying. I chose

60... ♔e5

My idea is to remove the potentially dangerous passed pawn on d5 first. The key then is how

the king and knight divide their tasks. There are two ideas:

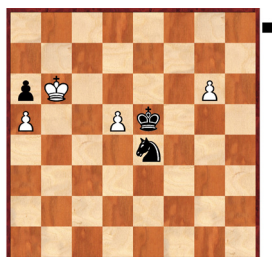
1) If the White king captures on a6 quickly, the Black king takes d5 off the board and then heads toward White's g-pawn, still remaining within the square. The knight then handles White's a-pawn with the famous 'carousel.'

2) If White immediately advances the g-pawn, the king still captures d5 and then focuses on White's a-pawn. It's crucial that if the White king captures a6, the Black king immediately locks it on the edge. In these cases, the knight blocks the g-pawn. Even if the White king eventually escapes the edge and tries to drive away the knight, I knew that with the knight hopping back and forth, the draw was secured. The variations were based on the schemes I had in mind.

In hindsight, it turns out that 60... ♔xg5 was also a fairly simple way to secure the draw. 61. ♔xa6 ♔f6 62. ♔b6 ♖d6 63. a6 ♔e7 and the knight carousel does its work again. [63... ♔e5 is also possible, as long as the d5 pawn can be captured in time.]

61. ♔xa6

Of course, this must also be considered: 61. g6!?

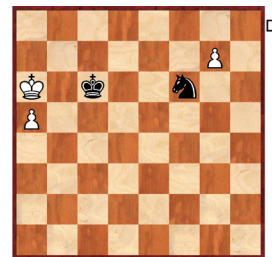


Analysis after: 61. g6!?

must be examined. Because I must, of course, remain consistent.

Immediately 61... ♖f6?? would be a terrible blunder because of 62. ♔xa6 ♔xd5 Black is too late... [Also 62... ♖xd5 loses because of 63. g7 ♖e7 64. ♔b7 and now the a-pawn decides.] 63. ♔b7! and the White king cannot be kept away from the edge, guiding the a-pawn directly to promotion.

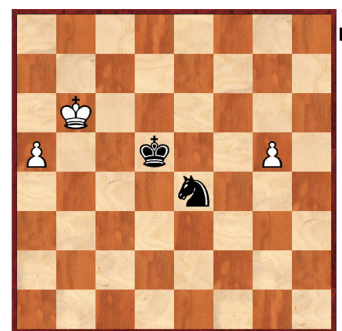
61... ♔xd5! is now the only move! 62. ♔xa6 ♔c6 63. g7 ♖f6



Analysis after: 63... ♖f6

with a draw. An example for illustration: 64. ♔a7 ♔c7 65. a6 ♔c8 66. ♔b6 ♔b8 67. ♔c5 ♔a7 68. ♔d4 ♔xa6 69. ♔e5 ♖g8 70. ♔e6 ♔b6 71. ♔f7 ♖h6+ 72. ♔g6 ♖g8 73. ♔f7 ♖h6+ 74. ♔g6 and so on.

61... ♔xd5 62. ♔b6

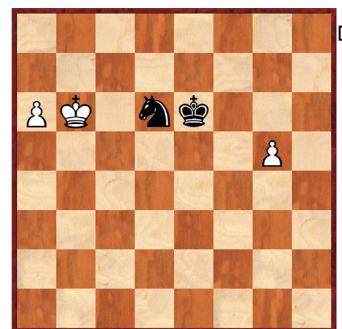


Position after: 62. ♔b6

This is again an important moment because now the second scheme comes into action. The division of tasks is that the knight must block the a-pawn, and the king focuses on White's g-pawn.

62... ♖d6 63. a6 (63. g6 ♔e6.)

63... ♔e6

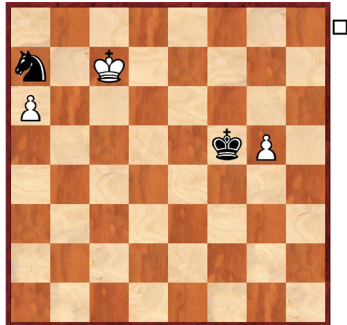


Position after: 63... ♔e6

64. ♔c5

She tries it this way. The carousel works as follows: 64. ♔c6 ♖c8 65. ♔c7 ♗a7 66. ♔b7 ♗b5 67. ♔b6 ♗d6 and so on.

64... ♗c8 65. ♔c6 ♔f5 66. ♔c7 ♗a7



Position after: 66... ♗a7

The carousel again works well here!

67. ♔b6 ♗c8+ 68. ♔b7 ♗d6+ 69. ♔c7 ♗b5+  
70. ♔b6 ♗d6 71. a7 ♗c8+ 72. ♔a6 ♗xa7 73.  
♔xa7 ♔xg5 ½-½

Completely exhausted!

Still, I couldn't help feeling that I had made a draw against 2750 😊....

## Practice meets endgame study

Finally, an incredible case from practice where practice and endgame study find each other in an adjourned game, long ago. In the following story, I would like to talk about the time when chess games could still be adjourned. Endgames are better learned not from books but in practice. When you have an adjourned game, you are highly motivated to finish it successfully. That's much more engaging than plowing through the dense material that endgame books usually offer. Consulting a reference book at that moment can sometimes be enlightening. The following adjourned game has a personal backstory that I would like to share. The Eindhoven Chess Association (ESV) had become the national club champion in the 1983-1984 season and thus had the opportunity to participate in the European Cup matches. In those matches, six boards were played, and two matches were scheduled. In

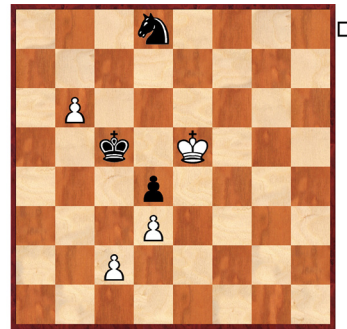
case of a tie, the result on the higher boards would determine the outcome. In the first round, Eindhoven was paired against *IT Bucaresti* in Romania. This meant that about ten of us from Eindhoven flew to Romania at a time when Ceaușescu was still in power. After the first match, Eindhoven had taken a slight lead, but it soon became clear that the second match would be "all hands on deck" for us. The games were played during a time when games could still be adjourned. In the second round, our first board player, IM Peter Scheeren, had a particularly unpleasant queen endgame with a pawn down that he had to defend against none other than GM Gheorghiu. Another adjourned game was clearly lost for us, and the third adjourned game was mine against the Romanian IM (& professional) Julius Armas. If I won my game, the other two could lose, and Eindhoven would still come out on top. However, if I failed to win, Scheeren would have a very tough challenge ahead... It was clear that the entire team focused on the adjourned position from my game, which looked like this (see diagram). That evening (and night), we analyzed the position extensively because play would resume the following morning. Teams were formed to analyze different variations following the Russian school of thought. The analysis I present below is the result of a joint effort by the entire team, with significant contributions from IM Peter Scheeren, Gerard Welling, Johan van Mil, Rudy Douven, and IM Frans Kuijpers. Incidentally, the other three would later all become IMs as well. Because the win could only be achieved in one — in my eyes, very artistic — way, the conclusion was justified: a game position had truly been elevated to an endgame study! The initial optimism about a successful outcome quickly turned to a negative mood when someone found a defense for the opponent that seemed difficult to crack. Fortunately, during dinner, using a small magnetic chessboard, a brilliant discovery was made, reviving the mood. Even a few beers appeared on the table. After dinner, we combined our efforts again, and all variations seemed to point in the right direction. The initial excitement about winning in a beautiful way was tempered by the fact that one variation still eluded victory.

However, this defense, discovered by Gerard Welling, was so obscure that the team remained reasonably optimistic about the outcome. "Would the opponent have analyzed as well as we did?" was the legitimate question I asked myself as I was sent to bed well past midnight. I had to play at 10:00 the next morning! While everyone, except one teammate, had gone to bed deep into the night, Johan van Mil continued his search. He was not confident that the opponent wouldn't find the defense, and he decided to sacrifice his sleep. Towards the morning hours, he made a miraculous discovery, which proved to be the key to success, and for which he woke me up at 8 a.m. As I rubbed the sleep from my eyes, he showed me the chessboard on which he had performed the winning concept. In the position after 8... Kd4 (with a knight on d6), he discovered that this position could also be reached with a knight on d8. I immediately understood what he meant because we had previously found a win with the knight on d8 earlier in the evening. This dry observation crowned the effort. The study had now become a true work of art, at least in my humble opinion. Black submitted the move 41... Kd7 sealed in an envelope. Since I am a chess instructor, I have chosen to present the variations with detailed explanations. I hope the reader will enjoy the remarkable maneuvers the black knight must perform to force the win, just as the players from the Eindhoven Chess Association did that night in a dark hotel in Bucharest during Ceaușescu's even darker regime.

**41... ♔d7 42. ♕f4 ♖c6 43. ♕e5 ♗c5!**

Essential is that 43... ♘b5 achieves nothing because of 44. ♕e4! With this, White adopts a waiting stance, which is sufficient for a draw. [Especially not 44. b7? due to 44... ♗xb7 45. ♕d5 ♖b6 and we get the position from the main line with the opposite color to move. Now Black wins easily. For example: 46. ♖c4 ♕c6 47. ♖b4 ♘c3 48. ♖c4 ♘e2 49. ♖b4 ♕d5 50. ♖b5 ♕e5 51. ♖b4 ♖f4 52. ♖c5 ♕e3 53. ♖b4 ♕d2 54. ♖b3 ♕c1→] 44... ♗xb6 45. ♕d5 With mutual zugzwang.

**44. ♕e6 ♘b7 45. ♕e5 ♘d8!**



Position after: 45... ♘d8!

Black now threatens to cover the pawn with check (...♘c6+) so that the black king can capture on b6.

**46. ♕e4 ♘f7!!**

Peter Scheeren's discovery during dinner. The idea behind this move is to deprive the White king of squares to drive him away from the White pawn, giving Black time to neutralize the troublesome b-pawn.

**47. ♕f5!**

The only move that qualifies, because once again Black has no time to capture the pawn. Observe: 47. b7?? ♘d6+ winning!

**47... ♕d5!**

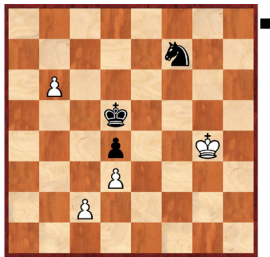
A paradoxical move, as the black king now also moves away from the b-pawn that it must neutralize. But now White is forced to decide on a move. After 47... ♕xb6? 48. ♕e6! ♘d8+ 49. ♕d5 ♘c6 50. ♕c4 followed by c2-c3 and the position is a draw.

**48. ♕g6!?**

The most obvious attempt, since after 48. ♕f6 ♘d6 White falls into a kind of zugzwang.

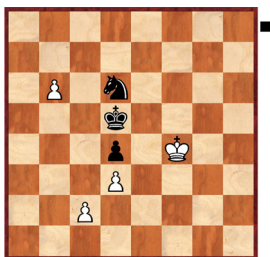
**A) 48. ♕f6? ♘d6!!** A new key point in Black's concept. It is important that now 49. ♕e7 is impossible because of 49... ♘c8+ and the pawn falls. Since the knight controls f5 and f7, the White king must go to the g-file, where he stands just too far away. 49. ♕g5 ♖c6 50. ♕f4 ♕xb6 51. ♕e5 ♖c5 and Black returns just in time, having consumed the b-pawn.

B) 48. ♔g4!



Analysis after: 48. ♔g4!

Suggested by Gerard Welling who said: 'If 48. ♔g6 doesn't work, then you should try 48. ♔g4, since the White king is equally close to the Black pawn.' 48... ♖d6!! Alternatives don't work. [48... ♔c6? 49. ♔f5 ♔xb6 50. ♔e6 ♖d8+ 51. ♔d5 ♖c6 52. ♔c4 and Black cannot make progress.; 48... ♖d8? 49. ♔f4! ♖b7 50. ♔f5 ♖d6+ 51. ♔f6 and a familiar position arises with the 'wrong' color to move.] 49. ♔f4



Analysis after: 49. ♔f4

49... ♔c5!! The whole point. With the knight on d6, the king must go to the fatal square e5. 50. ♔e5 Discovered by Johan van Mil after an entire night of analysis. His comment on this: 'If the knight is on d6, it is also on d8!' And so in this position you can check! on c6 and remove the pawn on b6. The knight is now going for a little walk... It all sounds like a "Columbus' egg," but discovering it required considerable effort (and a sleepless night)! 50... ♖b7 51. ♔e4 ♖d8 52. ♔e5 ♖c6+ check!! 53. ♔e4 ♔xb6 54. ♔d5 ♔b5.

48... ♖d8!

The correct idea, as will become clear. But now that the White king is on g6, 48... ♖d6 also wins 49. ♔f6 transitioning into variations we have already seen.

49. ♔f5

The key point is that now on 49. ♔f6? the brilliant 49... ♔c5!! follows so that Black can give the decisive check after 50. ♔e5 [50. ♔e7 also doesn't help because of 50... ♖c6+ check! 51. ♔d7 ♔xb6 52. ♔d6 ♖b4 53. ♔e5 ♖xc2] 50... ♖c6+ the crucial check! 51. ♔e4 ♔xb6 52. ♔d5 ♔b5 and Black has achieved a known winning position.

49... ♖b7 50. ♔f4

Forced, since we already saw that 50. ♔f6 fails to the zugzwang after 50... ♖d6. The White king must always be able to reach the Black pawn as quickly as possible.

50... ♖d6 51. ♔f3

White realizes that he will not be able to save the game and accepts his fate.

51. ♔g5 ♔c6 52. ♔f6 ♔xb6 53. ♔e5 ♔c5 and wins.

51... ♔c6 52. ♔e2 ♔xb6 53. ♔d2 ♖b5 54. ♔c1 ♔c5 55. ♔b1 ♔b4 56. ♔b2 ♖a3 57. c4 dxc3+ 0-1

And resigned, after which a kind of "hurrah mood" erupted in the Eindhoven camp!

#### Detailed information about the book:

- *Chess Endgames for Club Players*
- Publication date: 2022
- Number of pages: 480
- Editor: New in Chess
- Paperback ISBN: 9789493257498
- PDF-Excerpt:  
[https://www.newinchess.com/media/wysiwyg/product\\_pdf/9158.pdf](https://www.newinchess.com/media/wysiwyg/product_pdf/9158.pdf)
- Softback: € 34,95 Also available as an e-book € 26,99.
- More info on:  
<https://www.newinchess.com/chess-endgames-for-club-players>

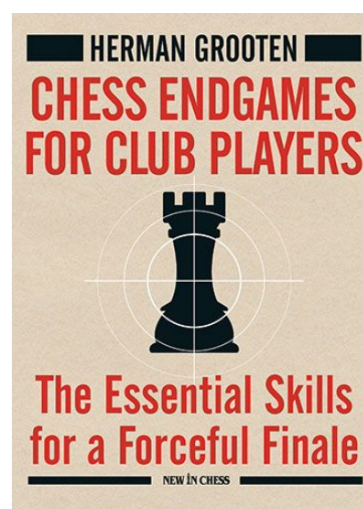


Photo by Peter Doggers

#### CV of the author:

Herman has been a semi-professional chess player since the age of 22. He earned his spurs within chess by obtaining the title of International Master in 1990. Twice, in the years 1981 and 2000, he managed to qualify through the preliminaries for the Dutch Championship where he was allowed to act at the highest level. Although nowadays not very active as a player anymore, he achieved a grandmaster result in the open grandmaster tournament of Leeu-

warden 1995. Abroad, he won an open grandmaster tournament in Bad Wildbad (Germany) in 2002, among others. In the open tournament in Graz (Austria), played a few months later, he was very close to a second GM norm.

In addition to his career as a chess player, he has worked as a chess trainer for nearly 45 years. In this position he has trained and coached many national youth talents on behalf of the KNSB (the Royal Dutch Chess Federation). Some of the students he has trained are Loek van Wely, Dennis de Vreugt, Jan Werle, Wouter Spoelman, Robin Swinkels and Benjamin Bok. They all became grandmaster, Van Wely even belonged to the world top for a while. Herman also gives private chess lessons at clubs and regularly organizes clinics, lectures, simultaneous exhibitions and workshops.

He was also active in the field of journalism. For seventeen years he was responsible for the chess columns every Saturday in the daily newspaper *Trouw* and for more than eight years for *Het Eindhovens Dagblad*. He was also the founder of the magazine *Schaaknieuws* for which he worked six years. In this period he was partly responsible for the publication of several tournament books, of which those on the *Interpolis* tournament 1989 to 1991 were the most important. As a publicist, he further earned his spurs by writing a couple of chess books. After *De verdediging van de koning*, he produced the trilogy *De elementen van Steinitz* with editor Van

*Spijk*. Together with IM Hans Böhm, he published three volumes of a series entitled *Meesterlijke Schaaklessen* at Tirion Publishers.

In May 2009, Editor *New in Chess* published the English-language book “*Chess Strategy for Club Players*”. This book is based on Steinitz's strategy elements. The book was awarded “*The book of the Year 2009*” prize by the leading American site [www.chesscafe.com](http://www.chesscafe.com). In his foreword, Grandmaster Jan Timman praises this voluminous tome of about 462 pages. Subsequently, *New in Chess* ss published the books “*Attacking Chess for Club Players*” and “*Endgames for Club Players*.”

Meanwhile, Herman has developed several books with editor *Thinkers Publishing* of Belgium, published in both Dutch and English. In the “*Understanding before Moving*” series, *Part 1 - Ruy Lopez and Italian Structures*, *Part 2 - Queen's Gambit Structures*, *Part 3.1 - Sicilian Structures (Najdorf & Scheveningen)* and *Part 3.2 (Taimanov, Kan & Richter Rauzer)* came out. A second series (*Key Concepts*) published *Part 1 - The Hedgehog*.

For the [Chessbase platform](http://Chessbase_platform), Herman records a weekly chess video (see: <https://videos.chessbase.com/en/Showdetail?id=Training%20Understanding%20Before%20Moving>). And in addition, he recorded three DVDs (Fritztrainers) for the same company (<https://shop.chessbase.com/en/search?query=Grooten&cat=0>). More personal info (in Dutch) on: <https://www.sterkspel.nl/>.