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# The Art of the Endgame 

My Journeys in the Magical World of Endgame Studies

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## Preface

In my early youth, there were fascinations. I imagined how it would be to live in a house in the woods. Castles would bring me to raptures. I remember my excitement when I was standing with my parents on the ferry that transported visitors to Loevestein Castle. I dreamed that on the playground in our neighbourhood there was a castle you could play in.

In the summer holidays, we travelled along the Rhine in a Ford Taunus - my father behind the wheel, my mother next to him and we, the four kids, pressed together on the back seat. Our destination was Tuscany: Siena and Lucca, with its all-embracing city wall, which we rounded again and again during our long walks.

Along the Rhine stood the robber baron castles with their impressive names: Reichenstein, Rheinfels, and the Fürstenberg, the ruin that towered high above the Rheindiebach village. There we used to find lodgings in a little hotel, concluding the first stage of our trip. At home, in the living room, I would build Lego cities and Citadel castles.
M.C. Escher's 'Metamorphosis' starts with black-and-white squares that transform into salamanders. The salamanders become beehives. Out of these, bees emerge, which are ingeniously transformed into birds. Then there are fish, and in the accompanying pattern - birds again.

Here the 'Metamorphosis' arrives at things made by human hands. The new birds transform into blocks. Out of these, houses in a South-Italian town are formed. Now the systematic pattern of forms is broken. A bridge connects the town with a chessboard. On a3 is a white rook, which also exists in the other reality. On the chessboard, a position is depicted where White perishes due to a smothered mate. And then Escher is back at the black-and-white squares.

From building miniature cities to chess: this was a step I already made in my youth.

The world of chess was the most fascinating. I devoured Euwe's books. The memory of the game Réti-Alekhine, annotated in his book Practical Chess Lessons, which never ceased to amaze me: the black rook appearing on e3 and remaining en prise there for several moves. Another game that was indelibly printed in my memory was Tartakower-Botvinnik from Hans Müller's Mikhail Botvinnik, One Hundred Selected Games. It was an im-
pressive image: the white king was pinned down in the corner by a knight on f 3 , supported by a mighty pawn front.

Within the romantic world of chess there was a sector that was even more hermetically closed off from the outside world. I first became acquainted with it when I read Herbstman's book 'De schaakstudie in onze dagen' (i.e. 'Contemporary Chess Studies'). In this new world there was no struggle in the sense of a man-to-man fight. The competitive element was gone - only scientific and artistic elements remained. The studies by Troitzky and Kubbel had a special magic. I felt that their masterpieces were made for eternity.

It is the strict regulations that lend a special status to the endgame study. White always has only one move to reach his goal, whether it is to force a win or a draw. Black, on the other hand, may have alternatives, and these extra possibilities can enhance the content and the richness of a study.

In practical chess, you think about what lies in the distance. You make plans and calculate variations. Creating an endgame study requires a significantly different thinking process. As a rule, the endgame study composer has an end position in mind, which contains a spectacular hidden point. Then comes the stage of retrograde thinking: he investigates the position backwards, asking himself: 'What was White's last move?' and then: 'What was Black's last move?' Today I still ask myself these questions in my mind.

I composed my first studies in the early 1970's, when I had just finished my secondary school education and the world was my oyster. Now I look back on this, four decades later, it strikes me how uncomplicated these early pieces of work look. The points are nice, but the play misses the depth of my later studies. Not until the 1980s did I manage to create a few high-level studies.

Nowadays I can hardly imagine how it was to compose studies without a computer. In those days it was extremely difficult to work out all the tactical details. You could spend days eliminating little tactical tricks that upset the play. And then sometimes, there would still remain questions. Nowadays you can simply move your pieces and pawns to the right squares on the analysis board of your computer. Tactical snags are often useful for adding new elements to the study.

In December 2010, I decided to write The Art of the Endgame. I wanted to show systematically, guiding the reader along themes and genres, why endgame studies are so beautiful and so interesting. Especially the system-
atics were important. It had struck me that most books on endgame studies were quite random collections. My intention was to reveal the secrets from the world of endgame studies in 14 chapters. I also had a second intention: in 1991, my book Schaakwerk II had appeared in Dutch (later translated as Studies and Games). In the second part of this book I had included a number of endgame studies. I wanted to put this material under the microscope one more time. With the help of the computer I would establish if the studies were correct, after polishing them up in some cases.

In January 2011, I started my journey in the world of endgame studies. I kept making new, fascinating discoveries. This stimulated me to create new studies. Before, I had never occupied myself with the question how you could incorporate the Novotny theme and the related Plachutta theme in studies. Studying a number of examples pointed me in the right direction. Never before have I been so productive as an endgame study composer as in the seven months that I wrote this book. It was a sensational experience. Whether I looked at bishop promotions, systematic manoeuvres, or the Valladao Task, I kept finding new paths.

The computer has refuted a number of studies by great composers. Nowadays there is a trend to publish such refutations as if they were great achievements. In this book I have striven to use the computer in a constructive way. An impressive work of art that has been damaged, must be repaired with great care. I have treated studies with such defects in the same way. I corrected them in ways that did not affect the brilliant ideas.

In the first chapter I discuss miniature studies, i.e. pieces of work that are often closely related to the theoretical side of the endgame. The second chapter continues on this path, and is purely theoretical. Then we come to the real romanticism. Pawn promotion is an important factor in chess. First I discuss several methods to prevent pawn promotions, and after that the various promotion combinations are reviewed. I have given a representative picture of the themes. As with every theme, I cannot pretend to be comprehensive; there are more than 75,000 studies in existence!

In the chapter on knight promotions, I have had to restrict myself even further. This is the type of pawn promotion that is most frequent after the regular queening, in practice as well as in studies. I have exclusively dealt with knight promotions that repeat themselves according to a certain pattern. With bishop promotions I could paint a slightly more comprehensive picture again, even though I was forced to make choices here as well.

In the chapters on mate and stalemate, I have selected those studies that appealed to me most. That was anything but easy. Each study (or game) ends in mate or stalemate, and the motifs can be surprising and beautiful.

Mutual zugzwang and building a fortress are themes that can be of practical use. It is remarkable how often strong players do not recognize these themes. For this reason, I think that Chapters 9 and 10 are highly instructive.

On the other hand, the next two chapters contain themes that are entirely disconnected from practice. Systematic manoeuvres do not occur in games. Nor will a player strive to lose pieces in the course of a variation. However, it is worthwhile to see how these offerings are justified in studies.

In the chapter called 'Three Themes' I have dealt with three of my favourite themes. The final chapter is a collection of remaining studies. Again, I had to make a selection here. There were studies from the past with nice ideas, which nevertheless had to be rejected for publication, either because the computer refuted certain variations, or because the variations were insufficiently special.

And that is how my seven months' journey came to an end. It was not only a fascinating experience, but also an instructive one. It seemed as if I was finally allowed to probe depths in the endgame that had been hidden from me before. I have tried to describe and explain my findings as clearly as possible. And I sincerely hope that the depth and beauty of endgame studies will also move the reader.

## Chapter 1

## Miniature Studies

A miniature study is a study with no more than seven pieces in the starting position．With minimal material，the composer must weave the maximum amount of finesses into the position．A classical exam－ ple is the following study by the brilliant Russian composer Mark Liburkin．


Liburkin，‘64’ 1933
White to play and win
First of all White pins the black knight，in order to capture it next．

2．돌d1－e2
Because his bishop is in the way， Black cannot unpin his knight． However，he has a resource in store．

2．．．．定 $\mathrm{e}-\mathrm{f} 6$
3．我e2－f3 臬 $66 x h 4$
Black appears to save himself， since after $4.0 \mathrm{xh} 4+$ 啝g 5 the
white knight is also under at－ tack．But now White changes tack．

4．国b1xe4＋wag5－g5

6．鼻d5－f7＋dag5－g5
7．鼻f7－e8


And the black bishop is lost．
This miniature study contains some themes that we will touch upon later．It starts with a pin．The final position shows a case of＇mu－ tual zugzwang＇：if it were his move，White would not be able to win．Furthermore，the＇domina－ tion＇theme makes an appearance： the black bishop has no squares and is dominated by the white pieces．

I have composed a modest num－ ber of miniature studies myself；it is not easy to build in enough points and finesses with so little material．

The following study by Benkö is very good.


Benkö, ‘Magyar Sakkélet’ 1988 White to play and win

In this miniature study White has trouble freeing his bishop. He has to start pushing his passed pawn.

## 1. b2-b4 <br> g3-e2

The only way for the knight to try and stop the b-pawn. After 1... ${ }^{\text {en }} 4$
 the knight would be dominated, while the black king is too remote to stop the b-pawn.
2. b4-b5 e2-d4
3. $\mathrm{b} 5-\mathrm{b} 6$ d $4-\mathrm{c} 6$
4. b6-b7

Black has managed to stop the promotion of the b-pawn, but this does not mean that his troubles are over. After 4...ebb 5.f4 ©d76.f5
 the white bishop would be freed, and White wins by bringing his king to d 6 .

## 4. ... <br> c6-d8!

Black is playing for stalemate.
5. b7-b8鼻!

The white pawn has travelled the entire road from starting square to promotion square. This motif is
called the Excelsior Principle. Although White now has a big material advantage, the win is far from easy. His king's bishop is still walled in.

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5. ...
4d8-c6
6. 定b8-g3!
```

The only square for the bishop. On 6...®e5+ White can now play 7. deff 5 with a win.

| 6. ... ${ }_{\text {7 }}^{\text {beg6-f7 }}$ |  |
| :---: | :---: |
|  |  |

Another fantastic resource. White cannot take the knight.
8. © e 7 -g8! (g6-e5+
9. 혈77-e8!

And wins.
For this study Benkö received second prize in the tourney of the Hungarian chess magazine.

If I think of bishop promotions, I am immediately reminded of Vasily Smyslov.

## Smyslov as an endgame composer

It is a striking fact that Smyslov started composing studies at a very young age. This craft lay dormant during the time of his great successes. It was only at an advanced age, when blindness stopped him playing practical games, that he picked it up again. For 60 years he had produced very little in the area of endgame studies.
In 2001 a little pocket-sized booklet called Moi Etiudy was published. It contains 57 studies, 48 of which are from after 1998. I got the booklet, autographed by Smyslov

Fortresses can also be built with heavily reduced material．As an il－ lustration I give a study where White just barely manages to pre－ vent the building of a fortress．


Timman 2010
White to play and win
Actually，this is a middlegame posi－ tion where White must play for an attack．

## 1．自c1－f4

Insufficient for the win was 1．${ }^{\text {d }} \mathrm{b} 2$ on account of 1 ．．．鼻d4．White wins an exchange，but loses his attack－ ing chances．After the text move White threatens to administer a devastating check on e5．

1. ... 鼻f2-d4

Controlling the long diagonal．White has to find new attacking ideas．

## 2．h5－h6

 4．${ }^{4} \mathrm{yd} 4+$ ！ cxd 4 5．鼻 $\mathrm{e} 5+$ ，winning．

## 2. <br> 鼻d4－f6

The only defence．At first sight it is unclear how White can breathe new life into his attack．

## 3．惜 b 5 xb 6 ！

A rook sacrifice which serves to give the bishop control of the square e5．

3．．．．应e6xb6
Black could not take the queen，as
 5．蒐e5＋he would get mated．

4．鼻f4－e5


What can Black think of now？

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4. ... 传c3-h3+!
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Black also sacrifices a rook．The point of the sacrifice is that Black tries to build a fortress．

## 5．g2xh3

White could not capture with the king on account of a queen check on e6．Now Black is going to try to exploit the doubling of White＇s pawns on the h－file．

5．．．．


This was the plan．The white bishop is pinned，and White does

## Chapter 13

## Three Themes

1. Troitzky/Amelung position

An interesting question is: can we compose a position where one side is a rook, bishop and pawn up, it is his move and yet he cannot win? I shall give two clues: stalemate is not a theme, and without that pawn it isn't possible.
In 1896 this position was discovered twice: by the Baltic/German endgame theoretician Friedrich Amelung in Riga, and by Alexey Troitzky in Smolensk. Each of them published a modest study in that year which showed the discovery: Amelung in the Düna Zeitung, and Troitzky in Novoye Vremya. In those times it was normal that new studies were published in daily newspapers.
Amelung's study looked as follows:


Amelung, ‘Düna Zeitung’ 1896
White to play and draw

White is a piece behind, and taking on g 7 will not save him.

1. h5-h6!

This pawn sacrifice has a special intention.

1. ... $\quad$ 7xh6
2. 혈e2-f3+ 훌a2-b1
3. -g $2-b 2+!$

A rook sacrifice that serves to vacate the 22 -square for the king.
3. ... .
4. ぁff3-g2

And the black rook has no squares.
In Troitzky's study, the play unfolds on the queenside.


Troitzky, 'Novoye Vremya’ 1896 White to play and draw

Here also, a crucial square must be cleared for the white king.

1. b2-b4+! 홀c5xb5

2. 홀c3-b2

And again the black rook is caught.

