

**An  
Introduction to  
Chess Endgame Studies**

**The Fine Art  
of the Royal Game**

**Oleg Pervakov**

**Foreword by Yochanan Afek**



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An Introduction to Chess Endgame Studies  
The Fine Art of the Royal Game

by Oleg Pervakov

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# Table of Contents

<b>From the Author</b>	5
<b>Foreword</b> by Yochanan Afek	7
<b>Chapter 1</b> <b>Study Terms and Themes</b>	9
<b>Chapter 2</b> <b>How to Solve Endgame Studies</b>	121
<b>Chapter 3</b> <b>How to Compose Endgame Studies</b>	130
<b>Chapter 4</b> <b>Training Exercises</b>	145
<b>Joint Study (front cover)</b>	158
<b>Chapter 5</b> <b>Solutions to Training Exercises</b>	159
<b>List of Study Composers and Game Fragments</b>	238
<b>About the Author</b>	240

# From the Author

## The Chess Endgame Study as an Art Form

*It is a grotesque misapprehension which sees in art no more than a craft comprehensible perfectly only to craftsman: art is a manifestation of emotion, and emotion speaks a language that all may understand.*

– W. Somerset Maugham, *The Moon and Sixpence*

The endgame study has a long and storied history and occupies a unique place in chess because of its similarity to practical play. Many studies contain beautiful ideas and combinations. Therefore, they have a big emotional impact and are remembered for a long time. Thus, solving or even simply playing through endgame studies is an effective method of studying the strategic and tactical elements of play and contributes to the growth of the number of fans of this chess art.

An endgame study is a composed position that is legal as far as the rules of chess go and contains an original idea. In a study, it is usually White to move and win or draw, and there is only one way to achieve the win or draw. The solution of a study assumes best play from both sides, preferably with all the pieces on the board involved (the principle of economy) and their importance being equal. Creating a study assumes the author's right to control the solution by showing the defenses and lines that form the foundation of the author's idea. The structure of a study usually consists of three stages: introduction, conceptual play (in which the conflict situation is developed), and finale with denouement preferably with the preceding point.

The world's best chess composers took part in forming the modern endgame study and its aesthetics. Criteria for evaluating endgame studies can be found, for instance, in a report by the outstanding grandmaster Genrikh Kasparian, "On the State and Prospects of Endgame Study Development," delivered at the International Chess Composer Congress (Moscow, August 1961):

- (1) Simplicity and naturalness of the initial position;
- (2) Original, vivid, and beautiful content;

- (3) Organic connection between the introduction and main play. The finale should be hidden as much as possible;
- (4) Interesting counterplay by Black;
- (5) Good usage of material and dynamism of play;
- (6) Preferably a non-forced solution; and
- (7) The solution should not be excessively long or hard.

On the other hand, the art of endgame studies does not like standards and ready-made recipes. Not all good studies satisfy all the criteria above. For instance, the introduction of chess engines has given an opportunity to implement incredibly difficult ideas which could otherwise not be discovered even by the strongest human composers. I personally would have changed the first point from that list to “Proportionality of form and difficulty of idea implementation.” And concerning the seventh point, I would like to point out that implementing some large-scale ideas might require quite a lot of moves.

Fans of chess composition can appreciate any kind of study, be it deep and involved or short and simple. This is the main goal of the composer. The combination of great technique and creative fantasy, without a doubt, gives good results for which any study composer should strive. Every new composition should introduce something new and interesting to the art rather than being simply another imitation.

This book is first and foremost for chess players who already play but may not know much about composing a chess study. Still, I hope that the book will be useful and somewhat instructive for those who may already be proficient in this area of chess.

The central chapter of the book is “Study Terms and Themes.” In two other chapters, the author shares his own experiences as a composer and solver. In conclusion, we offer some studies on popular themes for you to solve.

The book uses the generally accepted system of chess symbols. White is always to move in endgame studies, unless it is expressly stated Black to move.

Oleg Pervakov  
January 2025

# Foreword

## A Study a Day Keeps Blunders Away!

Chess is not just a highly popular game but also a fine art which is best expressed by the rich variety of composed mate problems and endgame studies. Among the composed chess problems, the genre that resembles the practical competitive game is **the endgame study**. As such, it has become a powerful training tool, highly recommended for players at all levels by the best trainers worldwide, as well as top players who regularly solve studies not just for their pleasure but rather to keep in form – sharp and motivated at all times!

Solving studies is not just an instructive journey into the subtleties and mystery of the endgame, but also an enjoyable method of improving the precision of one's calculation process and out-of-the-box thinking. Study composers constantly seek chess paradoxes and innovative ideas which are instrumental in shaping creativity and in providing essential tactical weaponry both for the attack and the defense.

Solving endgame studies is not just an enjoyable training method but also a fun competitive hobby, offering separate contests and titles worldwide. Quite a few gifted players have adopted composing as another lifetime channel to express their creativity. Among the most reputed such names have been former world champion **Vasily Smyslov** and top players **Richard Réti**, **Paul Keres**, **Pal Benko** and **Jan Timman** to name just a few. Other strong OTB grandmasters as well as solving GMs are currently Polish **Kacper Piorun** and Englishmen **John Nunn** and **Jonathan Mestel**.

The book you are holding – a first of its kind – is a complete practical guide to the wonderland of our fine art aimed at leading you to your upcoming solving and composing adventures by a world class expert. **Oleg Pervakov** is one of the dozen living study composers who are grandmasters of chess composition. With an output of more than 600 studies, he has scored, by far, the highest number of Fide Album points awarded to the best artistic efforts.

As such and also as a highly experienced solver, he skillfully guides the reader through the essential aspects of this new adventure. In five extensive chapters of his comprehensive course, Oleg presents amazing studies by 120 of the world's best composers both as examples and as exercises. Most of them have game-like initial positions which makes the solutions even more surprising and inspiring.

I wish you, dear reader, an instructive and fun guided tour into the magic world of chess beauty. Make the best out of it to grow as a chess player and a chess lover!

IM Yochanan Afek \*  
Grandmaster of Chess Composition  
Amsterdam, January 2025

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\* International Master Yochanan Afek is the only person to possess international titles in five different facets of chess. He is an International Master, International Grandmaster of Chess Composition, International Arbiter, FIDE Master in Problem Solving, and International Judge for Chess Compositions.

Otherwise, the b7-pawn is unpinned.

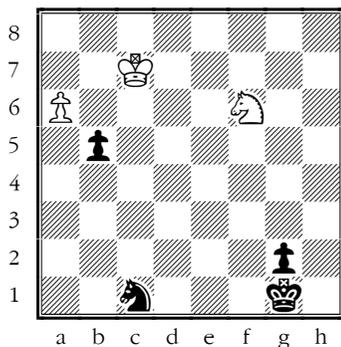
7. ♖f5(e6)+ 1-0

With two forks.

**Author's solution:** Idea shown by the study author.

**Bank:** Complicated pendulum-like motion of a piece (usually the queen) on a big area of the board. The term was introduced by the famous Soviet study composer Genrikh Kasparyan.

### H. Rinck 1905



*White to move and win*

1. ♖g4!

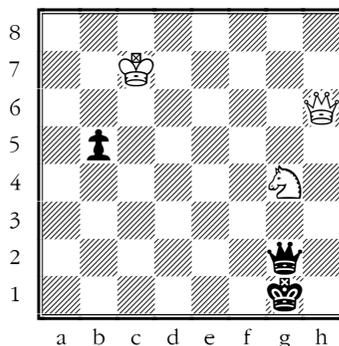
Since 1... ♖f1 is met with 2. ♗e3+ and 3. ♖xg2, the black king is forced to go into the corner.

1... ♖h1! 2. a7 g1 ♖ 3. a8 ♖+ ♖g2 4. ♖h8+ ♖g1 5. ♖d4+ ♖h1 6. ♖d1+ ♖g1 7. ♖d5+

The queen is making sharp *banks*, intending to get from the h-file to

the first rank in one move. 7. ♖f3+?! ♖g2 8. ♗d1+ ♖g1, etc. is just a waste of time.

7... ♖g2 8. ♖h5+ ♖g1 9. ♖c5+ ♖h1 10. ♖xc1+ ♖g1 11. ♖c6+ ♖g2 12. ♖h6+! ♖g1



13. ♖c1+!

Mission accomplished. 13. ♖b6+?! ♖h1 14. ♖h6+ ♖g1, etc. only leads to move repetition.

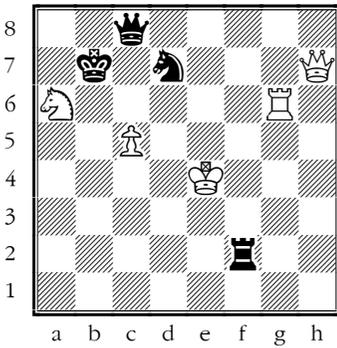
13... ♖f1 14. ♖c5+ (14. ♖e3+? ♖g2!)= 14... ♖h1 15. ♖h5+ ♖g1

Or 15... ♖g2 16. ♗e3+, forking.

16. ♖h2#

**Battery:** Placement of two different pieces of the same color on the same file, rank, or diagonal. The move of the piece that stands closer to the opponent's king (or other piece) allows the second piece to join the action. Batteries are classified by the closer pieces: there can be king, rook, bishop, knight, or pawn batteries.

M. Miljanic 2015



White to move and win

**1.c6+ ♖a8!**

After 1...♗×a6 2.c×d7+, the pawn and rook *battery* gets to work.

**2.♠c7+!**

We give up our own knight instead of capturing the enemy one: 2...♖×d7? ♜e2+! 3.♙f3 ♖f8+ 4.♙×e2 ♖f3+! 5.♙×f3, stalemate. 2.c×d7? ♖c4+, etc. even loses.

**2...♖×c7 3.♜g8+ ♜f8!**

Going for a different stalemate counterplay. The pin does not protect from the knight check: 3...♠f8 4.♖×c7. Another pin decides matters after 3...♙a7 4.♖×d7 ♜f4+ 5.♙e3 ♜f7 6.♖d4+!.

**4.♜×f8+ ♠b8 5.♖h6!**  
(5...♖×c7?, stalemate.) **5...♖h7+!**

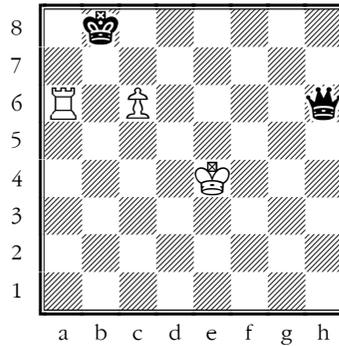
After 5...♖e7+ 6.♙d5 ♖b4 7.♖c1! Black will not be able to resist for long.

**6.♜f5!**

A beautiful, if forced, queen sacrifice.

**6...♖×h6 7.♜a5+ ♠a6**  
**8.♜×a6+ ♙b8**

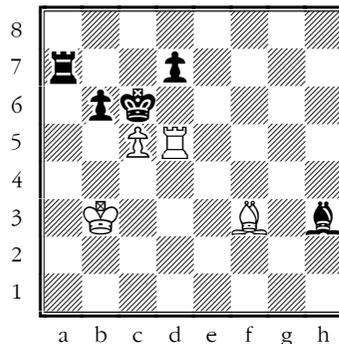
The rook stands on the other side of the pawn, again forming a *battery*. This time, the blow is fatal.



**9.c7+ ♖×c7 10.♜×h6 1-0**

**Battery transformation:** The pieces in the initial *battery* switch places during the play.

An. Kuznetsov, B. Sakharov  
1957



White to move and win

The rook and bishop battery shoots immediately.

**1. ♖d6+!**

The c5-pawn is more important than the h3-bishop: 1. ♖h5+? ♜c7 2. ♖xh3 bxc5 with equality.

**1... ♜b5!**

Refusing the bait. After 1... ♜xc5, the fifth rank is opened up, and the initial battery strikes again.

2. ♖d5+ ♜c6 3. ♖a5+, winning the rook. 1... ♜c7 2. cxb6+ ♜xd6 3. bxa7 is even worse.

**2. cxb6 ♖e6+!**

2... ♖a1 3. b7 is curtains.

**3. ♖xe6!**

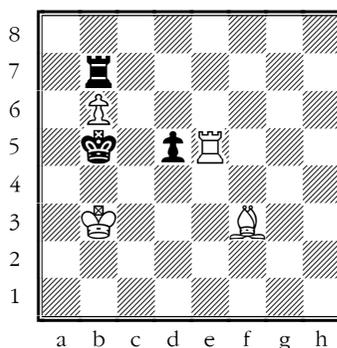
The black rook is under attack, so White can sacrifice his own rook without a second thought. Not 3. ♜b2? ♖a2+ 4. ♜b1 ♖h2 5. b7 ♖h8=, and 3. ♜c3? is even worse due to 3... ♖a3+.

**3... ♖b7!**

Black matches White blow for blow. Not 4. ♖xb7? dxe6 and the pawn is lost.

**4. ♖e5+! d5!**

In the critical position, Black is helped by the problem-like Novotny interference.



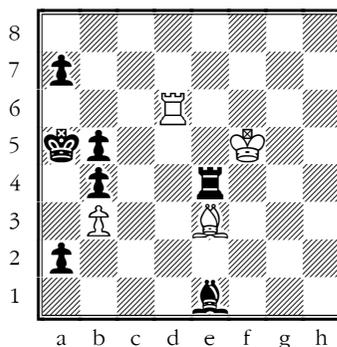
**5. ♖xd5!**

*Battery transformation:* the bishop and rook are ready to go! There is only a draw after 5. ♖xd5+? ♜xb6 6. ♖d6+ ♜c7 (c5)+.

**5... ♖xb6 6. ♖b7#!** Ideal mate.

**Blockade:** Limiting the mobility and cooperation of the opponent's pieces. This can be achieved in two ways: controlling the squares that can be occupied by the opponent's pieces or pawns, and directly or indirectly hindering their movement.

Y. Hoch 1980



*White to move and draw*

The position is so tense that White has no time to notice such trifles as the a2-pawn.

1. ♖b6+! a×b6

Forced. Surely the black king would not want to go under the attack of White's battery.

2. ♜d8

Threatening mate in one.

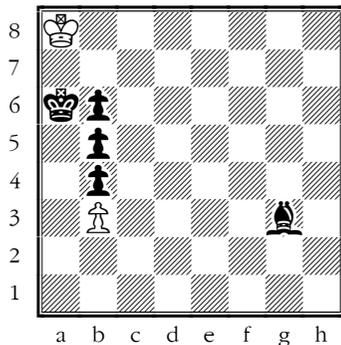
2... ♜e5+!

A return sacrifice. The "great escape" did not work 2... ♖a6 3. ♖×e4 ♖b7 4. ♜d7+ (but not 4. ♜d1? ♜c3) 4... ♖b8 5. ♜d8+ with a perpetual check, because the king has to protect the a-file.

3. ♖×e5 a1♖+ 4. ♖e6! ♖f6+!

The counterplay is ingenious, but White has calculated everything.

5. ♖×f6 ♜h4+ 6. ♖e6 ♜×d8  
7. ♖d7 ♜h4 8. ♖c7 (c8) ♖a6  
9. ♖b8 ♜g3+ 10. ♖a8!

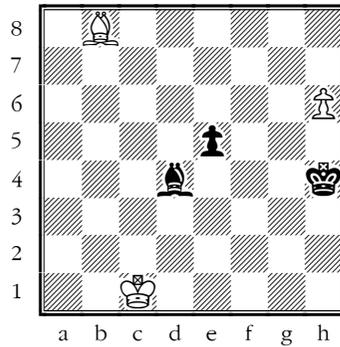


*Blockade!* The white king does not let his black counterpart out,

occupying the a8- and b8-squares, and the bishop cannot do anything in this position except stalemate. Draw.

**Blocking a square or line:** One side's pieces or pawns occupy important squares or lines, getting in the way of their own pieces and limiting their mobility. Smothered mate is an example of blocking the squares around the king.

**P. Heuacker 1930**



*White to move and win*

It seems that nothing will stop Black from opening up the a1-h8 diagonal and stopping the white pawn.

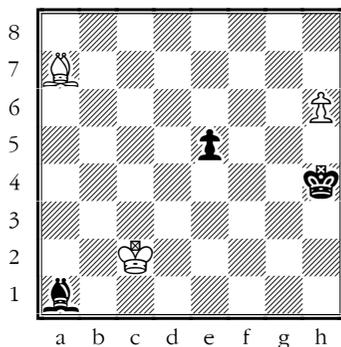
1. ♜a7!!

First, a sacrifice with the intention of deflecting the black bishop.

1... ♜a1!

Declining the sacrifice. Not 1... ♜c3 2. ♖c2.

2. ♖b1 ♜c3 3. ♖c2 ♜a1



What exactly did White achieve?

4. **Qd4!!**

What a surprise!

4... **Qxd4**

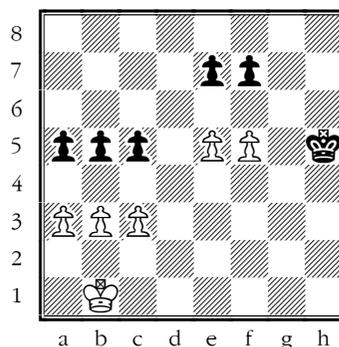
4...exd4 5. **Qd3** changes nothing.

5. **Qd3 Qa1 6. Qe4! 1-0**

And the long diagonal is completely *blocked*.

**Breakthrough:** A tactic that involves sacrificing one or several pieces or pawns to destroy the opponent's defenses. **Breakthrough** is often used to promote a pawn.

M. Zinar 1983



*White to move and win*

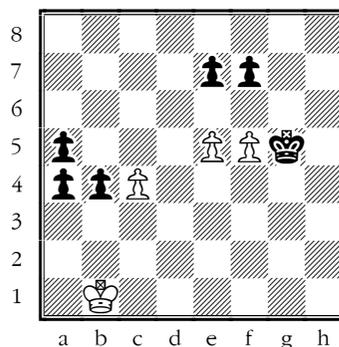
1. **b4!**

Initiating a classical *breakthrough*.

1... **cxb4!**

After 1...axb4 2.c4! bxc4 3.a4, the a-pawn is unstoppable.

2. **a4! bxa4 3.c4! Qg5**



The black king has entered the square of the c-pawn. Another *breakthrough* helps White.

4. **f6!**