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## Dedication

To “Coach” Donald Byrne

**“A chessplayer’s chessplayer and a friend’s friend.”**

– part of a telegram from then World Chess Champion Robert J. (Bobby) Fischer to International Master Donald Byrne at Byrne’s testimonial dinner in Boalsburg, Pennsylvania, September 7, 1974, shortly before Byrne passed away at an early age as a result of a rare disease that cut short not only his life, but a very promising chess career. We’ll never forget you, Coach!

## Preface

*Elements of Positional Evaluation: How Chess Pieces Get Their Power* provides a different perspective on how to evaluate the effectiveness of chess pieces and positions.

Originally written in 1974 on the author’s typewriter, this new, greatly expanded fourth edition of *Elements* includes material comparing this current edition of *Elements* with 1974 positional chess theory. It also includes new discussions on how 2009 theory has moved ever closer to the ideas suggested in *Elements*.

In addition, over 100 new examples and diagrams have been added plus an Appendix of Illustrative Games, making *Elements* less of a work on theory and more about theory and practice.

I hope my work in greatly enhancing *Elements* has also enhanced its instructive value and enjoyment for readers.

Dan Heisman  
January 2010

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## Introduction

*Elements* was originally quite a maverick book, rejected by two publishers back in the 1970s. After the first edition was published in the 1990s, someone on the internet called it a "Cult Classic." However, I am happy to say that by 1998 not only was *Elements* enjoying its third edition, but the theory proposed herein was – not so much because of this work, but because the bases are sound – becoming more generally accepted.

In 1998, IM John Watson's magnificent book on similar (and other) subjects, *Secrets of Modern Chess Strategy*, was voted the outstanding chess book of that year. At that time I corresponded with John, discussing the similarities of the theory in our books, and have since appeared as a guest on his ICC Chess.fm radio show. While he had no knowledge of *Elements* when writing his book, I am happy to say that *Secrets of Modern Chess Strategy* is more than a justification and extension. In my opinion, *Secrets* and its excellent sequel, *Modern Chess Strategy in Action*, can also serve as further praxis for many ideas in *Elements*!

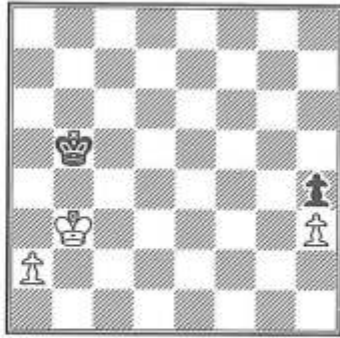
To conclude the introduction, I would like to whet the reader's appetite with a bit of the proposed new theory.

*Static* features are factors based upon where the pieces are situated on the board. *Dynamic* features are based upon analysis; i.e., mentally moving the pieces. This book addresses how static features affect the value of the pieces in a given position. For example, *if doubled pawns (a static feature) are often harmful, but are sometimes beneficial, then there must be something more basic than doubled pawns on which one could/should base his positional evaluation* – something that will help one determine when doubled pawns are good or bad and by how much. These more basic "somethings," when found and identified, will then become our elements.

It is also important to differentiate the evaluation of each piece individually in a given position from the evaluation of an entire position. This book is more about the static evaluation of each piece's value rather than the evaluation of an overall position. However, the new theory can also help evaluate entire positions by providing insight into: *Who stands better, By how much; and Why?* To this point, one of the proposed elements, coordination, implies the involvement of multiple pieces.

Students who wish to study evaluation usually concentrate on static features such as pawn structures, files, holes, outposts, all of which have been considered the most basic positional ideas. The identification of more basic elements should help the reader achieve a better understanding of evaluation. A discussion of these elements begins in Chapter 2.

## Miscellaneous Applications of the Theory



White to play and win  
A race to the right and  
then to the corner

In this example, not only is the distance to the eighth rank important, but so is the distance to the h-file. If the board were larger, the pieces would need to be relocated appropriately to create a close race. **1. ♖c3** But not **1.a4? ♖a5**, and Black's king is closer to the a-pawn and draws easily. White must make Black travel the maximum distance possible in the race for control of the critical b7-or b8-square: **1... ♗a4 2. ♖d3 ♗a3 3. ♖e3 ♗×a2 4. ♖f3 ♗b3 5. ♖g4 ♗c4 6. ♖×h4 ♗d5 7. ♖g5** White should elbow out the black king to gain as much leeway as possible. Recall the Reti composition in Section 2.8: the shortest distance between two points for the king is not necessarily a straight line. **7... ♗e6 8. ♖g6** Just in time! **8... ♗e7 9. ♖g7** and wins: **9... ♗e6 10.h4 ♗f5 11.h5 ♖g5 12.h6** and the pawn promotes.

### 6.3 A Brief Guide to Chess Principles

We have made considerable use of chess principles/guidelines/heuristics. This included discussions of correctness, origin, and how to re-examine these guidelines under the light of the

proposed theory. Below is a list of principles. Some contain references (in parentheses) to sections where the general issue is addressed.

1. *Passed pawns must be pushed.* (See Section 5.2.4) – Generally true. Vulnerability is the key as to when. But never push a passed pawn passed its zone of protection.
2. *Doubled pawns are weak.* (1.4, 5.2.1, 5.2.2) – Misleading. The reason why is central to the new theory.
3. *Develop your pieces.* (1.4, 3.5) – Too vague. A shortcut, but generally useful.
4. *Don't bring your queen out too early.* (2.7, 3.5, 4.6) – Usually true. However, it does not provide useful insight since the term "too early" is relative. It's like saying "Don't take unnecessary risks." But if you knew which risks were unnecessary, you probably would not need the advice!
5. *Don't trade a bishop for a knight unless you receive some other compensation.* (4.3, 4.4) – True only in some cases; too general. This principle is much clearer if it involves not giving up the bishop pair.
6. *Overprotection is an important concept.* (1.2, 2.6) – Yes, if you use overprotection correctly.
7. *A premature attack is doomed to failure or You cannot attack unless you have the advantage.* (1.2,

## Elements of Positional Evaluation



The “undeveloping” 9...Qb8 is not unreasonable.

9...Qb8 loses time. However, it is positionally and tactically justified

in a position still open, but fairly devoid of immediate tactical tension. After White’s usual 10.d4, Black will reposition the knight with 10...Nbd7, to guard the e-pawn more flexibly, while the c-pawn will become mobile, freeing the black queenside for further expansion.

27. *Develop your rook to the same file that your opponent develops his queen.* (3.5, 5.3) – GM Soltis writes that of all opening principles, this one has the fewest exceptions<sup>51</sup>!

## Epilogue

Has this work accomplished what it set out to do? In 1974, was there really something important and novel to chess theory that needed to be discussed? Is the book's massive update in 2009 still relevant in view of the chess world's move away from the static thinking that still dominated in 1974? I think so, but I will let the reader judge.<sup>52</sup>

Let's quickly review the key points of the new theory:

- The seven elements are the basis for positional (piece) evaluation.
- Evaluation based upon static features alone is misleading.
- Static features can be used as guidelines, but not building blocks.
- Concepts such as space and development are generalizations. These concepts express real ideas, but have multiple aspects that can be broken down into components, and thus should not be used in place of these components as basic evaluation tools.
- The concept of unchanging material values is a guideline that too many beginners are taught to take seriously, and is thus the root of many bad habits found in their play and thought processes.

I try to teach my students, "*Keep an open mind. If it works, play it! Don't be hamstrung by such guidelines as "doubled pawns are bad," "always*

*capture toward the center," or "bishops are better than knights." These guidelines are often very helpful, but don't treat them as absolute rules or laws.*"

Old concepts such as "the bad bishop" and "king-safety" can be better understood and defined with the new elements. Piece value is become much clearer through the use of elements such as potential, global mobility, and speed. Positional evaluation can be accomplished in a new and remarkably exception-free way. If this premise is accepted, then the new theory has passed an important hurdle.

Please consider the merits of each concept presented in this book. In any new theory such as this one, many will disagree with particular aspects, wanting to add something here or change something there. This is fine and even necessary for a theory to work properly<sup>53</sup>. I welcome any constructive criticism, comments, discussion, and suggestions. To feel otherwise would go against the nature of scientific process.

The Introduction mentioned using this book as a beginner's text or teaching guide. I believe that players who have been taught with this theory as a basis, instead of 1974's "play by the rule, paint (material) by the number" method, have developed a better understanding of chess and seemed to have become better players more quickly.

Lastly, it would be nice to believe that this book will be received as the new

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## Elements of Positional Evaluation

*My System* but, realistically, I know that won't happen. But that is all right! The book expresses novel ideas, hopefully in a helpful manner. The proposed new theory will hopefully stimulate discussion of the key ideas among those interested in positional evaluation. In the time since I began tournament play (and since I first wrote the first edition), there have been many positive signs of over-

throwing what I called "the 1974 theory." This constant reevaluation of theory is exemplified in the writing of the best chessplayers and authors, and is a very healthy sign for chess. As always, the reader will have a better perspective of these developing events than I can predict today.

Good health to all!