

**Charles Hertan**

# **Forcing Chess Moves**

The Key to Better Calculation

**New and Extended 4th Edition**

**New In Chess 2019**

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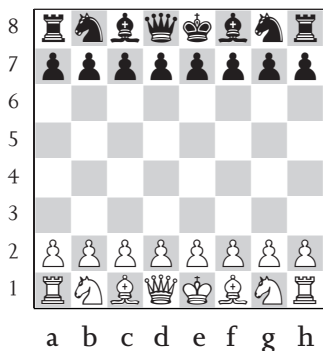
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## Explanation of symbols

### The chessboard with its coordinates:



- White to move
- Black to move
- ♔ King
- ♚ Queen
- ♖ Rook
- ♗ Bishop
- ♘ Knight

- ± White stands slightly better
- ∓ Black stands slightly better
- ± White stands better
- ∓ Black stands better
- +− White has a decisive advantage
- −+ Black has a decisive advantage
- = balanced position
- ! good move
- !! excellent move
- ? bad move
- ?? blunder
- ! ? interesting move
- ? ! dubious move

## Foreword to the New and Extended 4<sup>th</sup> edition by GM Pontus Carlsson

The first time I heard about Charles Hertan's masterpiece *Forcing Chess Moves* it immediately caught my interest, and I felt that I just had to buy 'that book'. Now, after having used it for years, also with my chess students, I would go as far as to say that it is a must-read for all club players who want to improve their chess.

What I really like about the book is that it teaches my students a method of how to think, to discover tactics and creative ideas during a game. All of them now know that they should calculate the forced moves first, since if they win, they win! And there is nothing your opponent can do to stop it. All my students who worked with the book have increased their tactical level and ratings by learning Hertan's method (always look out for forcing moves, checks, captures & threats). Thus, I know that it works!

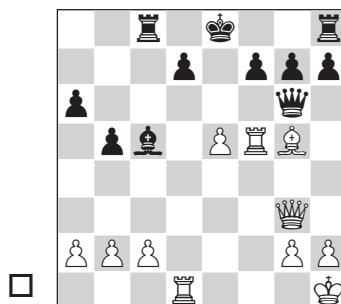
I am pleased to see that Charles has worked hard to include some new fresh material where he digs deeper into the very interesting and modern topic of how we as humans can improve our game by learning from the computer. We need to realize that the time when we could make fun of the computer's lack of chess understanding is gone, and instead try to study how they sacrifice material for initiative, how they think, and how they evaluate positions. For this purpose, this book is a great start, so just enjoy it!

And my sincere congratulations to Charles Hertan for creating another masterpiece.

Please allow me to add one example of my own to prove that I have learned something from the book as well.

### Carlsson-Lindberg

Sweden tt 2009



21.e6!

White strikes fast before Black can castle.

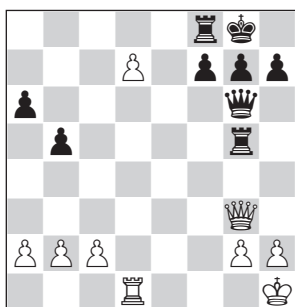
**21...0-0?**

A mistake. But it was not easy to spot the trap which I managed to discover by calculating the most forced moves.

21...fxe6? 22.♖xc5! ♜xc5 23.♞b8+ ♔f7 24.♞xd7#.

21...♞xf5! was the only chance: 22.exd7+ ♞xd7 23.♞xd7 ♔xd7 gives White the advantage after 24.♞d3+ ♕d6 (if 24...♔c6 25.b4! is the key move, e.g. 25...♕d6 (25...♕xb4? 26.♞e4+ ♔c5 27.♕e3+ ♔d6 28.♞xb4+ and White wins) 26.♞f3+ ♔c7 27.♞xf7+ ♔c6 28.♞a7! ♜a8 29.♞xg7 ♕xb4 30.♕f4) 25.♕f4 ♜c6 26.♞f5+ ♔e7 27.♞g5+ ♔e6 28.♞xg7 ♜e8 29.♞g4+ f5 30.♞h5 gives White the advantage.

**22.♖xc5! ♜xc5 23.exd7 ♞xg5**



**24.♞b8!!**

The point! A real 'computer eyes' move. Black cannot take the queen and is totally lost since White threatens the forced move 25.♞xf8+ followed by 26.d8♞ and mate.

**24...f6**

24...♞c6 25.♞xf8+! ♔xf8 26.d8♞+ ♞e8 27.♞xg5 also wins for White.

**25.d8♞ ♜xd8 26.♞xd8+ ♔f7 27.♞d7+**

Black resigned since he will get mated: 27...♔e6 28.♞e7+ ♔f5 29.♞d7+ ♔f4 30.♞d4+ ♔f5 31.♞e4#.

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 July 2019

# Preface to the 4<sup>th</sup> edition

Shortly after Bobby Fischer obliterated four super-GM's to become the 11<sup>th</sup> World Champion, ex-champ Tigran Petrosian was interviewed by Chess Life magazine. 'What can we (Americans) learn from the Soviet School of Chess?', he was asked. Chess players are truth-seekers by nature, so perhaps his candid, objective answer shouldn't come as a surprise: 'You have the champion; now we must learn from you!'

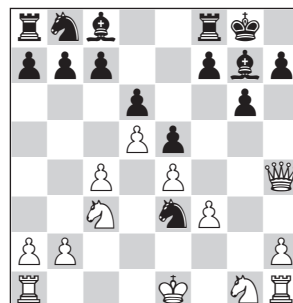
There's no denying that today's computers rule the landscape of chess knowledge, and we must learn from them now. Stockfish, the highest rated commercially available computer, is currently rated 3564. But in a match with AlphaZero this year Stockfish 8 lost by the astounding score 155 to 6, with 838 draws. Since every 100 Elo points represent roughly one rating class, we can speculate that AlphaZero is about 3-4 rating classes above Stockfish, or roughly 3900 strength. World Champion Magnus Carlsen carries the highest human Elo rating ever, 2861 as of May 2019. This puts AlphaZero roughly 10 rating classes above Magnus. AZ is to Magnus, as Magnus is to a strong local club player rated 1850!

We can only stare in awe at computer games that seem to come from a distant galaxy. One online observer commented, 'is this what 4000 chess looks like?'

## LCZero v20.2-32930 - Stockfish 190203

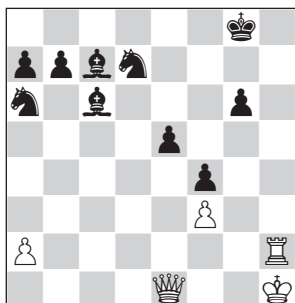
match, 2019

**1.d4 ♘f6 2.c4 g6 3.♘c3 ♙g7 4.e4 d6 5.f3 0-0 6.♙e3 e5 7.d5 ♘h5 8.♚d2 ♚h4+ 9.g3 ♘xg3 10.♚f2 ♘xf1 11.♚xh4 ♘xe3**



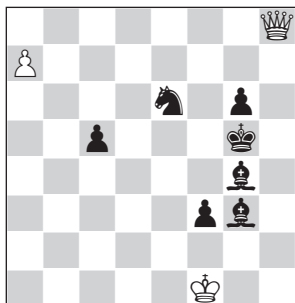
Black essays one of the most enigmatic chess variations. Apparently Black's two pieces and two pawns really do compensate for the queen!

12. ♖e2 ♜xc4 13. ♚e1 f5 14. h4 fxe4 15. ♜xe4 c6 16. ♚d1 ♘d7 17. ♜f2  
 ♘f5 18. ♜g3 ♜xb2 19. ♚b3 ♜d3+ 20. ♜g2 ♜c5 21. ♚d1 ♘d7 22. h5 ♜ba6  
 23. ♜c1 ♜f6 24. ♜1e2 ♜af8 25. h6 ♘h8 26. ♜f1 g5 27. ♜g1 ♜xh6 28. ♜e4 ♜f7  
 29. ♜2c3 ♜g6 30. dxc6 ♘xc6 31. ♜c2 ♘g7 32. ♜d2 ♘f8 33. ♜xd6 ♜f4 34. ♜e2  
 ♘a4 35. ♚e1 ♘xd6 36. ♜xf4 gxf4+ 37. ♜h1 ♘c7 38. ♜h2 ♜d7 39. ♜g1 ♘c6  
 40. ♜xg6+ hxg6



Thanks to chess lover Rich Lappin for sending this position. With four pieces and three pawns for the rook and queen, it must be seen to be believed. White now plays for activity, as a strong human would. Is this correct? Probably; ask your engine!

41. ♚h4 ♘xf3+ 42. ♜g1 ♘b6+ 43. ♜f1 ♘h5 44. ♚e7 ♜ac5 45. ♜f2 ♜f8  
 46. ♚xe5 ♜fe6 47. a4 ♘c7 48. ♚d5 ♘g4 49. ♜c2 ♘h3+ 50. ♜e2 b6 51. ♚a8+  
 ♜f7 52. ♚xa7 ♜f6 53. a5 ♘f5 54. ♜xc5 bxc5 55. ♚a8 ♘g4+ 56. ♜f1 f3  
 57. ♚h8+ ♜g5 58. a6 ♘g3 59. a7



Making two queens is a pretty good bid for counterplay, but a strong repositioning maneuver finishes White off:

59... ♘f5! 60. ♚h1

White loses one of the ladies after 60. a8 ♚ ♘d3+ 61. ♜g1 f2+ 62. ♜g2 f1 ♚+ 63. ♜g3 ♚f4+ 64. ♜g2 ♘e4+. If 60. ♚c3 ♘h3+.

60... ♘d3+ 61. ♜g1 ♜d4 62. ♚h2

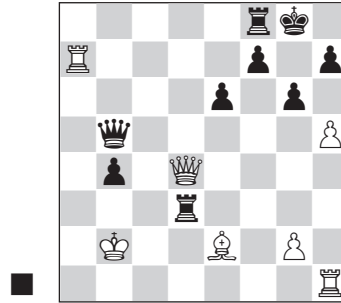
62. a8 ♚ ♜e2+ 63. ♜f1 ♜f4+ 64. ♜g1 f2#.

62... ♘xh2+ 63. ♜f2 ♜f4 64. ♜e1 0-1

Computers have definitely influenced master play a great deal. Part of this book's lasting success may stem from being the first tactics book to directly address this reality. Chess moves like the following would have been considered almost unprecedented 50 years ago:

### Fedoseev-Malakhov

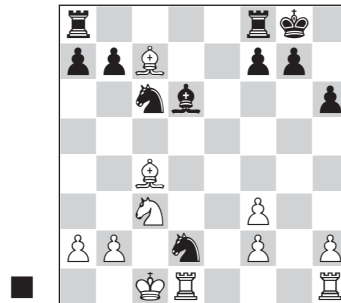
St Petersburg 2017



Black aimed for this position so he could uncork the preposterous **1...♞xh5!** with excellent practical chances. The engine calls it equal, but machines are not the arbiters of human emotion. White could not withstand the shock and went down quickly. There is no doubt that training with computers, and seeing games such as the following, inspired Black to consider such a 'random' resource:

### Miles-Deep Thought

Long Beach 1989



Being a happy, well-fed computer, Black chose this mess because he 'saw' the road to a clear advantage with the absurd-looking move **1...♙xh2!!**.

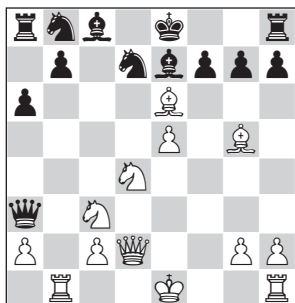
Bobby Fischer foreshadowed the computer era with his unbiased philosophy, 'I believe in strong moves'. Before him, players generally either disdained chaotic positions, or pursued them avidly. Fischer adopted the infamous Najdorf Poisoned Pawn Sicilian, where Black lives on a knife's edge, precisely because its random nature provided such fertile ground for outcalculating the opponent. He was not a risk-taker like Tal, but he believed that his unmatched preparation and objectivity made it worthwhile to wade into these waters, and try to pull out some coveted black wins:



## Bilek-Fischer

Stockholm izt 1962

**1.e4 c5 2.♘f3 d6 3.d4 cxd4 4.♗xd4 ♘f6 5.♗c3 a6 6.♕g5 e6 7.f4 ♖b6 8.♚d2 ♗xb2 9.♞b1 ♚a3 10.e5 dxe5 11.fxe5 ♗fd7 12.♖c4 ♖e7 13.♖xe6**



Few attacking players would touch Black's position with a 10-foot pole. If 13...♖xg5?! 14.♖xf7+ ♗xf7 15.0-0+ ♗g8 16.♚xg5 the knight is taboo and Black is scrambling to hold.

**13...0-0! 14.0-0 ♖xg5 15.♚xg5 h6 16.♚h4?**

White plays an imperceptible inaccuracy, and in computerland the game is over! After the correct 16.♚h5!, the engine vindicates Bobby's preparation: 16...fxe6 17.♗xe6 ♖xc3 18.♗xf8 ♗xf8 19.♚f7+ ♗h8 20.♚xf8 ♗c6 and chances are equal, but even here Fischer would have the imbalance he sought. One of the computer's leading ideas is 21...♚e3+, a move so mystical that few humans would ever contemplate it...

**16...♖xc3 17.♞xf7 ♞xf7 18.♚d8+ ♗f8 19.♖xf7+ ♗xf7 20.♞f1+ ♗g6 21.♞xf8**



Fischer knew what the computer sees in a flash – White's attack is illusory.

**21...♖d7 22.♗f3 ♖e3+ 23.♗h1 ♚c1+ 24.♗g1 ♚xc2 25.♞g8 ♚f2 26.♞f8 ♚xa2 27.♞f3 ♗h7 0-1**

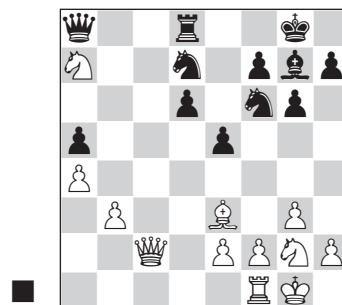
Garry Kasparov took a page out of Fischer's book, daring white players to attack his Scheveningen Sicilian, and confront his gargantuan preparation and tactical genius. But I have elsewhere referred to Magnus Carlsen as the first true champion of the Computer Era. Growing up when computers were already established as indispensable training partners, Carlsen fully grasped the new landscape of 'engine trained human' competition, and used it to maximal practical advantage. Magnus is quite possibly the strongest, and surely the most versatile champion of all time.

The 'computer eyes' concept espoused in this book is all about versatility. A computer couldn't care less whether it mates you with a brilliant combination, grinds you down in a slightly better ending, or refutes your blistering attack. Carlsen is the first player equally adept at smashing super-GM's in the style of Alekhine, or grinding them down with an impossibly tiny (or even nonexistent) endgame advantage, a la Capablanca. Computers disprove Capa's assertion that chess would soon suffer 'death by draws', due to the advancing level of grandmaster technique.

Pit Alpha Zero against a 2700 grandmaster in a completely level ending with reasonable play left, and the GM will be embarrassed more often than not. Magnus recognized early on that he could do the same. His engine-like technique is so good, that the word 'technique' doesn't even quite describe it. The chess term 'technical ending' traditionally means that one side has a recognizable, concrete advantage, albeit very small, and he or she applies correct endgame principles, alongside masterful calculation and theoretical knowledge, to nurse the edge to victory. But Magnus regularly beats top players without any traditionally recognizable advantage. His unique 'computer eyes' delve so deeply into the positional and tactical potentialities of each distinct ending, that, like Stockfish, his ideas sometimes seem to come from another planet...

### Meier-Carlsen

Karlsruhe/Baden-Baden 2019



If Carlsen were White here, we'd probably love his chances. White has a clever plan to win the a-pawn and create connected passers, while Black's

play is like a distant beacon. In a genius feat of assessment the champ says 'Bring it on!'

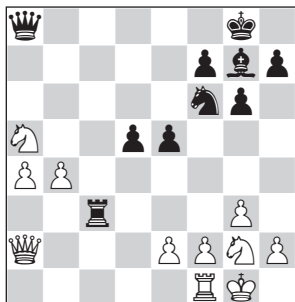
**1...d5! 2.♘c6 ♖e8**

The a-pawn is doomed by the fork trick 2...♖c8?? 3.♘e7+, but MC is cool as a cucumber.

**3.♙d2 ♘e4 4.♘xa5 ♖c8 5.♚a2 ♘df6**

Incredible sangfroid.

**6.♙e1 ♘c3 7.♙xc3 ♖xc3 8.b4**



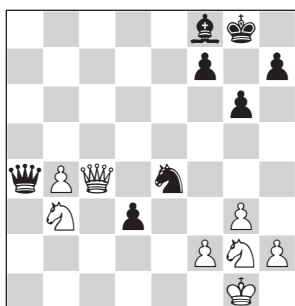
**8...♙f8!**

Remarkably, it transpires that White has big problems mobilizing his queenside, while Black's central play unfolds naturally.

**9.♚b2 d4 10.e3?!**

The natural response to Black's threatened 10...♘d5; White tries to contest the center. The computer asserts that the very far-from-obvious 10.♘e3! offers equal chances. Easy for AlphaZero to say.

**10...♘e4 11.exd4 exd4 12.♘b3 d3 13.♖c1 ♖xc1+ 14.♚xc1 ♚xa4 15.♚c4**



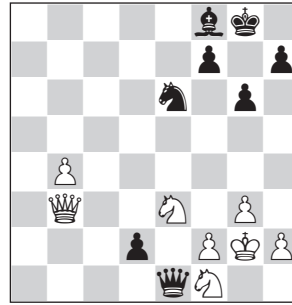
**15...♘c5!!**

Time and again Carlsen foresees the computer-authorized solution.

**16.♘d2**

Black queens on 16.♘xc5 ♚d1+.

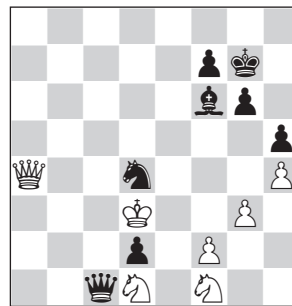
**16...♚a1+ 17.♘f1 d2 18.♘ge3 ♘e6 19.♚b3 ♚e1 20.♙g2**



**20...♙xb4! 21.♖b2**

The devilish forcing detail 21.♖xb4 d1♙ 22.♖b8+ ♔d8 was easy to miss.

**21...h5 22.h4 ♙a5 23.♖b8+ ♘f8 24.♖a8 ♙c3 25.♖c6 ♖c1 26.♖d5 ♘e6  
27.♖c4 ♙a5 28.♖d5 ♙b4 29.♖b5 ♖c3 30.♖d5 ♖c1 31.♖b5 ♙c3 32.♖a4  
♙d4 33.♘d1 ♙g7 34.♙f3 ♙f6 35.♙e2 ♘d4+ 36.♙d3**



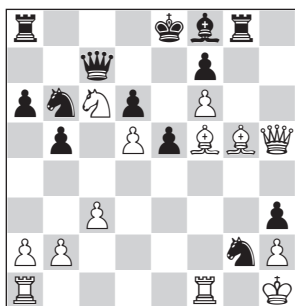
**36...♖b1+!!**

Vintage Magnus – sacrificing the passer to set up a mating net with a quiet forcing move!! As if defending against basketball legend Michael Jordan, I imagine his dazed opponent staring wide eyed at the board, mouthing the words ‘just... too... good’.

**37.♙xd2 ♖e4 0-1** White is paralyzed against the discovery, e.g. 38.♖a6 ♘b3# !

With his superhuman ‘übertechnical’ gift, Magnus realized he could throw a Soviet School style scientific opening repertoire out the window. He chose white opening moves so insipid and drawish, they were impossible to prepare for in any traditional sense. Unlike any player of the modern era, he rode this style to the crown. Perhaps this became too predictable or tedious, because just when we thought we had him pegged, the champ shook the chess world again! Preparing to defend his title for the third time, this time against Fabiano Caruana, he adopted the sharpest, most ‘antipositional’ mainstream opening in chess annals, the

Sveshnikov Sicilian – and played it like the ultimate virtuoso! Perhaps this shouldn't have shocked us so much, because MC had always shown that when so inclined, he could also attack as well as anyone:

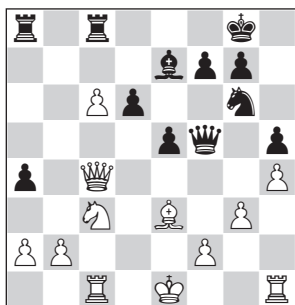


**Carlsen-Nakamura**

Wijk aan Zee 2013

1. ♖e6! ♜xg5 2. ♚xg5 fxe6 3. dxe6 1-0 in light of 3... ♚xc6 4. f7#.

Still, the gumption of playing a notorious line, which skirts the boundary of soundness, against perhaps the world's best natural positional player, proved to be a stroke of genius, and one of the biggest surprises in championship play:



**Caruana-Carlsen**

London Wch m 2018 (playoff)

I must confess, while following the match on-line, my thumbnail evaluation of this position was 'White is winning'! He has a 'crushing' queenside majority with a c6 'thorn' and seems to dominate the light squares. 1... ♚f3? is easily rebuffed by 2. ♚d5.

Computer eyes (and Magnus) see a completely different picture, and I could scarcely believe that White resigned five moves later! After Black's next two moves – a repositioning retreat and a quiet move of profound power – the light begins to dawn...

1... ♖d8!! 2. ♘d5

The most natural move on earth isn't the most accurate. The engines endorse a bail out move like 2. ♖g5 just to keep equality. If 2. ♘e4 ♖c7 3. 0-0 ♘e7 achieving ...d6-d5.

**1...e4!**

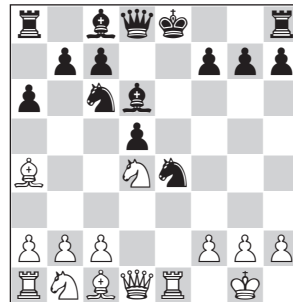
Fabiano now realizes he's been outprepared in this rapid-play tiebreaker, and panics. Due to his must-win match situation, he may have chosen to go down in a blaze, because White can't castle – 2.0-0 ♖e5 3.♖b5 ♖h3 or 2.♙d4 ♖f3 3.0-0? ♖xh4, when Black can force perpetual or try for more.

**3.c7 ♙xc7! 4.♗xc7 ♗e5 5.♗d5 ♕h7 0-1**

As great as Magnus may be, this game bears all the hallmarks of computer preparation. The human mind simply isn't programmed to scan for random resources in doubtful-looking positions. But computers are now the ultimate arbiters deciding which opening positions are strong, playable, or dubious. Strong GM's paired with powerful engines make remarkable chess discoveries every day.

I will leave you with one more curious anecdote:

A funny thing happened while researching my 2015 NIC book *Basic Chess Opening for Kids*. The problem was showing the youngsters how to refute the rare old coffeehouse Riga Gambit variation of the Ruy:

**1.e4 e5 2.♗f3 ♗c6 3.♙b5 a6 4.♙a4 ♗f6 5.0-0 ♗xe4 6.d4 exd4 7.♖e1 d5 8.♗xd4 ♙d6!**

The Riga Gambit. White's position is not some theoretical backwater, but rather the supposed refutation of the 'naive' capture 6...exd4.

**The Riga Gambit – a bust to the Ruy Lopez!?****9.♗xc6 ♙xh2+**

The point of black's audacious play is 10.♖xh2 ♖h4+ 11.♖g1 ♖xf2+ with a draw by perpetual. Surely, I thought, the tremendous engine Rybka 4 could easily demolish the main line **10.♕f1 ♖h4** when Black usually plays down a piece for 2 pawns... hours later the verdict arrived: slight advantage to Black!! What??

While recovering from engine shock, I was reminded of Fischer's old article 'A Bust to the King's Gambit', written after being humiliated

as Black by Boris Spassky. A better engine may yet rehabilitate White's historically strongest debut, but meanwhile what should I tell the children?

Fortuitously, a novelty played by my old friend Bill Paschall resulted in a miniature 'computer eyes' brilliancy:

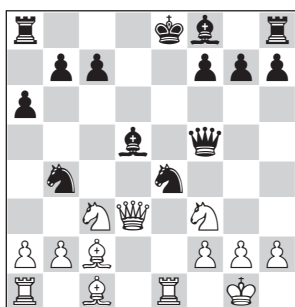
### Paschall-Strand

Oslo 2006

**1.e4 e5 2.♘f3 ♘c6 3.♙b5 a6 4.♙a4 ♘f6 5.0-0 ♗xe4 6.d4 exd4 7.♗e1 d5 8.c4!?**

In the computer era, Bill did not want to challenge Mr. Strand and his engine, which had probably made the same discovery as mine! Is the Paschall Variation henceforth the main line of the Ruy Lopez?

**8...♙e6? 9.cxd5 ♖xd5 10.♙b3 ♗f5 11.♙c2! d3 12.♖xd3 ♙d5 13.♘c3 ♘b4**



**14.♗xe4! 1-0** in light of 14...♗xd3 15.♗f6+! ♔d8 16.♗e8#.

The reader is thus invited to embrace the computer era, and emulate the world's best in striving to take its lessons to heart. Prepare to delve deeply into the three realms of knowledge which, with hard work and practice, will lead to improved chess calculation. These are, in a nutshell:

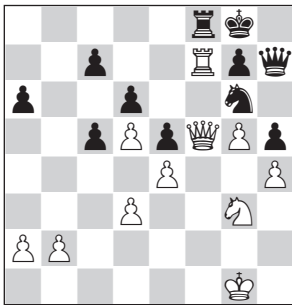
- Knowledge of 'stock' recurring master combinations;
- Enhanced brute force calculation skills; and
- Understanding and overcoming the 'human biases' that stand in the way of finding many winning tactics.

Whether you are already a fan of FCM or a new reader, you will find dozens of stimulating new positions in this edition. We have also added the 'Hertan Hierarchy' in the back. First published in 2009 in the compendium *The Chess Instructor*, the Hierarchy provides a systematic practical approach to analyzing positions. Used as a tool to analyze master games (or your own), it is designed to cement into practice many of the dynamic thought processes expounded in *Forcing Chess Moves*, helping you expand your tactical horizons, and take your analytical abilities to the next level.





After the key move **1. ♖d7!**, threatening **2. ♖xc6#** (not **1. ♖f6?**, threatening **2. c4#**, which is ‘cooked’ by **2... ♖e5!**), Black has nine defenses, each of which is met by a different mating move! While strong computers would solve this problem with ease, let’s face it, it’s quite a struggle for us humans to visualize lines such as **1... ♜hd6 2. ♜f6#** when the rook is pinned; **1... ♖xd6 2. ♜f4#** and now the queen is pinned; **1... ♞d4 2. c4#** when the knight now seals the king’s egress to d4; **1... ♞e5 2. ♞e7#** when e5 is ‘self-blocked’; or the 5 different mates resulting from each legal move of the c6-rook: **1... ♜b6+ 2. ♜xb6#**; **1... ♜a6 2. ♜xa6#**; **1... ♜xc7+ 2. ♜xc7#**; **1... ♜xc5 2. ♞b6#**; and finally, **1... ♜cxd6 2. ♜b8#**. The rook is now pinned and can’t block the bishop check.



**Erenburg-Banusz**

Budapest 2004

Moving to the realm of practice, how many readers can honestly say that they would even consider the following mind-blowing ‘quiet’ forcing move?

**1. ♖e6!! ♜xf7 2. ♜f5! ♜h8**

The main line is **2... ♞f4 3. ♖e8+ ♜f8 4. ♞e7+**, mating, and **2... ♖h8 3. ♖xg6**, threatening **4. ♞h6+**, is also utterly hopeless.

**3. ♖xf7 ♞f4 4. ♞e7 1-0.** A mating queen check follows.

### Defining ‘Forcing moves’

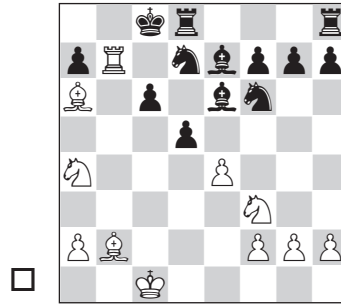
Before we go further, it is very important that you understand precisely what I mean by the term ‘forcing move’. Loosely defined terms lead to misconceptions and errors in thinking! So here it is:

**A forcing move is a move which limits the opponent’s options by making a concrete threat, such as mate or win of material.** Many players think only of checks, captures, or flashy sacrifices when they hear this term. While checks and captures do tend to be forcing, frequently they are far from the most forcing choices.

Take, for instance, this position taken from a classic game between Mieses and Chigorin.

**Mieses-Chigorin** (variation)

Hanover 1902



There are many checks and captures, but no move more forcing than **1. ♖e5!**, threatening double discovered mate via **2. ♜b8#** or **2. ♜c7+ ♕b8** **3. ♜c8#**. Absolutely forced is **1... ♗xe5** when **2. ♜xa7+ ♕b8** **3. ♜b7+ ♕c8** **4. ♗b6#** follows.

The first step toward developing better calculation skills is to train yourself to **always analyze the most forcing moves first**. This is not because they are always best. The most forcing move may lose outright, and usually does! There are three compelling reasons why analyzing forcing moves first is necessary:

1. Forcing moves have the potential to transform the game, by leading to gain of material, checkmate, or other concrete gains. When they do work, they tend to work better and quicker than non-forcing options.
2. Analyzing the most forcing moves first saves precious time. If they work, there is no need to look any further! Countless winning positions have been squandered by players who wasted huge amounts of time examining obscure ideas, when a clearly decisive forcing move was available.
3. Forcing moves limit the opponent's options, and thereby reduce the risk of calculation errors. Fewer replies to calculate means less chance of slipping up, so all things being equal, the most forcing option is simplest and best.

A deep study of forcing moves is probably the single most important task toward achieving chess mastery, since doing so will do four wonderful things to improve your calculation skills:

1. Studying tactical positions promotes analytical precision. 'Close enough' won't do. This is exactly what you must strive for, to find more winning forcing moves in your own practice. Precise analysis wins games.
2. Tactical study helps you develop **BOARD SIGHT**, the ability to envision more clearly where all the pieces are, and what they are doing, at each step of every variation. This is not an issue for computers, who have the huge

practical advantage of perfect board sight, no matter how far ahead they are 'thinking'.

3. Studying composed problems and master tactics helps you overcome human bias and 'staleness' in your thinking. In problem solving, stereotyped, 'automatic' moves will get you nowhere fast!

4. Learning to relax and enjoy the slow process of discovering the answer (rather than kicking yourself in frustration!) will help you develop the important capacity to enjoy the challenge of calculating difficult variations. Yes, this is a capacity you can develop! As a young player with a 'positional bent', I had to learn to do so myself, and it is a must if you are to develop your tactical potential.

The first goal of any player aspiring to find more winning forcing moves in his/her games, should be to calculate two moves ahead with absolute precision. Two obstacles are false pride and shame! Somehow, players seem to believe that 'everyone else' can see two moves ahead with ease, and they're embarrassed to admit how difficult it may be for them. Most club players have a similar fallacy about opening preparation: they imagine that studying openings is the key to improvement, and that 'everyone else' knows their openings cold; while in reality 95% of club games are decided by who does a better job of calculating variations and avoiding blunders.

Seeing two moves ahead, consistently, with accuracy and perfect board sight, is a very difficult task for a human, and probably a sufficient achievement to allow you to perform at the candidate master level tactically. My peak FIDE rating was over 2400, yet I am not ashamed to admit that some particularly devilish mate-in-two problems have stumped me for as long as an hour!

### **Defining 'Computer eyes'**

When I use the term 'computer eyes' in this book, I have two skills in mind, which computers excel at, and which we must learn from in order to maximize our chance of finding the correct forcing moves.

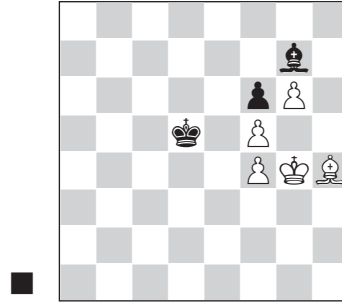
The first skill is brute force calculation, the ability to accurately analyze a series of forcing moves. The first two chapters are focused on helping you develop this skill, and it continues to be an important theme throughout the book.

The second skill is objectivity, the ability to find critical forcing moves which we tend to overlook due to human bias. Developing this skill will be the primary focus of the remaining chapters. Bias varies from person to person; unlike computers, each of us has different blind spots, or types of moves that tend to elude us.

The following encounter helped me bring this idea more into focus.

### Hertan-Kelleher

Cambridge 1994



Black, one of New England's most feared attacking masters, lost quickly after **1...♖e4?? 2.♙g5!** and the pawns crash through after **2...fxg5 3.♖xg5** or **2...♗d5 3.♖h5** and **4.♙h6**.

More refined is the waiting move **1...♗d4?!**, but it transpires that White can still win by one tempo: **2.♖h5 ♖e4 3.♙g5 ♖xf5 4.♙h6 ♙h8 5.♙f8! ♖xf4 6.♖h6 f5 7.♙g7 ♙xg7+ 8.♖xg7 ♖e3 9.♖h7 f4 10.g7 f3 11.g8♖ f2 12.♖c4**.

So is Black lost? Well, no. It turns out that there is a miracle draw:

**1...♗d6!! 2.♖h5 ♖e7 3.♙g5 fxg5 4.fxg5 ♖f8! 5.f6 ♖g8!!**

The shocking point: on **6.fxg7**, **6...♖xg7** wins the g6-pawn with a book draw.

**6.♖g4 ♙f8 7.♖f5 ♙b4**

And White can't break the blockade, since **8.g7 ♖f7 9.g6+ ♖g8 10.♖e6 ♙a3** leads nowhere.

What struck me about this game was not Black's failure to find these variations, which were after all so deep that few GM's would foresee them, but rather Kelleher's candid admission afterwards: 'I would never consider the move **1...♗d6**; it's too passive.' While a computer would have used brute force calculation to find the draw, a strong master had failed to even consider the strongest forcing move due to human bias! If this was true for Kelleher, how much more true must it be for the average club player!

In the pages of this book, you will find hundreds of opportunities to understand, and move beyond, typical human bias. Once you have digested these positions carefully, your newfound 'computer eyes' will help you discover many winning forcing moves which might have escaped your consideration in the past.

## How to use this book

To get the most from this book, I would recommend the following approach: the first time through, play through every variation of each example until you feel that you understand it perfectly. While the positions are selected to be challenging and stimulating even to masters, the variations are analyzed and explained at a level that club players should be able to follow. By completely understanding each solution, you will develop your 'computer eyes', by seeing how the type of 'human bias' covered in each chapter occurs in practice, and learning to develop an eye for the types of forcing moves you tend to overlook.

If you are absolutely stumped by a position even after playing through all the lines, put it aside for awhile and try to come back to it with a fresh head (my preferred method for solving difficult compositions). Save your 'solving' skills for the illustrative exercises at the end of each chapter.

In order to simplify the presentation of the text, I have chosen to use the convention '1-0' or '0-1', to signify that White or Black obtains a winning advantage at the end of each fragment. To maximize comprehension, the main line given in the solution represents the clearest or most thematically important demonstration of the winning forcing move, not necessarily the game continuation.

A white square accompanying a diagram indicates that White is to move; and a dark square means that Black is to move.

To distinguish the examples in the 'Study material' part of every chapter from the 'Exercises' part, I have provided the numbers of the former with the prefix 'FCM' (i.e. 'Forcing Chess Moves') and those of the latter with the prefix 'Ex'.

## CHAPTER 3

# Brute Force combinations

### Study material

In the introduction, we defined the two core aspects of developing powerful computer eyes. The first task was accurate brute force analysis of variations, and the second was overcoming human bias in order to become more objective, and creative, in our ability to find unusual winning forcing moves.

The term 'brute force' refers to the way machines 'think'. While computers analyze scores of variations and then try to draw conclusions, humans have a tendency to conceptualize positions first, with concepts like 'weak pawn', 'open file', 'better development', etc. This is natural and okay, but the problem comes when we make decisions based on such generalizations, without first testing their validity with concrete analysis. Developing computer eyes means learning to analyze essential forcing moves first, and always basing our final decisions on well-considered analysis.

When the supercomputer Hydra crushed the incredibly strong English GM Michael Adams in a 2005 match, an age-old debate was put to rest. Many had believed that positional judgment or 'grandmaster intuition' could overcome brute force calculation of scads of variations, but we now know that **accurate brute force analysis is the single most important chess skill**.

In Chapters 1 and 2 we began by training your computer eyes to become aware of recurring stock sacrifices, helping you recognize critical attacking positions and get in the habit of examining the most forcing moves first. At the same time, we began to examine the crucial role of brute force analysis and creativity in unearthing these powerful combinations. Having gained a basic knowledge of stock themes, you are now ready to learn how to better calculate the original, uncharted 'bread and butter' situations which occur most often in tournament play.

Even 'straightforward' brute force variations can be very difficult to calculate accurately, because this analysis requires three essential skills:

1. Accurate 'board sight' – the ability to correctly envision where the pieces are, and what they can do, even deep in the midst of a long calculation.

2. Accurate ‘selection’ – the ability to hone in on the key options, and avoid two key pitfalls at the opposite ends of the spectrum: failure to consider unexpected, but crucial ideas; or wasting huge amounts of time analyzing ‘dead ends’.

3. The raw ability and effort needed to calculate variations. Fortunately, these skills can be developed through practice, problem-solving, the study of master games, and by gaining a deeper understanding of forcing moves.

In this chapter we examine three types of brute force combinations:

#### A) ‘Bread and Butter’ Brute Force combinations

Most tactics books concentrate only on mating positions like the stock forcing moves found in Chapter 2. But these positions are relatively unusual in club play, compared with ‘bread and butter’ tactics: 2-4 move deep combinations winning material. Some of these combinations may utilize stock ideas in one or two side variations, but the primary focus is on accurate brute force calculation.

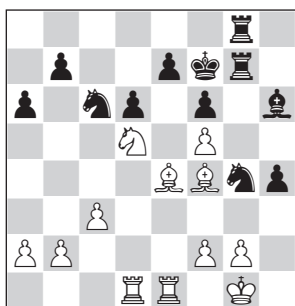
#### B) Mating and ‘Hybrid’ Brute Force combinations

This section is devoted to mating combinations which are too unique, or require too much original brute force analysis, to be considered ‘stock’ ideas; and ‘hybrid’ sequences in which both mate and/or win of material figure in the calculation of different variations.

#### C) Promotion-based Brute Force combinations

Combinations involving actual pawn promotion, or the achievement of mate or material gain via the threat of promotion, could constitute a worthwhile book by themselves. A strong awareness of these motifs is certainly a key aspect of developing your computer eyes, and we will revisit them many times, as they relate to different chapters of the book.

### A) ‘Bread and Butter’ Brute Force combinations



FCM 3.1  
Karthikeyan-Vachier-Lagrave  
Gibraltar 2019

The critical position has arrived in this tense queenless middlegame. White is clearly better after 1.♙xh6 ♜xh6 2.♜f4 ♖b8, but as a practical matter he must calculate a long forcing sequence which may knock off his famous opponent decisively:

**1.f3! ♙xf4**

The other messy try also required bold calculation: 1...♜ge5!? 2.♙xh6 ♖xg2+ 3.♝h1! (surprisingly 3...♝f1 only draws: 3...♖g1+ 4.♞e2 ♗lg2+ 4.♞e3 ♜c4+ with a perpetual) 3...♗2g3! (threatening mate; inadequate is 3...♗xb2 4.♖b1 ♗xa2 5.♜c7! with the crushing fork threat 6.♙d5+) 4.♜f4! (better than 4.♙f4 ♗h3+ and 5...♜xf3) 4...♗h8 5.♜h5 ♜xf3 6.♜xg3 ♜xe1 7.♜e2, winning.

**2.♜xf4 ♜ge5 3.♙d5+ ♞e8 4.♙xg8 ♜xf3+ 5.♞f2 ♜xe1 6.♙d5!**

White had to visualize all this, as well as Black's last-ditch next move, to choose the right line. If 6...♜c2 7.♜g6! snuffs out all counterplay before corralling the knight with ♗c1.

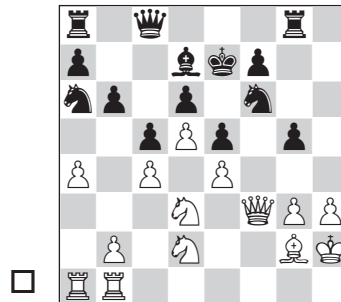
**6...♗g5 7.♞xe1 ♗xf5 8.♜g6 and 1-0.**

Similarly here, evaluation of the critical position turns on a brute force shot.

FCM 3.2

**Gostisa-Robatsch**

Ptuj 1995



If Black had one more move, he could establish a fortress with ...♗g6 or even take the initiative with ...g5-g4. But White strikes first, destroying the integrity of Black's set-up:

**1.♜xe5! dxe5**

White has a solid extra pawn and more after 1...♗h8 2.♖f1, while on 1...g4, 2.♖f4! gxh3 3.♖f1 is very strong.

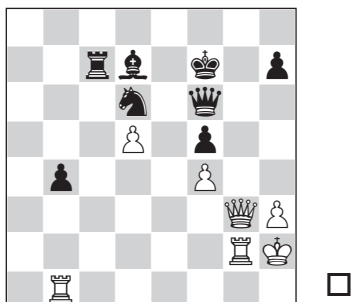
**2.d6+! ♞xd6**

2...♞e6 3.♖f5+.

**3.♖xf6+ ♙e6 4.♜f3** Black is in tatters: **1-0.**



In messy, wildly complicated positions the only way to deduce that a position is 'critical' is often to find the winning line! In tactical minefields, every position is essentially critical:



FCM 3.3  
**Short-Zagrebelny**  
 Dhaka 1999

The old coffee-house saying 'Always check, it might be mate!' could be usefully amended as follows: 'When many checks are available, computer eyes carefully calculate each one, mining every line for potentially winning brute force sequences'.

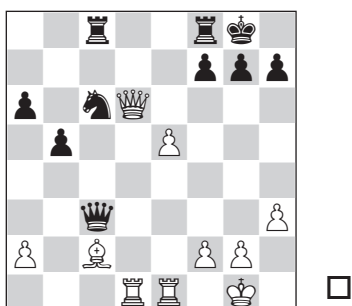
Four succinct and accurate checks bring home the point here:

**1. ♖g8+ ♔e7 2. ♜g7+**

The quickest and most efficient, although here or on the next move, 2/3. ♜e1+ would also have won.

**2... ♘f7 3. ♜xf7+! ♚xf7 4. d6+ Prying king from queen – 4... ♔e6 5. ♜e1+; 1-0.**

Even in relatively 'simple' positions, calculating one move deeper or more precisely often makes the difference:



FCM 3.4  
**EhIvest-Golod**  
 Chicago 2004

**1. ♜c1! ♚a5**

Everything loses, e.g. 1... ♚d4 2. ♘f5! ♚xd6 3. exd6, winning the exchange, or 1... ♚b2 2. ♘f5 ♜fd8 3. ♜xc6! or also 3. ♘xc8! ♜xc6 4. exd6, always exploiting the weak back rank.

**2. ♖f5 ♜c7**

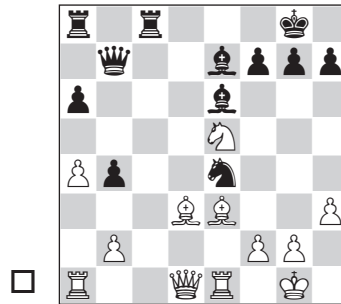
On 2... ♜fd8 3. ♖xc8 the two rooks and passer dominate the queen.  
Accurate brute force analysis has now forced Black to allow a winning  
stock blow:

**3. ♖xh7+** Picking off the ♜f8. Slightly simpler was 3. ♖e4!. **1-0**

FCM 3.5

**Nunn-Xie Jun**

San Francisco 1995



White plays two 100% forcing moves and calculates them through to  
material gain:

**1. ♖xe4! ♜xe4 2. ♖g5! ♜b7 3. ♖xf7! ♖xf7**

Other captures (3... ♖xg5 4. ♖xg5; 3... ♖xf7 4. ♜xe7) lose a pawn and the  
initiative.

**4. ♜h5+ ♖g8 5. ♜xe6 ♜c5 6. h4 h6**

Black strives for play rather than accepting a technically lost position. But,  
as so often, her activity hastens the end. Bad were 6... ♖xg5? 7. ♜e8+ and 6...  
g6 7. ♜xg6+!

**7. ♜xh6! gxh6 8. ♜g6+ ♖h8 9. ♜xh6+ ♖g8 10. ♜e6+ ♖f8**

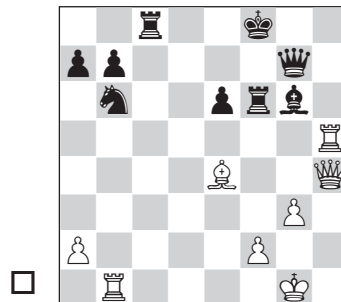
Else 11. ♖xe7+ wins.

**11. ♖h6+ ♖e8 12. ♜d1! 1-0.** Capping a great performance with a crushing  
quiet move, preparing 13. ♜g8+. In such complex positions, brute force  
vision rules.

FCM 3.6

**Kasparov-Short**

Sarajevo 1999

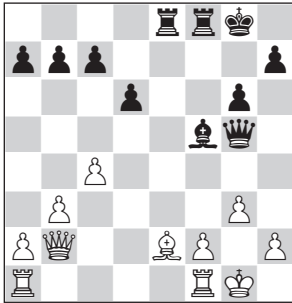


Like with his 'Great Predecessor' Bobby Fischer, Kasparov's deadly and penetrating brute force calculation elevated him a notch above his peers:

**1. ♖h8+ ♔f7 2. ♖xc8 ♗xc8 3. ♖xb7+ ♗e7 4. ♕xg6+ ♖xg6**

**4... ♖xg6 loses to 5. ♖g4+ ♔h7 6. ♖xg7+. 5. ♖b4 1-0**

'Selection' of the right options was straightforward, as each move was extremely forcing; but the calculative skill and board sight required to assess White's piece-down position are the very essence of computer eyes.



FCM 3.7

**Alatortsev-Boleslavsky**

Moscow 1950

Black is able to parlay a fleeting advantage in activity into a stunning brute force win:

**1... ♕h3! 2. f4!**

The natural 2. ♖fe1 fails to 2... ♖xf2! 3. ♖xf2 ♖e3.

**2... ♕xf1!!**

Since on 2... ♖c5 3. ♖f2 holds, Black had to seek a creative solution, retaining the initiative.

**3. fxg5 ♖xe2 4. ♖c3 ♕g2! 5. ♖d3**

There is no time for 5. ♖e1 ♕h3! and, at the right moment, ... ♖xe1+ and ... ♖f1+! with a winning ending.

**5... ♕f3!**

Not 5... ♖ff2 6. ♖e1!.

**6. ♖f1**

White has no good answer to 6... ♖g2+, e.g. 6. ♖f1 ♖xh2; or 6. ♖d4 ♖g2+ 7. ♖f1 c5 8. ♖xd6 ♕c6+ 9. ♖e1 ♖g1+ 10. ♖e2 ♖xa1 11. ♖e6+ ♖f7.

**6... ♖g2+ 7. ♖h1 ♕c6!**

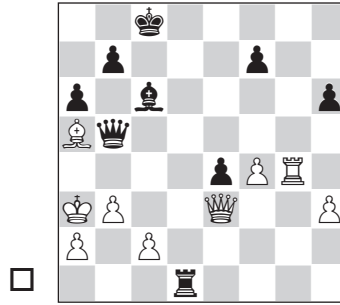
A beautiful quiet forcing move; not 7... ♖d2? 8. ♖xf3 with drawing chances.

**8. ♖xf8+ ♖xf8 9. ♖f1+ ♖f2+ 0-1**

FCM 3.8

**Charbonneau-Tyomkin**

Montreal 2004



Again, a well calculated checking sequence brings home the bacon:

**1. ♖g8+ ♕e8**

If 1... ♖d7 2. ♗d8+ skewers the rook.

**2. ♕c3+! ♖d7**

Black probably intended 2... ♖b8, but then comes the surprising brute force line 3. ♕c7+ ♖a7 4. c4! ♕c6 5. c5! followed by 6. ♕b6+!, winning a piece.

**3. ♕c7+ ♖e6 4. ♕e5+! ♕xe5 5. ♗xe8+**

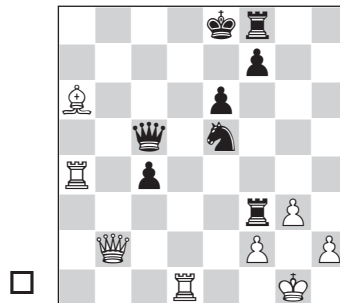
A decisive zwischenzug.

**5... ♖f5 6. fxe5! e3 7. ♗e7 1-0** White wins easily after 7... e2 8. ♗xf7+.

FCM 3.9

**Svidler-Rublevsky**

Smolensk 2000



With major pieces roaming the board and the enemy king exposed, a series of queen checks is often (though not always!) decisive:

**1. ♗xc4! ♖xc4 2. ♕b8+ ♖e7 3. ♕b7+ ♖f6**

3... ♖e8 4. ♕d7.

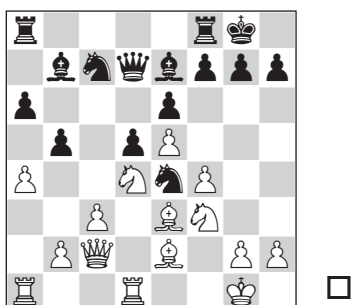
**4. ♕xf3+ ♖e7**

4... ♖g7 is met by 5. ♕g4+ (but not 5. ♗c1 ♖e5!).

**5. ♗c1 1-0** Now 5... ♖e5 fails to 6. ♕b7+ and after 5... ♕d5 the endgame will be a dead loss. A quicker win, by the way, could have been achieved by

5. ♕xc4! ♕xc4 6. ♕a3+ ♖e8 7. ♗c1.

A crucial function of computer eyes is that they enable you to know when to switch from a positional struggle to the complications of a tactical fray. Lesser players often back off in critical positions, rather than developing the confidence and work ethic to accurately assess messy tactics which may lead to victory:



FCM 3.10  
**Mokry-Stocek**  
Czechia 1994

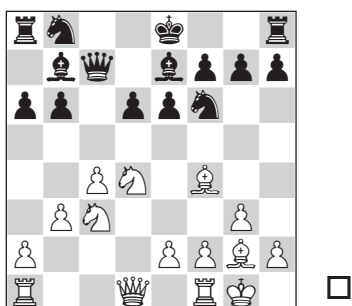
White sees through the illusion of the 'rock solid' ♖e4 and accurately navigates Black's scary-looking desperation tries. Computer eyes don't fear ghosts, but insist on exposing them to the light of analysis!

**1.axb5 axb5 2.♖xa8 ♖xa8 3.♘xb5! ♘xb5 4.♚xe4! ♜a2**

Very scary, but winning for White was 4...dxe4 5.♞xd7 exf3 6.♙xb5 ♞a1+ 7.♙f2 fxg2 8.♙e2!.

**5.♚c2** (not 5.♚b1? ♘xc3) with a good extra pawn: **1-0**.

Always examine the forcing option first, even in the opening!



FCM 3.11  
**Mohr-Atlas**  
Ptuj 1995

**1.♙xd6! ♙xd6 2.♘db5 axb5 3.♘xb5 ♙xg2 4.♘xc7+ ♙xc7 5.♙xg2 1-0**

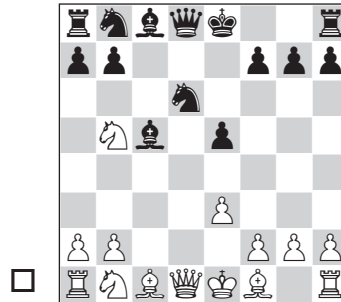
I am reminded of a miniature from earlier in my career: **1.c4 c5 2.♘f3 ♘f6 3.d4 cxd4 4.♘xd4 e5 5.♘b5 d5 6.cxd5 ♙c5 7.d6!? ♘e4 8.e3 ♘xd6??** Black

could have tried the interesting sac 8...0-0!? 9.♖c7 ♕xd6 10.♗xa8 ♖b4+ 11.♕d2 (11.♗d2 ♕f5 or even 11...♗c6!?) 11...♙h4.

FCM 3.12

**Hertan-Rohde**

New York 1984



But what could be wrong with this normal move, regaining the pawn? I didn't know the answer, but instead of playing routinely, I took one more look around for forcing moves and discovered a screamer:

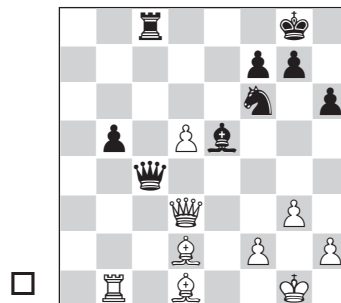
**9.♙d5!**

Wriggle and squirm as he may, Black will lose the e-pawn with check, with an awful position. One problem is that White recaptures with check after 9...♗xb5; another is that the ♗d6 is loose after 9...♖b4+ 10.♕d2 ♕xd2+ 11.♗xd2. **1-0**, shortly.

FCM 3.13

**J.Polgar-Aronian**

Hoogeveen 2003



Black had counted on ...♙c4, but computer eyes found a brute force refutation:

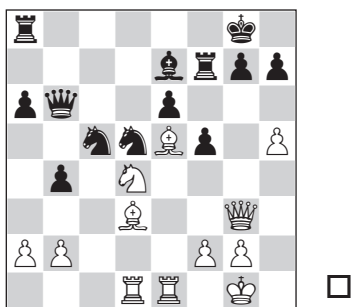
**1.♖c1! ♙xc1**

The cute point is 1...♙xd3 2.♖xc8+ ♔h7 3.♕c2, regaining the queen with interest.

**2.♕xc1 ♖xc1 3.d6 ♗d7 4.♔g2 ♕f6 5.♕c2 g6**

Black is down material, but will also get reamed on the light squares near the king.

**6.♖b3 ♔g7 7.♙d5 1-0**



FCM 3.14  
**Kramnik-Hübner**  
 Dortmund 2000

White obviously has a lot of pressure for the pawn, but can he overwhelm Black's fortress in this critical position? Again, the brute force answer is 'yes'.

**1. ♖xf5!**

1. ♙c4! was also very strong, but White has correctly calculated that he can already initiate winning tactics.

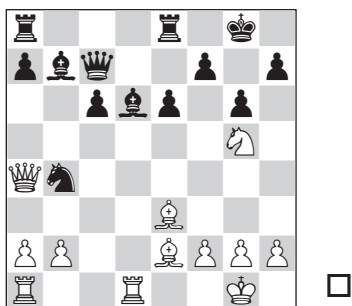
**1...exf5**

The opening of the a2-g8 diagonal now becomes decisive. But Black had no answer to the brutal threats on h6 or g7, e.g. 1... ♖xd3 2. ♖h6+ ♔f8 3. ♖xf7 ♖xe5 (3... ♖xe1 4. ♙xg7+) 4. ♖xe5 winning. Accurate envisioning of such tangled lines is much easier said than done, and is really the key to becoming a feared tactician. For most of us, it requires hard work and determination!

**2. ♙c4! ♖f6**

Or 2...f4 3. ♙f3.

**3. ♙c7! 1-0** The devastating point is revealed – the ♙e7 falls. After 3... ♖xh5 4. ♙xb6 ♖xg3 5. ♙xe7! the walls cave in.



FCM 3.15  
**Dreev-Cifuentes Parada**  
 Wijk aan Zee 1995

A bread and butter tactic tips the scales, before Black can plug holes with 1... ♖d5.

**1. ♙xd6! ♙xd6 2. ♖e4 ♙e5**

Or 2...♖e7 3.♙c5.

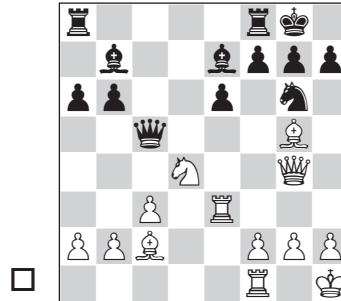
**3.♖xb4** With a rook for two strong minor pieces, the position is resignable amongst strong players: **1-0**.

A great many attacks are based on fleeting advantages, such as a preponderance of force in the attacking zone (a ‘time’ advantage or initiative), as opposed to structural edges. These positions demand energetic forcing moves before the opponent can consolidate.

FCM 3.16

### Rublevsky-Morovic Fernandez

Poikovsky 2001



**1.♗xe6! fxe6 2.♖xe6+ ♜f7**

More resilient was 2...♖h8 3.♙xc5 ♗xc5, though White will be a healthy pawn up in the endgame.

**3.♙xc5 ♗xc5 3...♖xg5 4.♙xf7+ ♖h8 5.f3.**

**4.♙xe7 ♖b5!**

In desperate times, strong opponents are very dangerous. Computer eyes must anticipate their last-ditch attempts to complicate!

**5.c4! ♖xb2 6.♖d7!**

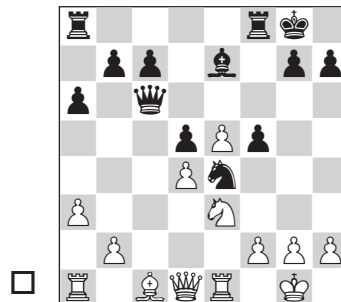
A surprising twist; the bishop is tracked down in the open, while the attack 6...♜xf2 is bashed by 7.♖e6+ ♖h8 8.♜h3. Quite hard to foresee!

**6...♜b8 7.♖c7 1-0**

FCM 3.17

### Keres-Sliwa

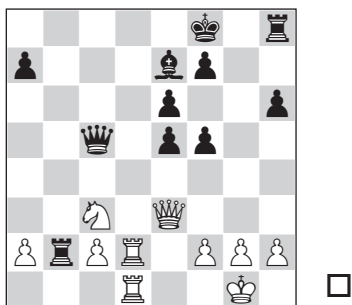
Gothenburg 1955





After the sharp advance ...f7-f5?, Black hopes to attack with ...f4-f3, or blockade the e-pawn on 1.f3 ♖g5 and ...♗e6. But a simple bread and butter brute force sequence shows that the idea isn't viable:

**1. ♖b3! ♜ad8 2. ♗xf5! ♜xf5 3. ♜xe4** Winning a vital pawn via the pin. **1-0**



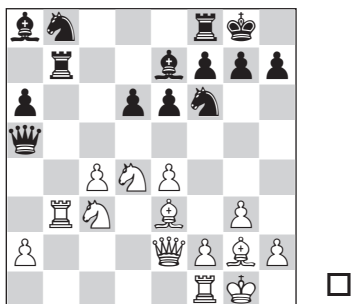
FCM 3.18  
**Mohr-Wach**  
Ptuj 1995

White has every reason to seek a brute force solution in this odd position; if the initiative fizzles, Black will relish an imposing center, a nice bishop, and White's queenside weaknesses:

**1. ♜d8+ ♔g7 2. ♖g3+ ♔h7 3. ♜xh8+ ♔xh8 4. ♗a4! ♜xc2 5. ♗xb2 ♖xb2 6. ♖e3!**

Only now does White's superiority crystallize, as two tremendously important pawns are under fire. In the game Black lost after 6...a5 7. ♖xh6+ ♔g8 8. h3 ♖xa2? 9. ♜c1! and similarly, if Black were to play 6...♖xa2, White's advantage in king safety would decide: 7. ♖xh6+ ♔g8 8. h3 e4 9. g3! followed by penetration with the rook. **1-0**

Among the most bedeviling brute force lines are those that unleash an orgy of captures. The game hangs in the balance with each decision. Only good selection, board sight, and raw calculation will decide the outcome.



FCM 3.19  
**Akopian-Svidler**  
Yerevan 2001

**1.e5! ♖xb3**

1...dxe5 2.♙xb7 exd4 3.♙xd4.

**2.exf6!**

Not 2.♘xb3 ♜xe5! 3.♙xa8 ♜xc3.

**2...♙xg2**

The bishops are golden after 2...♞xc3 3.fxe7 ♞e8 4.♙xa8.

**3.♘xb3!**

Every capture has fresh ramifications. On 3...♜xc3, 4.fxe7 wins.

**3...♙xf1! 4.♜g4!**

Bagging the point.

**4...♙xf6 5.♘xa5 ♙xc3 6.♙xf1 ♙xa5 7.♜d4 ♞d8 8.♜a7 h6 9.♙b6 1-0**

FCM 3.20

**Sarana-Jakovenko**

Satka ch-RUS 2018

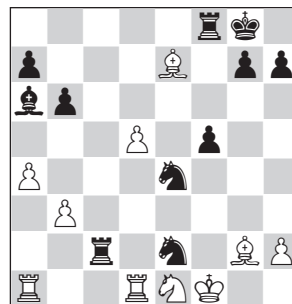


White seeks complications to ease his queenside problems, but forgets that one plays with fire when entering a long string of captures:

**1...♘xe6! 2.♙xd6 ♘xd4 3.♙xe7 ♘e2+!**

White's idea was 3...♘xf3+ 4.♙xf3 ♞xf3 5.d6! with sufficient counterplay.

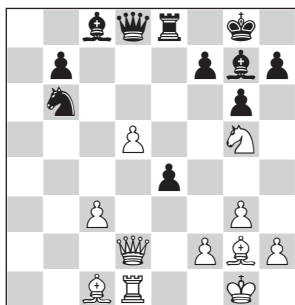
But the selection of brute force options is paramount in these positions, as the opponent may 'jump off the trolley' of forcing captures at any turn. Now 4.♙h1 ♘f2# is a picturesque smothered mate, so forced is...

**4.♙f1 ♘f4+ 5.♙g1 ♘e2+ 6.♙f1 ♘2xg3+ 7.♙g1 ♘e2+ 8.♙f1 ♘f4+ 9.♙g1 ♘e2+ 10.♙f1 ♞c2 11.♘e1**

The fitting finale is a beautiful stock smothered mate anyway:

**11...♗f4+ 12.♖g1 ♜xg2+! 13.♗xg2 ♗h3+ 14.♖h1 ♗f2#**

These tricky ‘stream of capture’ positions highlight the role of brute force analysis as the great ‘fact-checker’. Any time the opponent’s defence relies on a tactical device, computer eyes have a responsibility not to trust the opponent’s edifice, but to check it for calculative flaws:



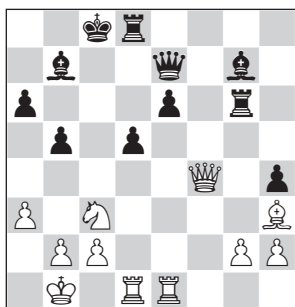
FCM 3.21  
**Carlsen-Giri**  
Wijk aan Zee 2011

What looks like another clever Magnus petite combinaison turns into a rare ‘oops’ moment after **1...e3 2.♖b2 ♜xg5 3.♗xe3**.

Obviously Magnus’ concept since **3.♜xb6 e2 4.♗e1 ♜xc1 5.♗xc1 e1♖+ 6.♗xe1 ♗xe1+ 7.♗f1 ♗h3** is a stock mate.

**3...♖g4! 0-1**. It’s all smoke and mirrors after **4.f3 ♗c4 5.♖b5 ♖d7**.

Well-timed bread and butter combinations play as strong a role in converting positional pluses into material gain, as they do in tipping the balance in ‘critical positions’. Knowing when and how to cash in on such advantages is an art in itself, but computer eyes are in the forefront, as usual.



FCM 3.22  
**Kasparov-Ivanchuk**  
Frankfurt 1998

White has pressure against the weaknesses e6 and h4, but is it enough? Brute force calculation shows that White can already ignore the threat of **1...♗xc3** and convert his advantage:

**1.♗xe6+! ♗xe6 2.♖g4 ♗d6 3.♗xe6 ♖xe6**

Or 3...♖xe6 4.♗e1 ♔d7 5.♗xe6 ♕xe6 6.♖xg7+.

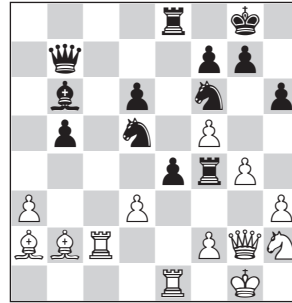
**4.♖xg7 1-0** White has won a pawn while maintaining a strong position.

Amateur players often fail to perceive the positional benefits that can accrue along with material gain; did the lost pawn secure crucial squares, or anchor a chain?

FCM 3.23

### Gelfand-Adams

Wijk aan Zee 2002



Mickey Adams makes it look easy, in grandmasterly fashion; five bread and butter forcing moves with a lone subvariation, and Black's initiative blooms into a pawn plus and a crushing edge:

**1...♖xf2! 2.♖xf2 ♜f4!**

This tremendous zwischenzug is the key.

**3.♖g3 ♜xf2+! 4.♜xf2**

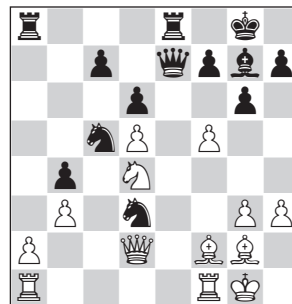
**4.♖xf2 ♜xh3+.**

**4...♜xd3+ 5.♜f1 ♜xb2 0-1**

FCM 3.24

### Chiburdanidze-Zsu.Polgar

St Petersburg 1995



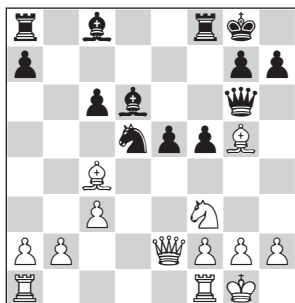
White is pretty clearly on the ropes, given the looseness of her position and Black's menacing minor (and major!) pieces. The master's imperative is to transform these factors into material gain or mate via the correct application of brute force:

**1...♜xf2! 2.♖xf2**

Forced, as both 2.♖xf2 ♘d3 and 2.♙xf2 ♘e4+ 3.♗xe4 ♖xe4 lose material.  
**2...♘b3!**

Forcing a massive simplification, correctly foreseeing the inability of White's minors to cope with the rook and passed b-pawn. Also very strong was the 'quiet' 2...♗e5!.

**3.♘xb3 ♗xa1 4.♘xa1 ♖e1+ 5.♗xe1 ♗xe1+ 6.♗f1 ♗xf1+ 7.♗xf1 ♗xa2 8.♘b3 ♗c2! 0-1**



FCM 3.25

**Handoko-Martin Gonzalez**

Lucerne 1982

White converts his edge by refusing to back down in the face of counterplay:

**1.♘xe5! ♗xg5**

Not 1...♗xe5 2.♗xe5 ♗xg5 3.♗xd5+.

**2.♘xc6 ♗xh2+!** A nice idea! Many years ago, the American hippie-master Brian Hulse gave me a valuable lecture about the **need to play for some imbalance in bad positions!**

**3.♙xh2**

Of course not 3.♙h1 ♗h6! with too much play. Handoko has calculated that the direct method ends all resistance.

**3...♗h6+ 4.♙g1 ♗xc6 5.♗fd1 ♗e6**

Or 5...♗d8 6.♗xd5 ♗xd5 7.♗xd5+ ♗xd5 8.♗e8.

**6.♗xe6+!** Regaining the piece with a winning ending after 6...♗xe6

7.♗xd5. **1-0**

## **B) Mating and 'Hybrid' Brute Force combinations**

These are 'non-stock' brute force sequences, combining mating ideas and the win of material.

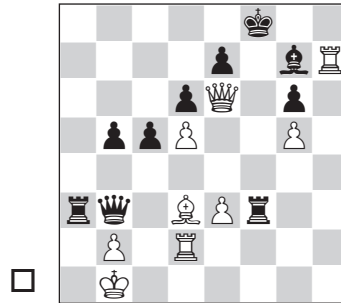
In Chapter 1 we saw how marauding major piece positions, where one or both sides menace the king, are decided by accurate calculation of forcing moves. Here brute force methods produced the one road to Rome.

Everything comes with check, as it must, lest Black's counterattack against b2 land first. But there are many side variations, with no room for error:

FCM 3.26

**Bharathakoti-Guijarro**

Gibraltar 2019



**1. ♖c8+ ♔f7 2. ♙xg6+!! ♗xg6 3. ♗e6+ ♙f6 4. ♗f7+**

Harmlessly gaining time on the clock in light of 4...♗xg5? 5. ♗h5#.

**4...♗f5 5. ♗e6+ ♗g6 6. ♖h6+! ♗g7**

Or 6...♗xg5 7. ♗g8+ ♗xh6 (7...♗g5 8. ♗g6+ ♗f5 9. ♖h5+) 8. ♖h2+ and mate.

**7.gxf6+ exf6**

Also on 7...♗xh6 8.fxe7+ or 7...♖xf6 8. ♖g2+ the king is clearly sunk.

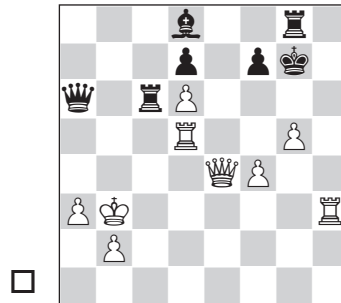
**8. ♗g4+ 1-0**

Here is another major piece melee which was a de facto mathematical exercise:

FCM 3.27

**Short-Lutz**

Budapest 2003



**1. ♖h7+ ♗f8 2. ♖xf7+!! ♗xf7 3. ♗f5+ ♗g7**

Or 3...♗e8 4. ♖e5+ and mate on d7!

**4. ♗xd7+ ♗g6 5. ♗e6+ ♗h5**

The queen flies solo on 5...♗h7: 6. ♗h6#.

**6. ♗h3+! ♗g6 7. ♗h6+ ♗f7 8. ♖f5+**

White had to see this checking possibility way beforehand.

**8...♗e8 9. ♗e6+ 1-0** This sacrifice was too deep and unusual to be considered a stock blow on f7!