## **Recent Advances in Opening Theory**

# © 2005 Colin James III All Rights Reserved

### Abstract

An opening series of forced moves is discovered using computer analysis that is a guaranteed draw for Black if both sides play perfectly. If White does not play perfectly and Black plays perfectly, then the opening is a guaranteed win for Black. The opening is a variation of the Modern B08 as 1. e4 d6 2. d4 g6 3. Nc3 Bg7 4. Be3 Nf6 5. Nf3 0-0 6.Qd2 with the newly discovered move 6. ... Nbd7. (A continuation of the line with the human move of 7. e5 allows Black to force a draw in 29 moves.) Such an opening of forced moves proves that while chess may appear to be infinite in practice to a human, chess is a finite problem to a relatively small computer.

#### Apparatus

The computer used in this study was a dual Opteron 240 with 2 GB of ECC registered RAM. The software used was Deep Fritz 8 with a hash table size of 1056 MB or about 1 GB. The moves were processed to at least level 20. A faster Opteron computer would replicate the results but within a linearly shorter period of time.

### Findings

The move orders of the opening are named in the literature as the Modern, Pirc (pronounced Peertz), Robatsch, and Yugoslav openings.

The moves are as follows:

1 e4 d6	2 d4 g6	3 Nc3 Bg7	4 Be3 Nf6 [or tra	5 Nf3 0-0 nsposes	6 Qd2 Nbd7 Qd2 c6	7 Bh6 c6 Bh6 Nbd7]	8 Bxg7 Kxg7	9 h3 Qc7	10 Qe3 e5	11 0-0-0 b5	12 g4 b4
13 Ne2 d5	14 Nxe5 Nxe5	15 dxe5 Qxe5	16 Bg2 dxe4	17 Rhe1 Re8	18 Ng3 Be6	19 Nxe4 Bd5	20 Nxf6 Qxf6	21 g5 Qf5	22 Qd4+ Kg8		24 Re3 - Qxd5
25 Qxd5 cxd5 [or tra	26 Rxd5 Rxe3 nsposes	27 fxe3 f5 fxe3 Re8	28 Kd2 Re8 Kd2 f5]	29 Rd4 a5	30 Rd5 Ra8	31 c4 bxc3+	32 bxc3 Rb8	33 Kc2 Kf7	34 Rd7+ Kf6	35 Rxh7 Re8	36 Kd3 Rd8+

37	38	39	40	41	42	43	44	45	46	47	48
Ke2	Ra7	Rxa5	Kf3	Kg3	Ra6+	h4+	Kf3	a4	Ke2	Kf3	Rxg6
Rc8	Rxc3	Rc2+	Rh2	Re2	Kg5	Kh5	Re1	Rf1+	Ra1	Kxh4	1/2-1/2

The moves above are all forced by Black throughout the variation. The important move discovered is 6. ... Nbd7 on which the definitive nature of the opening turns. The author proposes the name of the opening to be the "Deep Fritz Variation" of the B08 Modern Opening because the Deep Fritz engine chugged it out.

Two chess masters reviewing the results suggested that the move of 7. e5 was better than the machine move of 7. Bh6. That suggestion was submitted to computer analysis. The results of the line are below.

						7 e5 Ng4	8 0-0-0 Nxe3	c5	10 dxc5 Nxe5 nsposes	Bxe5 cxd6	12 cxd6 exd6 Nxe5 Bxe5]
13 Kb1 Bf5	14 Nd5 Re8	15 Qb3 Rc8	16 Bd3 Be6	17 Bb5 Bxd5	18 Rxd5 Re7	19 c3 Qb6	20 Rd2 Rc5	21 Bc4 Qc7	22 Bd5 Qa5	23 Qd1 Rxc3	24 bxc3 Qxc3
25 Re1 Qxa1+	26 Kc2 - Qc3+	27 Kb1 Qa1+	28 Kc2 Qc3+	29 Kb1 ½-1/2							

The move 7.e5 allows for Black to draw in 29 moves, thereby supporting the claim that the better line is that first presented.

A search of the author's chess library found that the following dedicated text references show these numbers of moves of this variation, where for moves 6. xxx yyy, move 6.0 is 6.xxx for White, and move 6.5 is 6. ... yyy for Black:

7.0:	Friedstein [1970], 1975
6.5:	Gallagher, 2003; McNab and Nunn, 1998;
	and Tella and Yrjölä, 2001
6.0:	Chess Informant, 2002 (as ECO B08:03.06.0)
4.5:	McDonald and Speelman, 1998
4.0:	Alburt and Chernin, 2001; and Seirawan, 2003
3.0:	Watson, 1998; and Watson, 2003
0.0:	Dvoretsky and Yusupov, 1994

It is remarkable that the text titled in part "Advances Since Nimzowitsch", Watson, 1998, does not show the most moves of the variation. Rather, it is a 1975 translation of a 1970 USSR text, and not in algebraic notation, that publishes the most moves of the variation.

This fact should serve as a caveat to those who would summarily dismiss older chess treatises, such as those not in algebraic notation, as without merit.

The only game found in the Mega Database 2004 of ChessBase that goes through move 8.5 is between Jonas Hoffmann and Ernst Millen (0-1) at Westpfalz on June 24, 2000. The White side error was at move 9. 0-0-0. Millen, at the time an expert rated at 2076, subsequently took a total of 40 moves to win.

### Conclusions

This opening variation of B08 is in the category of generic moves based on 1.... d6 for response to almost every opening move by White. Tella and Yrjölä, 2001, were the first to recognize this in major print media. Therefore the goal is to obtain transposition to one of the positions within the variation above for a guaranteed draw as Black if Black can manage to play perfectly.

What remains is to prove the perfect opening move for White. If it is either 1. d4, 1. e4, or 1. Nf3 then Black's response of 1. ... d6 guarantees a draw. What follows is that the arch chess problem is solved for the first time from the standpoint of a perfect move response for Black to White's three best first moves.

As a side effect, these findings also show that one moderately skilled in the use of computer hardware and chess software may achieve results and conclusions that chess experts will recognize as true and valid and which cannot be disproved.

### Acknowledgments

Thanks are due for helpful discussions to the former and current Colorado State Chess Champions, Dr Mikhail Ponomarev and Philipp Ponomarev.

#### References

Alburt, Lev; Chernin, Alex. 2001. Pirc Alert! A Complete Defense Against 1. e4. New York: Chess Information and Research Center

Chess Informant. 2002.

Encyclopaedia of Chess Openings [ECO]. Fourth Edition. Volume B. Belgrade: Šahovski Informator.

Dvoretsky, Mark; Yusupov, Artur; Sugden, John, translator. 1994. Opening Preparation. London: BT Batsford Ltd.

Friedstein, G. [1970]; Sen, Colleen, translator. 1975. Pirc Defense. [USSR]. Chicago: Chicago Chess Books. Gallagher, Joe. 2003. Starting Out: The Pirc / Modern. London: Gloucester Publishers plc.

- McDonald, Neil; Speelman, Jon. 2000. Modern Defense. London: Everyman Publishers plc.
- McNab, Colin; Nunn, John. 1998. The Ultimate Pirc. London: BT Batsford Ltd.
- Seirawan, Yasser. 2003. Winning Chess Openings. London: Gloucester Publishers plc.
- Tella, Jussi; Yrjölä, Jouni. 2001. An Explosive Chess Opening Repertoire for Black. London: Gambit Publications Ltd.
- Watson, John. 1998.
  - Secrets of Modern Chess Strategy: Advances Since Nimzowitsch. London: Gambit Publications Ltd.

Watson, John. 2003.

Chess Strategy in Action. London: Gambit Publications Ltd.