node, and D is the number of drawing moves. Provided that at least one node in the tree has a score of -1, even if due only to the opponent’s blunder, a search of the resulting 7-ply tree will provide a greater practical chance of success against an imperfect opponent than will selecting a drawing root move at random.

Various refinements to this concept suggest themselves, but are beyond the scope of this note. Although the application of this concept to chess-endgame databases is new, so far as I am aware, the idea of tree search assuming imperfect play by the opponent has been described earlier (e.g., Michie, 1981). In other words, when desperate, it is good tactics to mislead one’s opponent. The opponent, if not omniscient, i.e., if a human being rather than a computer database, is therefore classified as being, in some sense, contemptible. The notion of a contempt factor has been broached in literature by Slate and Atkin (1977) for full games. Without any risk (as opposed to its use in full games) it may now be applied in endgames tabulated in a database.

References


CORRECTING GRANDMASTERS’ ANALYSES IN ELEMENTARY ENDGAMES

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Editor’s Introduction

It may be challenging to our readers to analyse this note by Lars Rasmussen dealing with the KRKN endgame, the very same subject that has been treated earlier in this issue by Denis Verhoeof and Jacco Wesselius. It will be remarked that the two authors’ approaches are as distinct as they could be; nevertheless they are complementary. Whereas Verhoeof and Wesselius give an a priori, classificatory treatment, Rasmussen below provides an a posteriori, database analysis. It is not the least of Rasmussen’s merits that a home computer sufficed to hold the database and the program to consult it.

Recently, I have undertaken a definitive analysis of some technical endgames by computer, the most interesting of which are Queen versus Rook, and Rook versus Knight. I have compared my computer’s analysis with the existing endgame theory and have found some interesting results as the following KRKN examples will show.

The first instance

The position of Diagram 1 arose in the game Gosh - Gipslis (Calcutta 1979). White played 1. Nf7 and lost. Gipslis means according to ECE (rook endings II, pos. 393) that White could make a draw by 1. Nd7! Kf4 2. Nc5! This is not true, because after 1. Nd7 Kf4 2. Ne5 will follow 2. ... Re2! Now two variations are possible (A) 3. Kf1 and (B) 3. Kh3.

White: Kg2 Ne5
Black: Ke3 Re4
Black to move.

DIAGRAM 1
Correcting Grandmasters Analyses in Elementary Endgames

Variation A reads as follows:

2) 4. Nb3 Ke3 5. Na5 Rc5 6. Nb7 Rd5
4. ... Ke3! 5. Ng5
5. ... Rf2 6. Kg1 Rf5 7. Ne6
12. Ng1 Rh2 #
7. ... Rf2 6. Kg1 Rf5 7. Ne6
Two variations are
1) 8. Nc7 Kf3 9. Na6 Rg5 10. Kh2 Kg2 11. Kh1 Kg3!
8. ... Ke4 9. Nc6
9. Nf7 Rd5 10. Kg2 Ke4

Variation B reads:

8. Kf5! Kd4!
9. Kf4 Rc1! 10. Na4 Rb1


Diagram 2
White: Kb5 Rh8
Black: Ka7 Nb7
White to move.
A maximin position

The position of Diagram 3 is one of exactly two positions (ignoring symmetries) in which it takes a maximum of 27 moves to capture the Knight. (The other one is Ka4, Ra8 - Ka2, Nd7.) An optimal variation is presented below.


Cartoons by Jeff Ragsdale