Roycroft's 5-man chess endgame series

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REVIEWS

ROYCROFT'S 5-MAN CHESS ENDGAME SERIES

Queen and a2 Pawn against Queen (8 pp., April 1986, £2.50)
Queen and a6 Pawn against Queen (20 pp., May 1986, £4.50)
Queen and b7 Pawn against Queen (16 pp., June 1986, £4.00)
Chess Endgame Consultants and Publishers
17 New Way Road
London NW9 6PL, England
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Reviewed by H.J. van den Herik

In the autumn of 1985, John Roycroft visited Ken Thompson at Bell Laboratories, where Ken was working on his fundamental research of five-piece endgames. Both are authorities on endgame matters, Thompson's approach being the computer man's and Roycroft's that of a chess expert and a chess publisher. These converging interests have led to a plan for a set of 38 brochures on the results Ken had extracted from his programs. Three brochures are now before us.

It will be seen that the order of publishing is not numerical. The three brochures in question bear the numbers 2, 6 and 7 in the series and treat the domain of Queen and Pawn against Queen (KQPKQ). It is especially No. 7 which is closely related to Thompson's article in this issue of the ICCA Journal. Thompson, following Komissarchik and Futer, treats the endgame with the pawn on g7, the brochure assumes the Pawn on b7: the positions are identical up to reflection.

Booklet No. 7 (Pawn on b7) contains "a personal story" by John Roycroft, a very brief discussion of Komissarchik and Futer's work on the endgame, a comparison of their work and that of Thompson and, finally, three examples of optimal play as generated by Thompson's program. The examples are not annotated in chess terms familiar to human players, but with variations also generated by Thompson's program. We quote: "Play is optimal in the following precise sense: a move by White reduces the solution length by one; a move by Black maintains the solution at the current depth."

Booklet No. 6 (Pawn on a2) was the first one to be published and contains an introduction entitled 'New Knowledge Laid Bare', stating the purpose of the series. In this instance, three examples are given of which the longest won endgame position lasts for 71 moves and ends with an exchange of Queens.

This implies that the program would avoid endgames such as the KQP(a4)KQs, also classified as won, as long as possible, since if they appear at an earlier stage (even one move earlier) they would not correspond to optimal counterplay, which is what the program explicitly postulates. There is no example in the booklet in which the Pawn proceeds to a4 on the 17th move. In example 3, the Pawn actually moves to a4 on the 16th move.

Booklet No. 2 (Pawn on a6) starts with a question-and-answer dialogue arising from FIDE's 50-move rule. Again, three examples of optimal play follow: one maximin (71 moves) and two of 70 moves. Of all KQPKQ endgames, the endgame with the Pawn on a6, if won at all, is the longest to survive before being converted into another endgame (by a Pawn move, an exchange of Queens, or the loss of a Queen) or finishing with mate. (Further details on maximins can be found in Thompson's contribution in this issue of the ICCA Journal).

These three publications are interesting to chess-players rather than to computer-chess programmers. For chess enthusiasts who want to share the knowledge gained at the coalface of chess theory, these

booklets offer an excellent possibility to discover the mysteries of an endgame in *almost* understandable terms. However, an average chess-player may feel as when replaying the moves of a Kasparov-Karpov game. One thinks one almost understands, but one knows that one would never have thought of the moves oneself. The booklets' completeness is intriguing and demands a thorough study: *why this move rather than that?* The mere computer-chess enthusiast may derive more enjoyment from the work on five-piece endgames as presented by Thompson himself in this issue of the ICCA Journal. At any rate, £10.00 for the three booklets, which includes a series discount, is not modest for 44 pages.

The bulk of all the booklets consists of copies of computer output, laid out in the well-known Thompson style. All nine examples of optimal play date from November 18, 1985, an important day on which a big step forward was made on the road to complete understanding of the secret of the five-piece endgames.