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BACKWARDS TO THE MIDDLE GAME

Wise words by top grandmasters are guiding the contents of this issue. The game of chess is usually partitioned into three phases, viz. opening, middle game, and endgame. Yet, there are no clear definitions of these phases. Out of book is not the same as out of the opening phase. For instance, a computer program may not automatically change the parameter setting from opening phase to middle game phase after 8 moves and the message 'out of book'. The most difficult points to characterize are the precise transition points, e.g., when does the endgame start? On p. 143 of this issue we read "Fine (1952) saw no clear boundary between the middle game and endgame phases of chess but it is clear that he intended the endgame to follow the middle game permanently rather than temporarily." With the help of IGM Speelman's threshold for endgames (13 points), Haworth argues that the endgame KRPPKRP could be followed by the middle game KQRPKQR. This unexpectedly implies going forwards from the endgame to the middle game.

The exception brings us, albeit in another form, immediately to the contribution by IGM John Nunn called "Discoveries in R+2P vs. R+P endings". Nunn uses the 7-man MVL endgame tablebases from the Lomonosov team and applies them to positions from the well-known book *Rook Endings* by Levenfish and Smyslov. For the younger chess-players, this book contains the final verdicts of many intricate positions and was famous in the 1970s for its excellence. The book was assumed to contain the truth and, owing to Nunn, this is no longer so. He meticulously checked position after position, not with the intention "to point out mistakes by noted experts", but to learn, i.e., to discover new ideas. The result is a fascinating trip where top human knowledge is outclassed by brute force.

The progress in the generation of endgame tablebases is slow but continuous; the cause is the exponential increase of the endgame's complexity. Nevertheless, we are now living in the era of 8-man tablebases and an intriguing question still is: when do we reach the 32-man endgame solution?

Such a solution is not necessary for solving the game of chess as Schaeffer *et al*. have shown in *Solving Checkers*. He and his team constructed a program that harmoniously combined forward searching with backward searching. The result was a draw. For chess, many experts expect the same result. However, you never know …

When I once made a prelude to the 32-man endgame database in chess in the Dresden Workshop *Bedeutung des Schachs für Erziehung, Wissenschaft und Kultur* (Dresden, 1988), the former Correspondence Chess World Champion (1968-1971) Horst Rittner vigorously opposed the idea that it was possible. Indeed, it is still impossible, but perhaps we may think of it as a goal for quantum computers. Yet, even with such computers available, I believe that going backwards to the middle game is currently the best we may hope for. It certainly will be an essential part of the solution procedure.

This issue clearly shows that our research community as well as the community of computer players are vibrant. The reports on the World Computer Chess Championship, the Brain-and-Mind Computer Olympiad, and the Computer and Games Conference in Yokohama, Japan are a sign of recognition. The reports are a pleasure to read and can be considered as a review of all the new findings that were discussed there. Chess, Go, Shogi, and many other games, time and again, show their intricacies that were hidden up to now.

Yet, running from discovery to discovery takes time, say many years. Looking backwards we see that in these years we now and then lose our valuable researchers from the past. With great respect for his contributions to the computer-chess community, this issue of the Journal describes Alexander Bitman's passing away. He was a member of the ITEP team and the KAISSA team, and one of the developers of the first bit representation for a chess-board. Moreover, he was a mathematician, a Go player, and a friendly quiet contributor to our community. We honour him by a tribute on p. 191.

Finally, the Editorial Board would like to welcome a new member of the Board, I-Chen Wu. A brief biography is given on page 190. We are sure that our current cooperation (see the article on pp. 131-138) will be further strengthened by his enthusiasm. So, many new developments may be communicated by his efforts. The ICGA looks forward to its next phase, but does not intend to go backwards.

Jaap van den Herik

The credits of the photographs in this issue are to: Jan Krabbenbos, Jimmy Yen, I-Chen Wu, and Harvey Williamson.

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