

Tilburg University

Brain and brawn

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BRAIN AND BRAWN

Once every year or so, it is time for Journal's readership to sit back and take stock. 'What are we engaged upon?' is the question most likely to come up during such a self-examination. Our reader with his thinking cap on will ponder a remark last made to him by some guru not unlikely to be of Eastern European origin: "Computer chess has nothing to do with chess: chess is a game of subtlety, computer chess is nothing but an exercise among automata." On the other hand, our reader, if unbiased, will be aware of some indisputable facts:

- the best computer programs will outdo any but 0.5 percent of all human chess-players (this is a conservative estimate);
- commercially-available chess programs will outplay many of their partners and their prices are dropping even while their performance is increasing;
- especially at the top of the range, the computers are now recognized as playing inhuman chess: they explore eight to eleven ply of depth in full detail; what distinguishes them from human players is that they do so unselectively: whereas the human player only works out, intuitively promising paths, the automaton blindly and zestfully pursues any path mechanically possible.

Yet, *is it a different game?* The rules, which for humans have been carefully standardized, are just as carefully followed by the programs. More tellingly, has it ever been required of a Grandmaster to reveal how on earth he arrived at his decision to play 1. e2-e4 in preference to the many other opening moves? The human being need not reveal his reasoning. Nor, we feel, should the computer.

In a more complicated instance, 20. Be2-b5 (Hitech - Schach 2.7, Cologne 1986) proved to be the move of a genius, as was found by IGM Vlastimil Hort, ascertained by Hans Berliner and fully elaborated by László Lindner (Rochade, December 1986, p. 20). Yet, here again, inquiry into the reason for the move is epistemologically impossible. In more common terms: it seems impossible to find out how the computer, in the last instance, arrived at the brilliant continuation.

Granting their dues to both sides, we may well admit that computers play inhuman chess, but we are forced to consent to the opinion that they *do* play chess.

It is not for us to predict whether, in the long terms, the brain, as embodied in the cleverness of computer programs, will have the advantage over the brawn provided by better hardware (and the reader is reminded that hardware, if effective, is as stupid as their designers can well make it).

Still, there are pointers: your Editors do not think it is merely fortuitous that Chiptest-m, a newcomer and a brawny member of the species if any, gained a significant victory in the 18th ACM North American Computer-Chess Championship. Let us be honest: few among our readers will rejoice in the result, because it seems to imply a stone-age result: mere brawn scores! Nevertheless, it is one more fact to be considered.

Brawn clearly has its merits. Still, we, human beings writing about computer chess, hope for brain to prevail. May your Editors be so bold as to venture the opinion that, if the best of brawn were to be combined with the best of brain in a computer program, the result might well be the very best of computer programs, coming within measurable distance of constituting a challenge to the World Champion.

Bob Herschberg
Jaap van den Herik

Welcome and Farewell

Readers are notified that the Editor-in-Chief has taken up a new location in consequence of his having been nominated to a post of professor at the University of Limburg, Maastricht, The Netherlands. As one consequential change, the Editorial Assistantship of Ms. J.W. Pesch has now lapsed. For her five years of unselfish devotion, the Editors wish to thank her most explicitly; they feel assured that the readership will concur in their gratitude. The Editorial Board also wishes to record their gratitude to Mr. Jan Roerade and Mr. Koos Schonewille for technical assistance and to Mr. Arie de Ronde for being our Gutenberg. Finally, this is the place to introduce Ms. Hadewych Bollen (+31 43 888501) as the Journal's new Editorial Assistant.