LITERATURE RECEIVED

[The last *ICCA Journal*, Vol. 20, No. 2, which contained much background information on the match Kasparov-DEEP BLUE as well as the gamescores with annotations by Grandmaster Yasser Seirawan, was soon followed by two additional books on the match. It is a pleasure to read them and to stumble now and then on new information. Below we announce both books. From the first one we quote parts of the Foreword by Grandmaster Patrick Wolff, two-times US Champion; from the second one we reproduce parts of the Introduction by the author -Ed.]

MAN VERSUS MACHINE: KASPAROV VERSUS DEEP BLUE

D. Goodman and R. Keene[1]

1997, 128 pp., H3 publications, Cambridge, Massachusetts
£ 17.95, ISBN 1-888281-06-5

"The human animal is by nature competitive and comparative. Throughout our history we have measured our abilities by testing ourselves against nature, against other animals, and against each other. To this end, we have invented many sports, games, and contests. Surely there is no ability we treasure more highly than our intelligence, and that is why the game of chess – which has been called 'the ultimate test of cerebral fitness' – has a special place in our culture. To excel at chess one must be cunning , cold-blooded, and intellectually gifted. People spend the better part of their lives mastering strategies and training their minds simply to be able to defeat their rivals at this most difficult game.

"Because the hallmark of chess is that it is a competition of the intellect, it has been assumed for centuries that only humans could compete in this arena. One may race against a horse, or pit one's strength against the elements, but only humans possess an intellect, so only humans can play chess. But recently, another competitor has entered the arena of chess: the computer.

"When a human plays a human, the competition is essentially personal and no more. But when a human plays a computer, the competition becomes more important. Now it is more than just a question of which player will win: it becomes a question of whether the computer can outperform the human at an activity that tests the one quality we identify with, most strongly, our intelligence. And when the World Chess Champion, Garry Kasparov, possibly the greatest chess player ever to live, plays the fastest and most powerful chess-playing computer in the world, DEEP BLUE, the competition reaches the apex of its significance. Each combatant seems to stand as a representative for his (or its) group. The competition transcends the mere question of which party will win this game, and becomes instead a question of whether the human intellect will still reign supreme in this realm.

"One might protest that the computer is itself a creation of the human intellect. Fair enough, but that does not change the fact that it is the computer that makes the moves, not the computer's makers. We must measure ourselves against what we see, not what has made it. (...) Indeed, the protest may raise a deeper worry. Are we steadily building machines that will make us obsolete in every domain of the human intellect?

"There are other points of protest to rebut this worry. The computer may excel at chess, but it cannot do many other things, both simple (like recognising faces), and complicated (like writing good poetry). And intelligence does not equal life, or self-awareness, so our fears of being supplanted may be ill-founded, because it would take more than intelligence to do so. I for one am not upset about the (almost certainly inevitable) prospect of the computer surpassing us in chess for any reason other than the vanity of wanting to be able to play chess better than any machine. However, I understand very well why this chess match attracts so much interest both from those who love chess and those who know almost nothing about the royal game. Both sets of people deserve a book that will

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explain the history of computers and chess, put the match in its proper perspective, report on the day-to-day events of the match, and explain the details of each game. (...)"

KASPAROV VERSUS DEEPER BLUE:
THE *ULTIMATE* MAN VERSUS MACHINE CHALLENGE

D. King[1]

1997, 112 pp., B.T. Batsford Ltd., London
£ 9.99, ISBN 0 7134 8322 9

"If a computer can beat the World Champion, a computer can read the best books in the world, can write the best plays, and can know everything about history and literature and people." – Garry Kasparov

"And on February 10th 1996, that futuristic vision came true. DEEP BLUE, the IBM chess-playing machine, defeated Garry Kasparov, the reigning world chess champion and arguably the greatest human chess player in the two-thousand-year history of the game, sending shock waves over the world.

"This was the science fiction nightmare come true. In Arthur C. Clarke's *2001: A Space Odyssey*, HAL, the space-craft's computer, defeated the human captain at chess, and then took over the ship. The message was clear. If a computer could defeat the top human being at an activity that has fascinated, frustrated, infuriated, and delighted humans for so many centuries without ever being 'solved', then they were capable of taking on the most complex of problems and, perhaps more sinisterly, they could take charge and control humans. The machines were taking over.

"For dedicated chess players the result was shocking. The mystique of their most cherished game, enjoyed by millions all over the world, had been shattered. Chess-playing computers had already made their mark over the last decade – there are many commercially available programs that play a decent game – but we could always console ourselves that they had profound limitations: 'They do not understand strategy', 'They are only good for short-range tactics', 'Computers cannot play the simplest endgames', and, if all else failed, 'I lost, but the game is still far too complex for these machines to understand – Kasparov would never fall for such crude play'. That smugness was shattered on that day. That is why it hurt so much.

"For researchers into Artificial Intelligence, DEEP BLUE's defeat of Kasparov was a landmark achievement. The leader of DEEP BLUE's team, Dr. C.J. Tan, said "This is really indeed a historical event. Many records, historical records, have been broken during this event, both for chess as well as the technical community ... this will help us to further develop our system to serve mankind." That was one of the more restrained remarks. Others spoke of DEEP BLUE's victory as 'species defining'. (...)

"On 3rd May 1997 Kasparov sat down in New York to do battle again, though this time with a different opponent, a new and improved model: DEEPER BLUE. (A depressing thought for Kasparov is that he will never face a machine named 'Deepest Blue': year after year, with faster processing, it will go on improving.)

"But why was this event so significant? A computer can shuffle bits of wood across a table with the best of them. So what? Were these closely fought matches a watershed, or had it more to do with the egos of computer programmers? To answer that we have to go into the history of research into Artificial Intelligence and the role that chess played in it."

[1]   B.T. Batsford Ltd., 583, Fulham Road, London SW6 5BY, United Kingdom.