Machine vs. Man: Checkmate

We are sharing our world with another species, one that gets smarter and more independent every year.

By Steven Levy

July 21 issue — Garry Kasparov’s head is bowed, buried in his hands. Is he in despair, or just stealing a minute of rest in his relentless quest to regain the world championship, promote chess and represent humanity in the epic conflict between man and machine?
HE PROFESSES the latter. But no one could blame the greatest grandmaster in history if he did succumb to bleakness. His own experiences indicate the end of the line for human mastery of the chessboard. In the sport of brains, silicon rules.

Still, Kasparov is preparing to throw himself into the breach once more. In November he will play his third computer opponent in a highly touted match. The first, of course, was IBM’s Deep Blue, which in 1997 beat him in a battle that he insists to this day was unfairly stacked against him. Then, earlier this year, he fought to an unsatisfying draw against Deep Junior, programmed by two Israelis. Next up will be X3d Fritz, a world-class program modified to “play in the third dimension,” where his 3-D glasses will create the illusion that a virtual
chessboard is floating between Kasparov and the screen. Kasparov believes that it’s still possible to conceive of a human’s winning a series of games against a top chess program—but the window is closing. In a few years, he says, even a single victory in a long series of games would be “the triumph of human genius.”

Meanwhile, the Deep matches have already yielded one truth in the evolving tension between humans and machines. Our very humanity puts us at a profound competitive disadvantage.

We got a whiff of this in the Deep Blue match. Kasparov was so rattled at IBM’s tactics—essentially, the computer team played to win at all costs when Kasparov had been expecting a gentleman’s game—that he spectacularly blew the last game and thus the match. But this past January’s Deep Junior contest revealed the problem more clearly. Kasparov won the first game and cruised to a draw in the second. However, in game three, after starting strong he made a glaring mistake. And it suddenly became obvious that when computers and humans compete, it’s really not the same game at all. Kasparov was devastated in a way that an unfeeling machine never would be. Worse, having yielded the advantage, he had no hope—as he would have against a human—that his well-programmed opponent might make its own mistake and let him back in the game. The realization paralyzed even the great Kasparov, and it haunted him for the rest of the match.
“I couldn’t escape from the blunder,” he told me. “It was always stripping my mind of the mental powers to go ahead. Every game I was thinking, ‘OK now, if I got into the big fight, what will happen?’ That shows the weakness, the shortcomings of the human mind.”

Still, the match was tied going into the decisive game six. Kasparov quickly established a superior position. Against any human player, he would have moved aggressively and gone for the win. But he wasn’t playing against a human. “I still have a chance of making a blunder,” he says, reconstructing his thought process. “And I blundered in game three. So with all those facts, it was reduced to a simple decision. To lose is a disaster. So in my mind, a draw was much closer to winning.” Kasparov shocked the millions of chess fans who were following the game by agreeing to a draw in the game and match.

Deep Junior suffered none of this tsuris. “I’m calculating publicity factors, scientific factors, psychological factors, while the machine is just taking account of the chess factors,” moans Kasparov.

There’s a scary lesson in these contests between the grandmaster and his soulless opponents. We are sharing our
world with another species, one that gets smarter and more independent every year. Though some people scoff at the idea that machines could become autonomous, remember it wasn’t long ago that almost no one thought a computer would ever beat a human chess champion. Could we ever face anything akin to the horrendous sci-fi nightmares that we see in “Terminator 3”? In the long run, it’s well worth worrying about. But the machines aren’t worried at all.

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