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DIZZY NOW – AND STILL SPINNING UP

Editors forever are torn between two desires. First let the world be reasonably constant and static, so they may quietly philosophize in their columns, but are prevented from pontificating upon recent developments. Second, let the world of their specialty be dynamic, so they have a constant stream of news to comment upon: more news, less depth.

Your own Editors, like many of their colleagues in the past decade or so, have complained repeatedly and publicly about the rate of change. It is characteristic of this dizzying rate that many of the pioneers, a Zuse, a Shannon, a Simon and a McCarthy, are still happily alive while their great-grand-brainchildren perform their antics at a rate only dreamt of by their spiritual ancestors. Their survival is indicative of the rate of change: it took at least 500 years for spectacles to become widespread after they had been invented, some 50 years for steam engines to become widely applied after their invention. It was more than 15 years between Hertz and Marconi, and so on. Indeed, there was a rule-of-thumb at the mid-century which stated that it would take at least a human generation for a new invention to migrate from the laboratory to the market.

No longer so. Our field in particular has seen migration times from labs to supermarkets of 5 years or less. From being merely dizzying, our world has moved into the outright vertiginous. When this Journal was founded as a humble Newsletter a mere 13 years ago, computer chess was for a numerically weak elite. Not 5 years later,

store shelving overflowed in commercially-available, quite competent little computers, unpredicted in the mid-seventies and indeed then unpredictable.

At the same time the top of the programs, relying on the heaviest engines then available, played a correct but unimaginative and all-too-predictable game against the gifted amateur, to whom they succumbed. An International Master, such as David Levy, our current President, could almost contemptuously brush off these mechanical contraptions. In a very short interval those artefacts grew in power! Grandmasters could still hold their own against them, but no longer with such supercilious ease. Still and all, a new era had been broached which, for short, we might term the Grandmaster era. Suddenly, vertiginously, the IM era had come to an end. Mere IMs can now no longer be assured of holding their own against the best of computers.

Unbeknownst to us all, in computer chess, the IM era has had its day, witness the resounding victory of Deep Thought over David Levy, 4 - 0 (!), in December of the past year. Admittedly, David Levy will not describe himself as the strongest of IMs, yet his defeat has set a milestone. The chess engine is evidently now a worthy opponent of IGMs.

Seeing the rapidity of development, we wonder how long this IGM era will last. If our readers believe, as we do, that the rate of computer-chess progress is relentlessly increasing, this new era, where the best of the engines are no more than equally-rated sparring partners to IGMs, will endure for a shorter interval than the IM era.

Extrapolations are always hazardous, but it is not too bold to predict now that less than half a decade will see the best engines outperform the run-of-the-mill IGMs. Another half decade at most may well result in creeping up or even jumping up to the level of worthy and respected co-equals with the world top.

This is not to say that chess will move out of the human province. It means no more than that the very best will have found their equals as seconds, using them as condign sources of advice and perhaps so being freed from their isolation. Chess will, we confidently predict, still be a human game in spite of some brute idiots doing almost as well as the best flesh and blood.

Bob Herschberg
Jaap van den Herik

Whenever the occasion calls for it, we shall publish a summary of notable results in the competitions between the best of the chess engines and human beings who have at least the distinction of being an IGM, together with other noteworthy items in the competitions between man and his machines.

CHRONICLE

IGM G. Kasparov - Deep Thought	2 - 0	New York, October 22, 1989 (see <i>this Journal</i> , Vol. 12, No. 4, p. 230)
IGM J. van der Wiel - Mach IV+	2 - 0	The Hague, November 28, 1989 (see <i>this Journal</i> , Vol. 12, No. 4, p. 231)
IGM A. Miles - Deep Thought	0 - 1	The Open US Tournament, Long Beach, Ca., November, 1989 (a chess engine's second win against an IGM playing White)
IM D.N.L. Levy - Deep Thought	0 - 4	London, December, 1989 (<i>this issue</i> , pp. 34 -36)
IGM D. Byrne - Deep Thought	1 - 2	USA, August, 1989 and January, 1990 (three wins; see <i>this Journal</i> , Vol 12, No. 3, p. 191)
IGM A. Karpov - Deep Thought	1 - 0	Cambridge, Mass., February 2, 1990 (see <i>this issue</i> , pp. 37-40)
IGM H. Pflieger - Deep Thought	1 - 1	1990 (two draws; see <i>this issue</i> , p. 40)