Breakage and Seepage

Somewhere in Holland, there is a statue to Hans Brinker. Brave Hans, the legend goes, put his finger into the dyke (a dam to the Dutch) and kept it there overnight, thus stopping the waters from breaking through into the polder. Not only is the figure of Hans purely fictitious, the legend goes against physics, hydrology and common sense.

Physics dictate that the threat to a dam is not from a hole that can be plugged by a boy’s finger. Rather, outside pressure causes the inimical waters to seep through and under the dam, inflicting much more damage by seepage than imaginatively could be caused by a finger-sized breach.

Yet the statue is there for the benefit of tourists, while the steady work, maintained over the centuries by engineers to tame the seepage goes unsung. The moral is of course that hydrological achievement is not the work of a mythical individual who reaps the intoxicating benefits of the headlines, but of plodding members of the community who, if they write at all, are quite content with dull reports in the literature of their profession.

Let us apply the lesson to our own field: of course, it is newsworthy that next February Garry Kasparov is to play DEEP BLUE. The kitty is commensurate with the estimated impact of the event and we do not blame
anybody who is impressed by half a million dollars in prize money. Editorially we may be forgiven, a slight smile: was not part of the reason for such largesse in the prizes be the desire to persuade the ordinary citizen that there must be something in it, otherwise hard-nosed companies would not make so many good greenbacks available.

Regular readers of our Journal will refuse to see this match, whatever its outcome, as a breakthrough though it will be labelled as a very public piece of breaking through a dam of opposition for computer chess.

We are amused, but not impressed. To us, this pretended act of breakage is far overshadowed by the quiet seepage, the oozing of ideas, the percolation of techniques, in short, the seepage which these pages have witnessed for over a dozen years. In this seepage, it was shown very acutely that not all new ideas had the future that was confidently expected for them by their originators. Let us, without blushing, quote some examples. The B* algorithm fizzled out, as did the singular-extensions technique. By way of contrast, transposition tables and the null-move algorithm did prove their mettle.

Recording the successes and failures, however, is only secondary to our argument. Our main assertion is that, owing to the seepage which would never make nation-wide headlines, the quality of programs has improved continuously – and when we say continuously we indeed mean by imperceptible stages.

Due to seepage, embodied in this Journal and others or even merely secretively incorporated into actual playing programs, all previous estimates of computer playing strengths have been made obsolete.

A few years ago, it was estimated that only 2,000 players in the world could consistently outdo the best of the programs the industry had to offer. Reviewing recent results, Paderborn and Hong Kong among them, we challenge our readers to revise this estimate. How many players, they believe, would consistently outdo a good program on a well-equipped but otherwise unacceptional PC? A drastic downward revision will be in order.

In our view, the overall improvement with the march of time of consistently good programs on modest equipment is far more telling in favour of the maturity of computer chess than any spectacular result that

Like Snow upon the Desert’s dusty Face,

Lighting a little hour or two – is gone.

Bob Herschberg
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