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Too mechanistic a view of science!

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May 21, 1993

Mr. Barry Watts
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[redacted]

Dear Barry,

Thanks for the great letter. I especially appreciated your comment about the state of military strategy, and have revised my paper accordingly. Maybe it's just that since military strategy has had the notion of time-as-a-weapon for so long, it has produced (stochastically, if through no other device) a few brilliant thinkers on the subject. I certainly agree with you on the overall state of the art as far as military philosophy is concerned. Also, your characterization of the case study method was a gem.

A major issue, as I see it, is whether we gain very much by trying to make management, and by implication strategy, a branch of engineering. Here is a precursor of "Riding the Tiger" that I did for the last Callaway Symposium. The basic argument is that strategy takes up where engineering leaves off, but that this does not rule out empirical methods. Thus, to beat on poor old Lanchester one more time, the fact is that *if* the Lanchesterian assumptions are satisfied, the Lanchesterian results will obtain. The reason that this is not very useful strategically is not that Lanchester was wrong but that *both* sides can employ the proper quantitative techniques and run out the implications. So the guy with the smaller Lanchester value (rR^2) will presumably do something else, unless extraneous notions get in the way (As often happens: For some reason, linear tactics never seem to die, although that fate is common among its practitioners.)

Which brings us to the good Prof. Kay. No doubt, as Kay insists, there must be more to all this than just, "Tactic A is great, unless it doesn't work." And he is dead on in his criticism of checklist mentalities. On the other hand, his off-handed putdowns leave me a little unsympathetic with his case. For example, he insists that "understanding why IBM is failing is easier than explaining the motion of the planets." It's been a few years, but I seem to recall that the motion of the planets was pretty well explained by Kepler in three succinct equations. Even if you think Kepler was a buffoon, if you use his laws, the planets will show up pretty much where they are supposed to.

OK, why is IBM failing? Kay is right. It *is* simple, so simple that we can all think of dozens of reasons. In fact, diagnosing IBM seems to have become a cottage industry: Failure to update the original PC/XT/AT family until it was too late. Tepid nature and high cost of the PS/2. Inability to link IBM minis and mainframes. Erosion of the customer base for mainframes. Deliberately slowrolling technologies (i.e., RISC) that might threaten the mainframe business. Glacially slow OODA loops. Highly insulated management (Several months ago, *PC World* was testing i486-based computers and asked the newly independent IBM PC Company for their best machine. Most competitors fell all over themselves to provide equipment. IBM "turned the request over to our advertising agency.")

Yet the IBM PC (even though it was truly "unimaginative" technically) defined the market for many reasons, including adequate performance, excellent perceived quality, large software base (in part because of its open architecture, ease of programming the 8088, and confidence by software developers that IBM would still be around for a few years), and the belief that the IBM name on the front guaranteed that when the thing needed service, there would be somebody to do it. TI, which had a great product 2 years earlier, stayed closed and disappeared, while Apple (also closed) survived only on its technical quality. In other words, Kay and *The Economist* to the contrary, it is not that simple.

To my mind, Boyd, Musashi, and that crowd offer a way out of this dilemma. Boyd talks about "Patterns," and Musashi his "Heiho,"rather than compiling lists of aphorisms á la Napoleon. In this worldview, statements like Kay's can never be part of strategy because, to the extent they are scientific, even in the Popperian sense, they are available to both sides. And what does "potentially falsifiable" mean when applied to strategy? The whole idea is to have your competitor/opponent believe something is true, while you, clever devil, create and exploit an area where it is false. In human competition, *everything* is potentially falsifiable, and thus potentially useful, if you are agile enough. Even the construction of a defensive line, which is pure poison as a strategy, could be a very clever tactic, e.g., to trick the opposition into thinking you *had* adopted a Maginot Line mentality. As John Gardner noted, after 150 pages of advice for serious authors (much of it along Kay's lines): When writing comedy, you can do anything, so long as it's funny.

To bottom-line all this (English is such a flexible language), Kay's argument that management is somehow like medicine seems to put the subject into the engineering arena. Doctors are, at heart, simply highly trained and better paid mechanics. It's just that somebody forgot to give us the shop manuals so we're having to generate them ourselves. But medicine is a fundamentally