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The Folly of Forecasts

Ian Angell says that Wall Street traders' beloved computerized mathematical models should display a mental health warning

Our faith in computerized models has some uncanny parallels with the preposterous claims made in the early days of electricity - like the 'Heidelberg Belt' which administered small electric shocks applied to the 'nether regions' so as to increase sexual potency.

Aided and abetted by computer technology, this kind of thinking has turned the world's financial markets into a huge global casino. It started with 'the chartists' who claimed to predict stock movements by pattern matching as if the market was some recurring dendrochronology.

Then came the 'Masters of the Universe' and their mathematical models. Developed by the likes of Nobel Laureates Robert Merton and Myron Scholes, these methods are designed to beat the system. Accordingly, hedge funds leverage already huge amounts of money into astronomical sums which are then placed as bets. 'The big swinging dicks' of Wall Street and the City believe in a mathematics guarantee that they can beat the system. With the vast sums involved even very small percentage gains turn into a tidy profit.

Indeed they did win big in the 1980s and 1990s, which is why the banks have been happy to 'lend' them ever increasing sums of money. Then this summer Long Term Capital Management (LTCM), which had leveraged its \$4.5 billion into a \$1.25 trillion bet, suddenly lost \$1.8 billion, 44% of its capital.

This is serious money, and only swift action by the US Federal Reserve Bank avoided global financial Armageddon. Banks were forced to write off hundreds of millions of dollars.

Why? Because the dominant ideology of our times promotes computerization as a virility symbol. No 'expert' can appear on television without the ubiquitous microcomputer. We believe that these models increase business potency. The history of technological achievements, including the development of the computer, sustains the optimism that underpins our faith in computerized mathematical models. Too easily we forget Healey's Law: "When you're in a hole, stop digging".

With the minimalist insight of true genius, Pablo Picasso identified our particular hole: "computers are useless, they can only give you answers".

The answers delivered by mathematical models are not neutral. They are value-ridden, and hide a powerful intellectual imperialism.

Behind much application of IT is the belief that human thought is mere calculation; we are no more than biological analogue computers.

A hidden agenda stems from the dominance of two ideas: that a number can be a meaningful representation of human experience; and that arithmetic operations on such representations, particularly when implemented on a computer, can produce 'rational' decisions about the human condition.

Unquestioning acceptance of simulations of open-ended human experience is sheer folly. Models can only ever be a pale shadow of what actually happens, and can never emulate the subtle, and not so subtle, checks and balances and the feedback of unknown and unknowable interactions.

Everywhere I see the folly of forecasts which merely assign numbers to the future. Such forecasts are a belief that numbers are meaningful in relation to the future. Strategy becomes a matter of controlling the future by labeling it with numbers. Wrong! Strategy means continually re-evaluating an uncertain situation. Searching for the right numerical label to represent the future, and then manipulating it in a computer program, is more akin to numerology and astrology than to legitimate science: it is the modern-day equivalent of 'reading the runes'.

It seems that neither the chartists or the masters of the universe had ever heard of Goodhart's Law: "any observed statistical regularity will tend to collapse once pressure is placed on it for control purposes". Underlying all the self-assured mathematics of hedge funds is a manipulation of observed regularities. But once the sums involved had become so massive, the gamblers had changed a bet into an attempt to control the system. Collapse was inevitable.

How could they believe that mathematical models are some kind of computerized Viagra for business? These mathematical models should really have carried a mental health warning on the danger of turning Wall Street's 'big swinging dicks' into just another bunch of dick-heads.