


# QUANTS' BEST STRATEGY IS FROM THE 17TH CENTURY

BY DAVID SIEGEL

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Among the biggest stories in asset management over the past decade or two has been the rise of so-called quantitative investing. I say “so-called” because the label can be misleading. Catchwords like “quantitative” and “systematic”  are becoming more common—but these terms are nebulous. People use them to mean all kinds of things.

What matters more is firms’ philosophical approach to the discipline of investment management. The most effective way to address hard problems like forecasting asset prices or optimizing portfolios is, in my view, the same as for any other extraordinarily complex challenge: Use the scientific method. Doing so not only brings greater rigor and integrity to the investment process, but it also helps us combat a wide range of harmful but common cognitive and emotional biases. The availability of massive amounts of data and cutting-edge technology only magnifies the power of a scientific approach.

The Information Age certainly is

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*David Siegel*

other industries. The amount of data created in the world has been growing exponentially for years, and continues to do so. It is a torrent of structured and unstructured information that comes from an incredible variety of sources—exchanges, sensors, satellites, web traffic, shipping traffic—and the list keeps getting longer. The availability of so much data means that a once-unimaginable amount of information exists today to make decisions.

Handling all that data is a herculean task.

Finding, ingesting, storing, parsing, normalizing, and delivering it would be utterly impossible to do manually. Automating these processes clearly requires significant investment and innovation in engineering. And the challenges don't stop there. Making efficient use of the output likewise requires significant research and expertise in data science, modeling, and related analytical techniques—increasingly including applications of artificial intelligence.

It may be tempting to take for granted our ability to do each of these well, but don't be fooled. Using the power of advanced algorithms  and huge data sets

to uncover valuable economic, behavioral, or market insights takes a classically scientific mind-set. That means basing the entire endeavor—from data

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Culture matters and doesn't change overnight. Instilling a scientific mind-set at an organizational level is more complex than it might seem, especially when an asset manager seeks to hire trained scientists to work alongside traditional industry professionals (as opposed to the reverse). The cultural challenges become evident even when the goal is machine-assisted human trading, but they become glaring when the goal is machine-driven trading with human assistance.

It is worth bearing in mind that not all quantitative strategies are scientific. For example, a manager might use algorithms to compute moving averages as part of a trading strategy. Without continually iterating through the steps of hypothesis formulation and testing, however, the exercise becomes something less than empirical—and the results may be disappointing.

Ultimately, the greatest beneficiaries of a more scientific approach to investing are asset owners, be they individual retirees or large institutions. While the scientific method has been central to the advancement of human inquiry since the 17th century, investment managers have been a little slow on the uptake. The shifts we are seeing in the industry today represent a welcome, if overdue, move in that direction.

— *David Siegel is the co-founder and co-chairman of Two Sigma Investments, LP*

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