
RESEARCH ELSEWHERE

Robert A. Olsen

Neuroeconomics: Why Economics Needs Brains

By Colin Camerer, George Loewenstein
and Drazen Prelec

Scandinavian Journal of Economics, Vol. 106, No. 3,
2004, pp. 555–579.

Economists have tended to ignore psychologists' insights regarding the human decision processes because of concerns about the ability to empirically validate psychological theories. As this literature review suggests, one of the principal values of neuroscience is that it offers methods to measure and physically observe brain activities that should be associated with, and are implied by, various learning, memory and decision tasks. Thus neuroscience provides an avenue for the "Doubting Thomas" of economics to feel comfortable embracing behavioral research as well as providing an additional set of tools and models for investigating the nature of economic decision-making.

The paper begins with a brief introduction to brain imaging techniques and then proceeds to discuss the implications of selected results for key economic issues such as preference selection, decision-making under uncertainty and the role of social cooperation. In particular, the authors point out that preferences are "state dependent" and that inferring preferences from choice is problematic at best since individuals experience utility in many different forms and ways. For example, money is not necessarily valued for the things that it can purchase and the value of personal income is not independent of its source. When it comes to risk,

risk is clearly a multi attribute psychological phenomena that cannot be modeled simply by probabilistic distributions of possible outcomes. For example, ambiguity is a risk attribute that is a function of a fear of the unknown. More importantly, it appears to be unrelated to probabilistic knowledge. Finally, social preferences appear to have been influenced by evolutionary developments that enhance survival and adaptation. For example, cooperation and trust are intrinsically rewarding. So is the act of punishing those who violate generally accepted norms and standards of acceptable behavior.

Understanding Momentum

By Alan Scowcroft and James Sefton

Financial Analysts Journal, Vol. 61, No.2, 2005, pp.
64–81.

This empirical study uses market data from 1980 to 2003 to investigate the nature of stock market price momentum. Specifically, the authors use data for all of the stocks in the MSCI World Index to examine price momentum for short (one month) to long (three year) time horizons. The principal conclusions reached by the authors are that, in both the long and short term, large capitalization stock momentum is primarily driven by industry and country developments but that small cap momentum is driven by individual company developments. This result is consistent with theorizing that the information dissemination process is likely to be different for large and small cap firms. For example, if a large company announces improved earnings it is more likely that industry prospects have improved. In the case of small firms, those with a smaller analyst following, momentum is more likely to be a consequence of the slower dissemination of information specifically related to the firm itself. The authors do not attempt to determine whether the observed price momentum is "rational" or the result of behavioral "bias". However, they do discuss alternative possible scenarios.

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When Good Decisions Have Bad Outcomes: The Impact of Affect On Switching Behavior

By Rebecca K. Ratner and Kenneth C. Herbst

Organizational Behavior and The Human Decision Process, Vol. 96, 2005, pp. 23–37.

This experimental study investigates whether negative affect following an unfavorable outcome can induce decision makers to switch from a superior decision process to an inferior process.

Previous research suggests that decision outcomes have a strong influence on the perceptions of the quality of one's own, as well as others', decision processes. In particular, poor outcomes tend to be associated with poor decision processes and lead to process switching, even when such conclusions may be unjustified. Whereas previous research has focused on cognitive reasons for switching, this study is unique in that it focuses on the affective influence of negative outcomes on the switching process. More specifically, these researchers suggest that regret can be a principal cause of switching after the occurrence of an unfavorable outcome. The results of four laboratory experiments reveal that subjects feel greater regret when they choose probabilistically favored options but the outcome is unfavorable. This increase in regret appears to cause subjects to switch to an alternative decision procedure that is less likely to produce a favorable future outcome. In addition, the authors discuss methods for reducing the effect of regret and thus lessening the tendency to switch decision processes.

Do Behavioral Biases Affect Prices?

By Joshua Coval and Tyler Shumway

Journal of Finance, Vol.60, No.1, 2005, pp. 1–33.

This paper uses a unique data set to identify the presence and the security price impact of behavioral bias among professional securities traders. Specifically, these researchers used trading records from 426 CBOT T bond futures traders from 1998 to determine if biased beliefs caused long-term impacts in T bond futures prices. The data included information on over five million futures transactions. The overall finding is that, on balance, traders tend to be loss averse (this is seen as a behavioral bias) and undertake larger and more risky transactions in the aftermath of a prior losing trading session. More specifically, traders are risk seeking in losses and actively

purchase contracts at higher prices and sell contracts at lower prices than those previously prevailing, after incurring previous losses. This loss aversion also appears to result in greater short-term price volatility in trading sessions following losses. Nevertheless, prices set by loss averse traders appears to be quickly offset by other traders such that there is little net long term effect on futures prices. Thus, in this extremely liquid, short-term market (most traders close out positions at the end of each day), "rational" bias of this type appears to have little significant economic effect.

Brand Perceptions and the Market for Common Stock

By Laura Frieder and Avanidhar Subrahmanyam

Journal of Financial and Quantitative Analysis, Vol. 40, No. 1, 2005, pp. 57–85.

This empirically based paper is unique in identifying the impact of product brand perceptions on common stock prices. In particular, the authors hypothesize that investors prefer the stock of companies with high visibility brands because brand recognition serves as an indicator of superior firm information. They also investigate the hypothesis that investors mistake high product quality for investment desirability. Using survey data from the Landor Image Power Survey, covering 300 firms and 5000 respondents, and accounting and market data from various standard sources, the authors find that, *ceteris paribus*, individual investors prefer the stocks of firms with high visibility brands but that institutional investors show no such preference. Institutional investors instead prefer to concentrate on larger more liquid stocks and avoid less known small firms. Also the evidence does not support the hypothesis that investors believe that firms with high quality products are necessarily superior investments. In general, investor preference for stocks with strong brand identity appears to be related to the belief that information about such firms is more reliable and readily available. Thus, although the authors don't formally make the connection, investors may see brand name firms as less risky because they perceive less "unknown risk" to be associated with them. A number of studies have suggested that "unknown risk" is a significant determinant of investor risk perceptions, along with possibility of loss and variability in return. "Unknown risk" has been shown to be a function of the perceived adequacy of the information about a risky endeavor.

Positive Emotions Broaden the Scope of Attention and Thought- Action Repertoires

By Barbara Fredrickson and Christine Branigan

Cognition and Emotion, Vol. 19, No. 3, 2005, pp. 313–332

What is often called the “broaden hypothesis” states that positive emotions broaden the scope of attention, cognition, and action while negative emotions narrow such activities. To date, tests of this hypothesis have concentrated on comparisons between positive and negative emotional states. This experimental paper is unique in that it compares positive and negative states with more natural, neutral states. Using video film clips, the authors find that positive moods, relative to neutral moods, are accompanied by more numerous thought-action urges. Negative moods have the opposite effect, although it is not as pronounced. In addition, the direct and unambiguous evidence from this study is at variance with alternative models suggesting that positive moods may result in less cognitive processing and action due to a lesser need to maintain some homeostatic mental state. While this study does not directly deal with financial examples, it raises important questions related to financial market behavior. For example, if positive moods are associated with greater attention and ideation, might not good investment performance be associated with expanded thoughts of situations and potential actions that might lead to more of the same? What role might positive emotions play in information search and the stock price momentum phenomenon?

Explanations Determine the Impact of Information on Financial Investment Judgments

By Elizabeth Mulligan and Reid Hastie

Journal of Behavioral Decision Making, Vol. 18, 2005, pp. 145–156.

The explanation-based approach to decision making argues that, especially in complex decision situations, individuals attempt to construct a coherent story that explains the facts of the situation. For example, jury members have been shown to create coherent “story lines” using trial facts in order to arrive at decisions about guilt or innocence. The hypothesis of this laboratory study is that investors also try to

build a coherent “story” about the situation at hand and that the way in which information is presented strongly influences the decision outcome and the weight given to various pieces of information. In particular, these researchers hypothesized that when information is presented in a causally connected fashion the information would be more consistently and appropriately comprehended. They found that investors gave differing weights to pieces of information depending upon whether the story information was given to them in causal story order or was scrambled. For example the “outcome” of the investment story was given the greatest weight in investor decisions when the “outcome” came in its natural position at the end of the investment “story”. Thus simply knowing what information an investor has is not sufficient to understand its influence. One also needs to know the order in which the information was acquired.

Towards a Competitive Arousal Model of Decision-Making: A Study of Auction Fever in Live and Internet Auctions

By Gillian Ku, Deepak Malhotra
and J. Keith Murnighan

Organizational Behavior and the Human Decision Process, Vol. 96, 2005, pp. 89–103

In this paper the authors develop and test a model of auction behavior that is based on “competitive emotional arousal”. The authors begin with a review of the literature on the “Winner’s Curse” and “Escalation of Commitment” models; two theories that are sometimes used to explain overbids from a more rationalistic perspective. They then proceed to develop an auction model that hypothesizes that auction over bidding will be directly related to rivalry, social facilitation, time pressure and the uniqueness of being first. Specifically, the model predicts that overbidding should be greater when there are fewer rather than more bidders, the bidding is open to public scrutiny and comment, as the bidding period draws to a close and when there are perceived social advantages in being a “first mover”. Data analysis from multiple private and internet auctions tends to support the authors hypotheses. In addition the authors present new evidence that sunk costs can be perceived as a vehicle for emotional arousal. This paper has especially interesting implications for bidding on IPO’s and in other financial circumstances where the calculation of investment value is subject to considerable debate and ambiguity.

Emotions as a Mechanism for Boundedly Rational Agents: The Fast and Frugal Way

By Roberta Muramatsu and Yaniv Hanoch

Journal of Economic Psychology, Vol.26, 2005, pp. 201–221.

This well written review paper suggests that human emotion should be formally incorporated into models of bounded rationality and that emotion should be properly considered as an information processing activity, similar to cognition. The paper begins with a brief review of how emotions affect attention, learning and memory. The authors then proceed to suggest that emotions are specific mental processes that have been honed by evolution to ensure survival and adaptation but that can cause problems when activated in novel and evolutionarily unnatural situations. They proceed

to develop the argument that emotions might be viewed as inborn vehicles for systematically influencing thinking and choice in a world where cognitive resources and time are limited but workable rules for search, stopping and decisions must exist. Thus emotions are in some sense the primary method for interfacing with the world but also work to allocate cognitive resources as the need arises and the situation permits. Thus emotions are the built in programs that make humans ecologically rational but not always axiomatically rational because the natural world is not constructed in a way that makes axiomatic rationality desirable. For example, in the real world, true uncertainty always exists to some degree and time and resources are not costless. In conclusion, the article argues that emotions should be seen as an inseparable from and complementary with cognition. Without emotion, cognition reaches its zenith in the “idiot savant” who knows all about making the perfect decision but who cannot decide.

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