

Why Humans Do What They Do: Interdisciplinary Research on Decision Making at the University of Missouri

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Every day we make hundreds of decisions: What to eat, what to wear, and from whom to get information. We know the brain makes decisions, but how does it do it? We might assume that the brain makes logical decisions, but if we think about it, we know this can't always be true. Inevitably, the information gathering and sorting process will sometimes go awry, leading us to make impulsive and perhaps risky decisions.

MU has enormous potential to be the site of path-breaking interdisciplinary research on decision making. This research not only is a basic component of human life science but also has clear application to the marketing of life-science-related industries and products.

New Thinking About Decision Making

The standard approach to modeling decision making incorporates a variety of assumptions. Agents are assumed to be rational and to have narrowly defined personal goals, complete knowledge about relevant options, and the ability to perform complex optimization calculations. There is growing recognition, however, that newer models, which replace the assumption of simple rationality with alternative assumptions, may aid in understanding decision making.

Within psychology, there is considerable interest in "heuristic-based" decision models, which have been shown not only to predict human behavior but also to be near-optimal decision-making strategies in many contexts.

Experimental economics seeks to explain nonrational behavior by studying people's decisions in a controlled experimental setting. Economists also study the brain activity of decision makers under controlled conditions, creating the new field of neuro-economics.

In philosophy it is becoming increasingly clear that human rationality must be viewed in light of the fact that humans do not deal with perfect information. Thus, philosophers have begun to pay

attention to the psychological and economic findings mentioned above.

Implications

A better understanding of the nonrational factors that influence decision making will have transformational consequences for large areas of our economic and political lives. Even though such research is still in its infancy, there are al-



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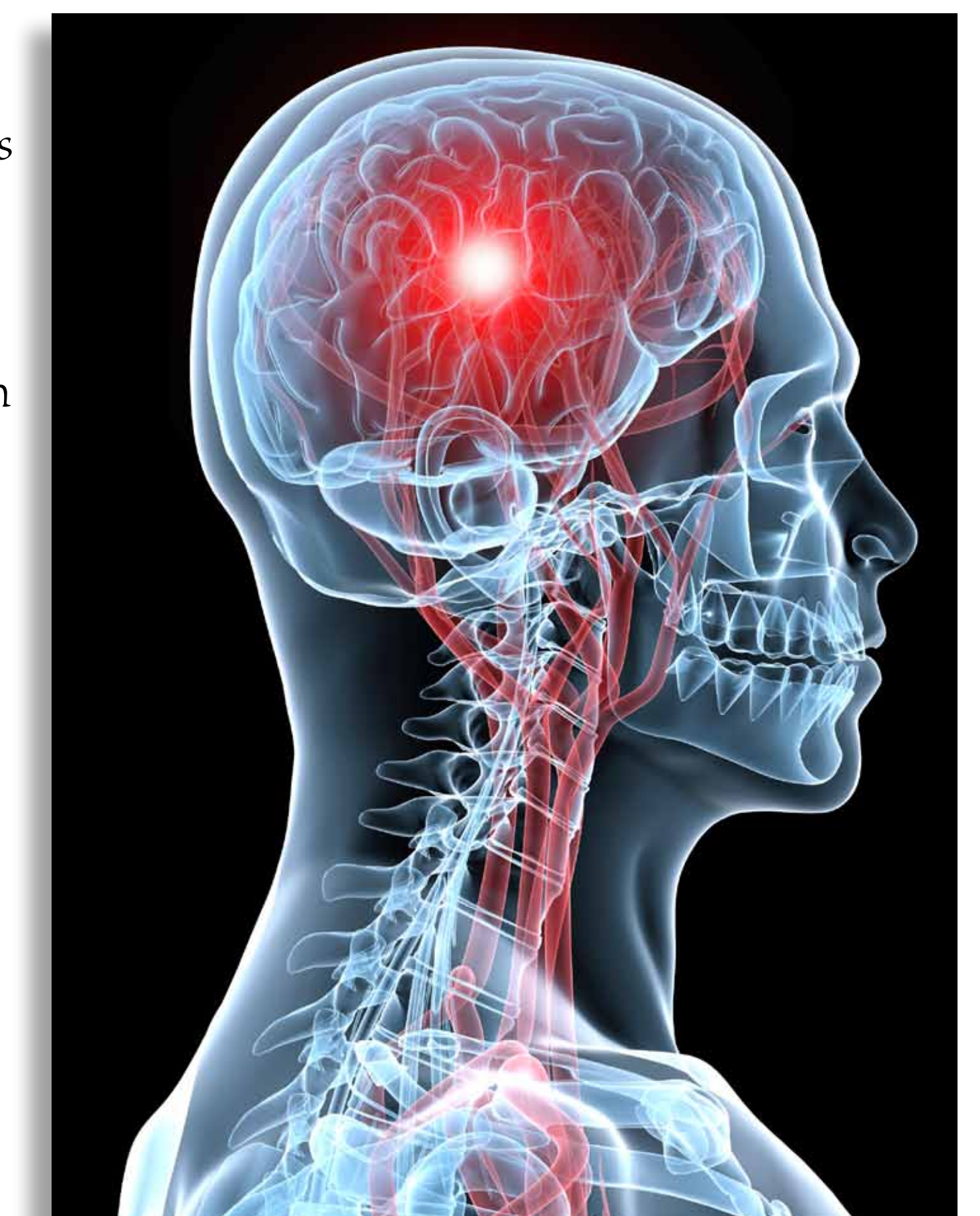
Would you like to lose \$1 million for certain? Or would you prefer a bet that gives you an 80% chance of losing \$5 million with a 20% chance of losing nothing at all? Nearly everyone chooses the bet. But that's very strange. The bet has an expected loss of \$4 million—that's four times the loss of the sure thing. People love to take a risk!

So people hate to take a risk and they love to take a risk. How come?

ready several private consulting firms that work with Fortune-100 companies for the purpose of informing marketing and sales strategies through the use of neurological studies.

In the political arena, the same consulting firms are marketing their services to political parties for the purpose of influencing voters' reactions to candidates and platforms. As this research proceeds, we can easily envision a future in which nonrational elements of decision making become even more dominant among those who move public opinion.

Ethical issues arise directly from new models of decision making. If individuals' actions are not rationally consistent, the justification for inferring a person's "revealed preference" from behavior is seriously undercut, and we are forced to confront the question of how we might define human welfare.



The Unique Position of MU

The questions of how and why humans make immediate judgments through unconscious mechanisms that operate independently of rational decision making are hot topics of research. These topics obviously appeal to a wide audience, based on the number of popular trade books and new celebrity intellectuals who have attracted unprecedented attention to them—think of Malcolm Gladwell's *Blink: The Power of Thinking Without Thinking* (2005) and Mark Earls' *Herd* (2009).

MU is in a unique position to carry out the kind of interdisciplinary research that extends these discussions. Indeed, MU has an opportunity to become literally a one-stop shop for basic and applied research into decision making. MU's departments of Economics, Psychological Sciences, Philosophy, and Anthropology all have significant, overlapping strengths in the study of human decision making. Tied to that strength is MU's new Brain Imaging Center and its state-of-the-art fMRI capabilities, which will enable researchers to study a spectrum of cognitive processes and how these processes influence decision making.



We all know first impressions count, but how long does it take people to form that first impression? Just 1/10th of a second. And extra time only strengthens that first impression.

