What Can Cognitive Science Say or Learn about Economic Crises?

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The issue
Economic crises bring to the fore deep issues for the economic profession: why are such crises often not foreseen, and what does this entail for economic theory? In this symposium we also adopt a self-critical analysis, by asking the following: what can the cognitive science community say or learn about cognition and behavior in the context of economic crises? After all, cognitive science shares one of its principle objectives with economics: to investigate and model the principles that underlie and govern human behavior.

Challenges
The current financial crisis presents us with a real-world example of decision making under uncertainty. Cognitive science offers a variety of theories and models, from probabilistic models of cognition (Chater & Oaksford, 2008) to heuristic approaches (Gigerenzer & Gaissmaier, 2011), each designed to describe decision making under uncertainty. Empirically, the extant methods used to examine this question in both economics and psychology involve simple choice tasks (e.g., lotteries and games with well-defined probabilities and outcomes). But, are the models sufficient to accurately represent uncertainty, and are the tools adequate for the job of capturing decision making under uncertainty?

Uncertainty can permeate all aspects of a decision problem, from constructing the action space, to inferring probabilities of outcomes and the behavior of other agents in the situation. For instance, politicians need to decide whether to bail out fragile banks and countries under time pressure, with incomplete information about the problem space, and the necessity to manage conflicting goals (e.g., also considering the needs of their won electorate). Turning situations of this kind into lottery type tasks may in fact be a way of translating the unmanageable (uncertainty) into something manageable (risk), but at the same time the evidence may be giving answers to the wrong kind of questions.

Additionally, there is an issue of scalability. Neoclassical economics assumes that macro-level behavior can be deduced from modeling agents as rational, utility-maximizing individuals. While this oversimplification is often recognized by economists, scaling up to the aggregate level is a necessity when having to inform policy decision. The crucial challenge in revising the microfoundations of economic behavior is how we can build more realistic models, which nevertheless can be scaled up to the aggregate level.

Goals of the Symposium
The symposium is themed around the target questions: What can our community say or learn about cognition and behavior in economic crises?
For instance, could rational or heuristic models help predicting or preventing crises? Or could the psychology of crowds help to explain economic crises? By bringing together researchers with different research perspectives and methodologies, the key objective is to discuss the challenges that real-world problems such as economic crises present us with, and ways in which cognitive science could possibly inform economic theory and policy making. The symposium will consist of a general introduction (Osman, Meder), four talks (Chater, Gigerenzer, Neth, Read) and a discussion (Meder, Osman) involving all participants.

**Nick Chater**

Chater’s work has explored the fundamental principles of cognition, in particular in contexts in which the cognitive system is faced with uncertain inferences (e.g., learning, decision making, reasoning, perception). Recently, his work also concerns applications to policy making.


**Gerd Gigerenzer**

Gigerenzer’s core research approach has been to understand decision making from the perspective of bounded rationality. This includes heuristic decision making and the development of effective tools for risk communication, with the goal of helping people to make better decisions in an uncertain world.


**Magda Osman**

Osman’s work explores dynamic decision making and shows that people are sensitive to underlying differences in the stability of the environment when tasked with controlling uncertainty in micro-world dynamic environments.


**Daniel Read**

Within the domain of judgment and decision making, Read has studied a variety of behaviors including seeking (how consumers choose to diversify consumption), intertemporal choice (how people trade off current and future consumption), and decision making under risk.
