

BEHAVIORAL ECONOMICS AND INSTITUTIONS



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Behavioral Economics and Institutions

I would like to start by thanking all those who enabled me to stand here today. I thank the Latsis foundation for awarding me this prize, the University of St. Gallen for providing a stimulating environment for my research, and my family and friends for supporting me in all those years.

I have been awarded this prize for my habilitation which consists of 10 self-contained papers. Some of these papers are co-authored, and my thanks go to my co-authors for their collaboration. Summarizing all of these papers in detail would obviously be impossible within the time-frame I have been allotted. Instead, I would like to seize the opportunity to explain in simple words what my research is about and why I am doing it.

Behavioral and experimental economics: Integrating insights

I am an economist. However, I am not a mainstream economist. I am active in the field of “behavioral and experimental economics”. Behavioral economics attempts to integrate insights from psychology and sociology into economics with the aim of making economics a more realistic and more powerful science of human behavior. When I explain this to my friends who are non-economists, I usually get quite positive reactions. They tend to think that integrating insights from the social sciences into economics is a great idea and they generally welcome interdisciplinary research. In contrast, I get more skeptical and ambivalent reactions when I explain this to my colleagues who are mainstream economists. And they have a point.

The problem with integrating insights from other sciences into economics is that there are so many insights in the social sciences that could potentially be integrated that you must make a wise choice, and mainstream economists argue that any such integration comes at a cost. The cost is that economic theory becomes much more complicated. They argue – they are economists after all – that there should be a clear benefit to outweigh these costs. This benefit is an improved ability of economic theory to predict and explain what real people do.

To assess whether integrating insights from the social sciences is necessary and fruitful, experimental economics is the method of

choice. Experimental economics adapts methods developed in the natural sciences to test economic theories. When we test economic theories, we sometimes find that the behavior of real people is very well in line with the predictions of mainstream economics, and sometimes we find that there is a large discrepancy between these predictions and observed behavior. In a sense, my research is about evaluating under which conditions mainstream economic theory predicts well what real people do, and when it fails to predict what real people do. The latter case is more interesting to me as this motivates us to think about how to amend economic theory to improve it.

Mainstream economics: In defense of “homo oeconomicus”

To be able to explain more precisely what I do, I should first say a few words about what mainstream economics is. Mainstream economics starts from the assumption that all people are fully rational and strictly egoistic. This “homo oeconomicus” is obviously a caricature of real people. It is obvious, and a large amount of behavioral research demonstrates it, that not all people are the same. It is obvious, for example, that people are boundedly rational and that some people are more rational than others. Today, it is clear that the assumptions of mainstream economics are descriptively wrong, and that “boundedly rational” behavior is real. Yet, stating this fact is not the end, but rather the start of the debate. Mainstream economists have of course noticed a long time ago that these assumptions are unrealistic – that is at least what they claim. But they say that they simply don’t care about the descriptive inaccuracy of the assumptions, as long as the “theory works well”. Their claim is that the predictions derived from these inaccurate assumptions are nevertheless accurate in the aggregate. And that is, they say, the relevant dimension, as economists are often interested in aggregate behavior, in what people do on average, not in the idiosyncratic behavior of particular people. For example, economists often seek to explain market prices and quantities, not the consumption decisions of Mr. X or Mrs. Y. The assertion by mainstream economists is that while there may be bounded rationality at the individual level, there will be some mechanism that mitigates or even fully eliminates the effects of bounded rationality at the aggregate level. Mainstream

economists have always been confident that such mechanisms exist and that they are effective most of the time. Yet, this confidence has not been based on empirical evidence but on a priori-considerations until recently. In other words, the existence of these mechanisms has just been assumed but not proven. My research is about providing such empirical evidence. My research investigates when the confidence in such mechanisms is well-founded and when it is misplaced.



Mechanisms to eliminate the effects of bounded rationality

To illustrate a mechanism that could eliminate the effects of bounded rationality, consider this jar containing jelly beans. Suppose I asked you guess the number of jelly beans in the jar.

You would all come up with some estimate. Most estimates would be wrong, and some by a wide margin (the correct number is 468). But the interesting thing is that the average guess will be quite close to the true value. This is so because some people err on one side, and some err on the other side. Some people will overestimate, some underestimate the true value. That is, if individual actions are *unbiased*, the aggregate will be in line with the true value even though individual behavior is not. Behavioral economics is about identifying economic decisions – which can sometimes be considerably more complex than guessing the number of jelly beans in a jar – in which people tend to make biased deci-

sions. If decisions are biased, individual errors will not be eliminated by simple aggregation but translate from the individual to the aggregate level.

There are other mechanisms that can mitigate the aggregate-level effects of bounded rationality in some cases. One such mechanism is learning. Practice improves performance, and experience is so valuable to us because we can eventually learn to make better decisions. My research is also about investigating when people can eventually learn to make optimal choices, and when they fail to learn effectively. Competition is another mechanism that can eliminate the effects of bounded rationality at the aggregate level. When a firm makes very irrational pricing decisions in a competitive environment, it will eventually go bankrupt and be eliminated from the market. Hence, selection may contribute to making the aggregate more rational than the individuals are. Some of my experiments serve to investigate the conditions where competition induces this effect – and the conditions where it does not.

Institutions and behavior

I have been talking about “conditions” under which bounded rationality is more or less likely to affect the aggregate. In economics, we call these conditions “institutions”. Institutions are simply speaking the “rules of the game”, the rules that govern our interactions. Analyzing how institutions shape human behavior has been a key issue in mainstream economics for a long time. Institutions shape human behavior because they provide incentives, and rational people respond to incentives. My research goes beyond this important issue in taking into account that people are heterogeneous with respect to rationality. I investigate how institutions determine which “type” of agent comes to dominate the aggregate. In some institutional settings, the boundedly rational agents learn to behave as if they were rational, but under other institutional settings, the rational agents may have incentives to imitate the irrational agents and come to behave as if they were irrational.

Expectations-driven behavior

A focus of my research has been of the role of expectations in this process. Expectations are important in economics because what is optimal

for me to do depends on what I think other people are going to do. And it is possible that (unwarranted) expectations may induce rational people to behave in an apparently irrational way. Let me illustrate this by the quip “The stock market went down today, on fears that it would go down.” The quip captures the following reasoning: Suppose many stockholders expect (for whatever reason) other people to sell their stocks. That is, they expect stock prices to fall. Then, to avoid losses, they have an incentive to sell before others do. But selling contributes to falling stock prices. Hence, expectations can to some extent become self-fulfilling: Stock markets may go down, *because* traders expect them to go down.

The problem with this explanation is that it is very difficult to test with conventional empirical methods. For example, expectations are difficult to measure in the field. In contrast, experimental economics provides some tools to measure expectations and to isolate causal factors of price movements in markets.

Relevance

Why am I doing this research? Why do I think this research is important? For two reasons. The first has to do with science. I think that behavioral and experimental economics improves our understanding of the economy and society, and contributes to making economics a more realistic and powerful science of human behavior. The second reason has to do with economic policy. I believe this research has important implications for the design of institutions, and may one day help to make better policy choices. Given that irrational people exist, we should try to design our institutions such that aggregate behavior is not too dependent on the presence of a few irrational people. In other words, we should try to find institutions that are robust against irrationality. If my research makes a contribution to this endeavor, I shall be very happy.

Thank you for your attention.