

Course: **Philosophy of Experimental Economics, University of Vienna**

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Alvin E. Roth (2015): Is Experimental Economics Living Up to its Promise?

ABSTRACT

Almost 40 years after publishing his first experimental paper, Alvin E. Roth reviews how experiments have changed the way research is done in economics. He identifies *the experimental cycle of creative destruction* as one of the major contributions of experimental economics to the field. Experiments may speed up scientific progress by enabling researchers to create their own observations instead of having to wait for the required data to emerge naturally. The cycle of creative destruction sets in when experiments designed to test a particular theory discover unpredicted empirical regularities. Exploring these regularities more thoroughly helps to define the scope of the existing theory and may eventually lead to the development of a new theory accommodating the observed regularities. A famous example of a theory emerging from the described process is Prospect Theory, which was developed by Kahneman and Tversky (1979) in response to experiments uncovering regular departures from the predictions of expected utility theory.

Roth sees another important function of experiments in providing guidance to practitioners. By focusing his discussion on market design, he identifies three roles for experiments. First, experimental economists can help to get a better understanding why some markets fail and others not. Field data may be useful for developing a hypothesis on why a mechanism fails in certain markets, but they cannot definitely clarify the underlying causality. Studying the mechanism in the lab allows controlling for the confounding effects of other differences between the real markets. Any outcome differences still observed in the experiment can then be unequivocally attributed to differences between the mechanisms. Second, experiments can serve as a testbed for exploring new market designs and comparing their efficiency to existing designs. Third, experiments can provide additional evidence for the communication with policy makers. An example for the successful integration of experimental methods in the redesign of a market is the reorganization of the American clearinghouse placing medical

graduates in their first job (Kagel and Roth 2000). While Roth describes the guidance experiments can give as valuable, he emphasizes that practical decisions should always be based on a combination of empirical, theoretical and experimental evidence.

In Roth's opinion, experimental economics is living up to its promise. Today, experiments are a recognized method in economic research and an experimental research community has emerged. The field is still developing, with vivid methodological and substantive debates taking place and interdisciplinary research growing.

QUESTION 1: Why is there not more communication and collaboration between (experimental) economists and psychologists?

On page 19, Roth briefly elaborates on his mistaken idea of how economists and psychologists would collaborate in the future. At the end of the 1970s, he attributed the lack of collaboration between the disciplines to a lack of familiarity with the theories and methods of the other discipline. In an attempt to improve the situation, he published an experimental paper on bargaining and risk aversion in a psychological journal (Roth and Malouf 1979). The paper did not receive much attention from psychologists, but eventually from economists. Many years have passed since then, but the situation did not change much. The question is why there is still not more exchange between (experimental) economists and psychologists on topics of joint interest.

An article by Ariely and Norton (2007) provides valuable insights. Traditionally, economists have not been interested in studying topics like affection or emotions, just as psychologists had no interest in topics like market efficiency or market design. Today, economists and psychologists increasingly share an interest in the same problems such as cooperation or charitable giving and, in addition, they use similar lab-based methods. They rely, however, substantially different approaches to bring real-world phenomena to the lab. Economists assume that individual behavior is driven by utility maximization. Therefore, they consider it to be essential that experimental subjects are incentivized and informed about the costs and benefits associated with their decisions, allowing them to maximize their utility in the experiment. Psychologists, on the other side, believe that costs and benefits are only imperfectly defined in many real world situations and defining them clearly makes the situation in the lab less realistic. Instead, they consider contextual factors to be most important and seek to represent them as close as possible in the lab by using cover stories and deception.

Economists, again, argue that deception prevents participants from making informed decisions and even causes mistrust and suspicion among them. Although the approaches are very different, psychologists' use of deception and economists' use of incentives serve the same goal, namely the production of results which help to explain real-world phenomena. While the skepticism about the approach used by the other discipline is high on both sides, both disciplines could potentially benefit from an increased communication and collaboration.

Why did the paper by Roth and Malouf not attract the attention of experimental psychologists? The answer can, of course, only be speculative. Roth and Malouf (1979) present a binary lottery game as a technique to study bargaining while controlling for individual risk aversion. They closely followed the economic approach when implementing their experiment. They abstracted away any real-world context, did not use any form of deception, the choices of the participants were incentivized and participants were informed about the potential costs and benefits of their choices. For a psychologist who considers contextual factors to be of utmost importance, this approach makes only limited sense.

QUESTION 2: To what extent do experimental studies really “whisper in the ears of princes”?

Roth identifies an important role for experiments in providing guidance and advice for practitioners and the real-world problems they are dealing with. Most experimental papers, maybe with the exception of pure theory-testing papers, elaborate in their introduction and often also in the conclusion on the real-world relevance of their research. However, how many experimental studies actually inspire decision makers in policy or management?

Roth discusses in his article a number of economic experiments which were highly informative for practical decisions. Whether these examples can be used to make a general statement about the relevance of experimental economics for practical decisions is questionable since Roth limits his discussion to market design studies. There is no doubt that most experimental studies seek to shed light on some relevant real-world phenomenon. The vast majority, however, do not get the attention of a broader public but only of the (experimental) economic community – if at all. While experimental economists seem to have been successful in influencing decision makers in the area of market design, this is far less clear for the research done in other areas.

I would like to mention two observations which make me think that the limited orientation of experiments towards the solution of practical problems may be a general concern in the community. First, let me quote Catherine Eckel. Among others, she has conducted an experimental study for Canada Student Loans with the objective to find out what kind of government assistance is needed to increase human capital investments of people with different socioeconomic backgrounds. She writes about her study that it “is one among very few that use experimental methods in the field to provide input into the structure and calibration of a specific government policy” (Eckel et al. 2007, 235). Second, I recall listening to a speech of the president of the German Society for Experimental Economics, Joachim Weimann, who was calling on the society’s member to focus more on the policy relevance of their research.

My question is whether Roth was maybe too optimistic about experimental economics living up to its promise of “whispering in the ears of princes”. There is no doubt that experimental economics has this potential, but maybe it is not yet fully living up to it in areas other than market design.

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