Kahneman and Tversky and the making of behavioral economics
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Citation for published version (APA):
7. Changing meanings: disunity in economics and psychology

In the first chapter, I introduced Peter Galison’s notion of disunity and applied it to economics and psychology. Economics and psychology in the postwar period were disunified cultures. The two disciplines communicated with one another, and theories, methods and experimental results travelled between them. But the communication and exchange were not understood in the same way. By and large, psychologists understood economics to be only interested in the normative aspects of economic behavior. As such it was understood to be a sub-discipline of psychology. For economists, on the other hand, psychology and psychological assumptions constituted the necessary premise upon which economic theories and models were constructed. Economics started where psychology left off, just as chemistry starts where physics ends.

This thesis has shown how from the late 1970s and early 1980s onwards economists have used psychology to redefine economics. In this period, behavioral decision researchers communicated with experimental economists and with financial economists, and as a result theories, methods, and experimental results travelled from psychology to economics. This was not a neutral exchange that left theories, methods and experimental results unaffected. Instead, the meaning of the theories, methods, and experimental results exchanged altered when they entered economics. They lost some of their psychological connotations and gained new economic connotations. For instance, the experimental method and experimental results lost their role of testing the human measurement instrument, and continued as only testing human behavior against the normative benchmark of rationality. Prospect theory lost its connotation of unifying psychology and economics in one field of behavioral science, although this took several years before it became clear.

What is particularly illustrative in this regard are the two very different ways in which psychological theories, methods, and experimental results were interpreted in experimental economics and financial economics. The theories, methods and experimental results that travelled from psychology to economics acquired very different new meanings in these two economic programs. In addition to the disunity between psychology and economics, a disunity appeared in the early 1980s between experimental and behavioral economics.
In experimental economics, the corroboration of psychologists’ experimental results was interpreted as completely invalidating any description of individual behavior as rationally maximizing utility. Therefore, in experimental economics prospect theory was interpreted as showing how even an adjusted rational maximization theory was not descriptive of individual behavior. In addition, the experimental results were interpreted as proving the importance of the market as a rationalizing mechanism that over time drives the economy to equilibrium. The experimental results lost their relation to the traditional normative benchmark, but acquired a new meaning by demonstrating a phenomenon unexamined by psychologists: the market. In contrast, in behavioral economics the experimental results of the psychologists maintained their meaning in disproving the normative theory of rational decision making. However, this was merely the first step in producing new additional meanings they were to be given in behavioral economics, namely as invalidating the norms of rationality in markets. In behavioral economics, psychologists’ experimental results were interpreted as disproving the existence of rational equilibria in markets, and prospect theory was interpreted as a first and promising candidate for providing a descriptive alternative that could explain both deviating individual behavior and irrational markets.

As a consequence, these different cultures and sub-cultures also employed and understood the experimental method in different ways. For psychologists, the experimental method was a way to investigate the human being in its natural state. It was a method which could be used to investigate the underlying characteristics of human behavior that determine or affect all human behavior, irrespective of its particular background, knowledge, or cultural specifics. For example, in order to reduce the noise from particularities of the individuals in the experiments as much as possible deception was often considered a valuable method. It ensured that experimental subjects would not respond on the basis of prior knowledge of the theory behind an experiment, specific cultural beliefs of proper behavior and so forth; a methodological problem in psychology generally known as the Hawthorne effect [e.g. Adair (1984)]. In contrast, both experimental economists and behavioral economists ruled out deception because they used the experimental method to investigate how the individual behaved in different economic situations. It was not the individual’s underlying nature, but his or her economic behavior that was the subject of investigation. Therefore, it was vital that the subjects in the experiments completely
understood what situation they were in, and that they never felt as if they were being fooled by the experimenter. The individual should behave as if he or she was in the economic environment simulated by the experimental set up, and should not behave as an individual who does not completely understand what is going on and/or suspects he or she is being fooled in some way or another. Thus, the experimental method had a different meaning in psychology and economics.

One difference between the use of experiments in experimental and behavioral economics was that for experimental economists experiments were a method of testing the functioning of the market that operates over and above individuals, whereas for the behavioral economists experiments tested market behavior as a characteristic of individual behavior in a market environment. For behavioral economists, market or economic behavior was about the individual, and the testing of this behavior only required that individuals be given an economic choice. For experimental economists, on the other hand, the market was a mechanism, an invisible hand, that over and above individual behavior directed the behavior of each economic agent towards achieving more rationality. This market could only be tested through individuals, who in the controlled setting of an experiment behaved as if they were in a real economic market. Because of this different understanding of the market, experimental and behavioral economists also employed experiments differently. Behavioral economists employed experiments to carefully observe how individuals respond to specific economic choices. Experimental economists, on the other hand, employed experiments to investigate how individual economic behavior adapts over time when individuals face the same situation a large number of times, but in each round acquire more information about the behavior of the other participants and more information about the functioning of the market. Thus, in addition to the different meanings of the experimental method in psychology and economics, the experimental method acquired a different meaning in the two subcultures of experimental and behavioral economics.

The disunity of psychology and economics is further illustrated by their different understanding and use of measurement. To behavioral decision researchers, measurement and individual behavior were two sides of the same coin. Coming from the German psychophysical tradition, the theory of human decision making was at once understood as a theory of human perception and rational inference, and as a theory of the human being as a measurement instrument. In psychological
experiments, the underlying nature of human decision behavior as well as the human measurement instrument was investigated. But when psychological theories, experimental methods and experimental results travelled to economics, this double meaning was lost. In both behavioral and experimental economics discussions of measurement were simply absent.

All these different elements of the disunity of economics and psychology and the disunity of experimental and behavioral economics explain the different ways economists and psychologists have understood the relationship between their disciplines. The psychologists saw the economists using the same method and same theory as used in psychology and thus considered economists to be engaged in the same project as psychology. Because of this understanding of economics, Kahneman and Tversky advanced prospect theory as a theory meant to unify the two disciplines that for some unknown reason had been developing separately alongside each other. Economists on the other hand saw psychology as investigating human behavior, and therefore as a possible source of information for economics’ starting point. The difference between experimental and behavioral economics was that for behavioral economists changing the behavioral assumptions had direct consequences for the economic models and theories, whereas for experimental economists it did not. Economics and psychology were disunified in their understanding of the relationship between economics and psychology, but experimental and behavioral economists also had different understandings of the relationship between the two. The difficulty in understanding the history of the mutual influence of economics and psychology is not only that influencing factors meant different things in the different disciplines, but that as a consequence also what the different disciplines were about and how they were related were understood differently. Across the different (sub-)disciplines and across time, the definitions of economics and psychology have not been stable entities.

Finally, the disunity between experimental and behavioral economics in the United States has been amplified by opposing political ideologies. This is the reason why the distinction between experimental and behavioral economics is much more pronounced in the United States than it is in Europe. With their emphasis on the market as the only source of efficient allocations of resources and efficient production of goods, experimental economists such as Vernon Smith and Charles Plott are to be situated on the free-market end of the political spectrum, where the role of the government should be kept to an absolute minimum and where each individual has the
right and ability to take care of him- or herself. The repeated claim of Friedrich Hayek’s intellectual heritage is another indication of how the experimental economists are politically positioned. Behavioral economists, on the other hand, favor a government that actively stimulates individuals to overcome their cognitive limitations, follow their own true preferences and thus advance their well-being. Behavioral economists favor a much more interventionist government, and implicitly a government that reduces the social inequality that results from economic and other structures that put some people at a disadvantage. Behavioral economists feel morally obliged to help individuals who, for example, are trapped by credit card companies into paying high interest rates on their loans, and to help individuals without considerable wealth to save for retirement.

Since the late 1970s experimental and behavioral economists have both relied on a branch of psychology called behavioral decision research to redefine economics in their own specific ways. The flow of theories, methods and experimental results from psychology to economics and their loss of psychological connotations illustrate the disunity of economics and psychology. So do the two very different ways in which these theories, methods and experimental results were picked up and used by experimental and behavioral economists to redefine economics. Economics and psychology are disunified cultures and behavioral economics and experimental economics are disunified sub-cultures. Their history can only be understood by recognizing them as such.