Human Behavioral Economics: The Law of Supply and Demand as a Description of Behavior during a Video Game

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Recently, a number of authors have suggested that there is a conceptual similarity between the behavior of animals in operant conditioning experiments and the economic behavior of humans in the marketplace. One result of this discovery has been the rapid development of Behavioral Economics, a cross disciplinary field which uses the methods and laboratory equipment of animal psychology to test the predictions of traditional economic theory. Both psychologists and economists have benefitted from this venture: psychologists have gained a variety of new theoretical approaches, while economists have gained a laboratory methodology capable of testing previously untestable principles. One limitation of behavioral economics, however, is that the majority of the experiments have used animals in an isolated laboratory environment. This may limit the applicability of behavioral economics because such isolated environments are very different from normal human environments. The present experiment sought a "middle ground" by testing principles of behavioral economics in humans in a controlled laboratory setting but using a piece of apparatus - the video game - which is a common item in modern culture. Five students played a video game in which success or failure was largely determined by underlying reinforcement schedules. Preliminary results suggest that the subjects responded according to the law of supply and demand. That is, the number of responses made per earned game point was inversely related to the number of points available in the session. This replicates findings by Dougan (1992) in a similar study which used pigeons as subjects.