

A Commentary on Ralph Hertwig and Andreas Ortmann

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## **Challenges for everyone: real people, deception, one-shot games, social learning, and computers**

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Abstract (59 words):

This commentary suggests: (1) experimentalists must expand their subject pools beyond university students; (2) the pollution created by deception would not be a problem if experimentalists fully used non-student subjects; (3) one-shot games remain important and repeated games shouldn't ignore social learning; (5) economists need to take better control context; and (6) using computers in experiments creates potential problems.

Hertwig and Ortmann provide a useful synthesis and comparison of experimental methods from economics and psychology (i.e., a particular sub-field of psychology).

However, in reflecting on methodological improvements, H&O fail to recognize the extreme reliance of both psychology and economics on university students as subjects.

Many scholars from both fields are guilty of reaching conclusions about “human reasoning” (i.e. conclusions about our species) by relying entirely on this very weird, and very small, slice of humanity. Even efforts at cross-cultural work by both economists (e.g. Roth et. al. 1991; Cameron 1999) and psychologists (Nisbett et. al. 20000) nearly

always involve university students, all be they from places like China, Indonesia, Japan and Israel. Meanwhile, there's three billion potential adult subjects out there who have never participated in any experiments, and are a lot more representative of humanity than the privileged inhabitants of elite universities. Researchers do not need to go to the Amazon, Papua New Guinea, the Ituri Forest, or Kalimantan—try the bus station, the beaches, the market, the used furniture auction, the bowling alley, the “projects”, or the county fair.

H&O also express an important concern about how the repeated use of deception might adversely affect experimental results. However, if researchers would simply expand their potential subjects pools to include the three billion adults who have never set foot in a psychology or economics class (or in a university), all worries about polluting the human subject pool could be put to rest. All deception experiments could be done outside the university, with a new set of subjects every time if need be. If every experiment requires 100 fresh subjects, we could do 30 million experiments before having to use anyone twice.

I agree with H&O that repeated games can be useful, but they provide little actual defense for their emphasis on repeated games, aside from quoting Binmore. First, real life is full of one-shot games in which individuals must make one-time decisions without any prior experience. Many people get married only once (divorce remains illegal in many countries). Many families buy or build only one house. People also often get only one chance to deal with a breast cancer diagnosis, a physical assault or a sinking ship.

Second, in some experiments (like the Ultimatum Game), repeating the game does not substantially affect the results (Roth et. al. 1991). Third, sometimes we only want to measure what people bring into the experiments, not what they can learn via experience in highly structured laboratory settings with clear feedback. I think both one-shot and repeated games are useful, and there's no particular reason to emphasize one or other until a research question is specified.

The other problem with repeated-game experiments is the almost complete emphasis on studying individual learning, as opposed to social learning. We know that if you provide experimental subjects with opportunities to imitate others, they will (Bandura 1977; Henrich & Gil-White forthcoming), especially when money is on the line (Baron et. al. 1996; Kroll & Levy 1992). In real life, individuals are repeatedly exposed to the behavior and decisions of others; consequently, it is a serious methodological concern that economic experiments usually ignore the potentially important impact of imitation and other forms of social learning on adaptive learning.

H&O emphasize the importance of detailed instructions, scripts and context. I fully agree. As the authors hint, many economists go to extreme lengths to excise any context from their experiments in an effort to make the payoff structure the centerpiece of decision-making. However, if people use contextual cues to figure out which set of norms apply to a particular problem (independent of the game payoffs), then acontextualizing an experimental protocol effectively creates an uncontrolled variable, which liberates subjects to interpret the game according to whatever context comes to mind first (which

may be governed by their last social interaction outside the lab, or what they had for lunch). Such acontextualizing may, for example, account for the high variance found both within and across public goods games. The ‘details’ researchers abstract out of their game structures maybe exactly those details that cue people into using particular sets of norms. Economists have taken control of a specific set of potentially important variables that relate to payoffs, but they may still be missing other key variables (Pilutla and Chen 1999).

Both psychologists and economists use computers to administer experimental protocols. Unfortunately, psychological evidence indicates that people often think of computers as social actors, with feelings, genders, motivations, and even emotions (Nass et. al. 1997). Consequently, experimentalists may be effectively introducing omniscient 3<sup>rd</sup> parties into their games. Computers may not affect the payoff matrix, but they may affect human psychology.

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