

Experimental Methods in Social Sciences (in particular economics)

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Differences Among Fields

Differences between Experiments in Economics and Political Science

- Fundamental approach to experiments is not much (and not in principle) different between economics and political science
 - often test of (game) theoretical predictions
 - large overlap of interests
 - individual and collective decision making
 - aggregation of preferences
 - interest in non-standard preferences and lack of rationality
 - but also some differences in interests
 - e.g., economists often have an interest in market behavior
 - also some methodological differences
 - e.g., economists have a stronger belief in necessity of incentives
 - political science appears to have a less strict (or less consensus on a strict) view of what constitutes an experiment

Differences between Experiments in Economics and Social Psychology

- Differences between economics and social psychology are more fundamental and center around the following issues (Hertwig and Ortmann, 2001)
 - my understanding of experimental political science literature is that it is somewhere in between, but closer to economics on these issues
- Scripts
 - economics experiments typically provide scripts (instructions) that detail what happens (including that participants might be told something only later on)
 - psychology experiments more often provide vague initial instructions and then details along the way
 - not providing a script may enhance experimenter demand effects and reduce replicability

Differences between Experiments in Economics and Social Psychology

- Repetition
 - economics experiments often investigate repeated choice in the same situation
 - psychology experiments more often look at one-shot inexperienced behavior
 - partly due to economists' interest in stable equilibrium behavior
 - repetition allows for learning both of the task and reactions of other participants
 - matters for many biases and heuristics

Differences between Experiments in Economics and Social Psychology

• Incentives

- economic experiments typically give incentives, most of the time monetary
- psychology experiments often do not give incentives
- for economists, given the content of their theories, giving incentives comes natural
- for many task psychologists investigate, there is no clear performance standard or other evaluation
- but psychologists also often simply work on assumption that participants are motivated anyway to perform well
- incentives often reduce variability and bring data closer to normative predictions
- incentives particularly matter when much cognitive effort is required, so hypothetical studies on bounded rationality are problematic

Differences between Experiments in Economics and Social Psychology

- Incentives

- incentives also matter when psychological incentives work against revealing true preferences (in particular social preference experiments or value elicitation, for, e.g., environmental goods)
- but incentives do not always matter
 - e.g., accuracy in general knowledge questions
- further, when there is no motivation to bias beliefs, they are typically not affected
- instead, incentivizing belief statements can cause distortions of beliefs and preferences
- argument against incentives: crowding out of intrinsic motivation
 - no consistent evidence for crowding out of intrinsic motivation

Differences between Experiments in Economics and Social Psychology

- Deception

- deception is generally taboo in economics experiments
- in psychology views and practises differ
 - guidelines of American Psychological Association propose deception as last-resort
 - but in practice deception is frequently employed in psychology
- reasons to use deception
 - avoid that participants understand purpose of the study
 - cheap: can cut participants in roles one is not interested in and restrict attention to most interesting choice sets
 - one can study situations that would very rarely occur naturally (e.g., Ash conformity experiment, reactions to emergencies)
 - in principle, one can study situations that would be too dangerous or otherwise ethically problematic (though simulating these would typically also not be allowed today, e.g., Milgram obedience experiment)

Differences between Experiments in Economics and Social Psychology

- Deception
 - problems of deception
 - ethical (not main concern for economists)
 - participants will not believe future instructions
 - participants might also detect deception within experiment already, altering perceived incentives
 - since deception in one experiment has negative impact on other experiments, the use of deception is not a cost-benefit issue for the experiment in question

Differences between Experiments in Economics and Social Psychology

- Deception

- alternatives

- deception about the decision situation is not necessary to conceal the purpose of study, because it is not required to reveal everything
 - strategy method: ask for all possible situations one might be in, before one knows which one actually becomes relevant
 - randomly draw situation from those resulting from real actions of others and fabricated actions, inform participants about the procedure, but not whether the other's choice is real or fabricated
 - debriefing addresses ethical concern, but makes practical concerns worse
 - relevant question is not whether a particular study cannot be run without deception but whether the research question cannot be investigated without deception

Differences between Experiments in Economics and Social Psychology

- Differences in approaches generally lead to more methodological variability in psychology
- Reasons for differences
 - multiple research goals and lack of unifying theoretical framework in psychology
 - experiments were considered with scepticism within economics for a long time, increasing need for clear standards
 - during rise of experimental economics in 1970's and 80's concentration among relatively few institutions (and people)

Differences between Experiments in Economics and Social Psychology

- Number of studies
 - in economics there is typically one study per article
 - essentially, experimental economists search for the optimal design to study a question experimentally and then implement it, possibly adding some control treatments
 - in psychology, it is very common to include several experimental studies on the same topic in one article
 - this broader approach is better able to produce a complete picture of a phenomenon
 - narrower approach of economists partly caused by theory-driven approach

Literature

- Hertwig, Ralph and Ortmann, Andreas (2001) “Experimental Practices in Economics: A Methodological Challenge for Psychologists?”, Behavioral and Brain Sciences 24, 383–451.