



Universität
Zürich^{UZH}

Soziologisches Institut

Feldexperimente in der Soziologie



Einführungsveranstaltung

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Content

1. **Field Experiments**
2. **What Do Laboratory Experiments Measuring Social Preferences Reveal about the Real World?**



Lab and Field experiments



1. observation of subjects in a controlled setting but where the subjects do not perceive any of the controls as being unnatural without deception
2. many of the characteristics that people identify with field experiments are not only found in field experiments
3. field experiments can help to design better lab experiments: unexpected behaviors that occur when one loosens control in the field are often indicators of key features that have been neglected in the lab



Criteria that Define Field Experiments

The nature of the

1. subject pool
2. information that the subjects bring to the task
3. commodity
4. task or trading rules applied
5. stakes
6. environment that the subject operates in

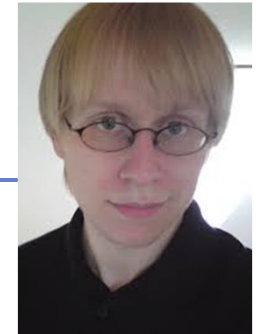




Nature of the subject pool



- Student subjects are the standard subject pool used by experimenters, simply because they are a convenience sample for academics.
- Student sample provide a less concentrated set of sociodemographic characteristics with respect to age and education level, which turned out to be important when developing statistical models to adjust for hypothetical bias
- Thus when one goes "outdoors" and uses field subjects, they should be viewed as nonstandard in this sense.



Nature of the information that the subjects bring to the task

- Nonstandard subject pools might bring experience with the commodity or the task to the experiment, quite apart from their wider array of demographic characteristics.
- For example, in the field, subjects bring certain information to their trading activities in addition to their knowledge of the trading institution. In abstract settings the importance of this information is diminished, by design, and that can lead to behavioral changes.

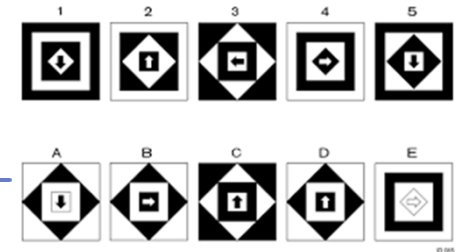




Nature of the commodity



- Recent years have seen a growth of experiments concerned with eliciting valuations over actual goods, rather than using induced valuations over virtual goods.
- The distinction here is between physical goods or actual services and abstractly defined goods.



Nature of the task or trading rules applied

- Field experience play a major role in helping individuals develop heuristics for specific tasks.
- An important question is whether the successful heuristics that evolve in certain field settings "travel" to the other field and lab settings.
- Another aspect of the task is the specific parameterization that is adopted in the experiment.



Nature of the stakes



- Stakes in the laboratory might be very different than those encountered in the field, and hence have an effect on behavior.
- Field experiments in relatively poor countries offer the opportunity to evaluate the effects of substantial stakes within a given budget.



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Nature of the environment that the subject operates in

- The environment can provide context to suggest strategies and heuristics that a lab setting might not.
- Even with salient rewards environmental effects could remain.
- Rather than view the environment as uncontrolled effects, it can be seen as worthy of controlled study.

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Taxonomy of field experiment

- Conventional lab experiment: employs a standard subject pool of students, an abstract framing, and an imposed set of rules.
- Artefactual field experiment: the same as a conventional lab experiment but with a *nonstandard subject pool*.
- Framed field experiment: the same as an artefactual field experiment but *with field context* in either the commodity, task, or information set that the subjects can use.
- Natural field experiment: the same as a framed field experiment but where the *environment* is one where the subjects *naturally undertake* these *tasks* and where the subjects *do not know* that *they are in an experiment*.



Methodological Importance of Field Experiments

Evaluation methods for "treatment effects" construct the proper counterfactual.

1. controlled experiments, including field experiments, directly construct a control group via randomization
2. natural experiments find a naturally occurring comparison group to mimic the control group
3. propensity score matching (PSM) make non-experimental data" look like" experimental data
4. instrumental variables (IV) estimation find a variable that is excluded from the outcome equation, but which is related to treatment status and has no direct association with the outcome
5. structural approaches typically rely on complex estimation strategies,



Artefactual Field Experiments

One major criticism of the inferences drawn from laboratory experiments is that one needs to undertake an experiment with "real" people, not students.

1. students might be self-selected in some way, i.e. certain individuals with characteristics that are important determinants of underlying population behavior are excluded
2. possible recruitment biases, i.e. the observed sample is generated by a process that depends on the nature of the experiment

the largest "problem with students" is the lack of variability in their socio-demographic characteristics, not necessarily the unrepresentativeness of their behavioral responses conditional on their socio-demographic characteristics.



Framed Field Experiments

- abstract, context-free experiments do not provide more general findings if the context itself is relevant to the performance of subjects.
- For example, only experienced traders gain experience over time by observing and surviving a relatively wide range of trading circumstances. It remains an open question whether standard lab settings can reliably capture the full extent of the field counterpart of experience.
- If one wants to draw conclusions about the validity of theory in the field, then one must pay attention to the myriad of ways in which field context can affect behavior



Natural Field Experiments

- In the "real world" individuals pay attention not only to the stressor, but also to the environment around them. These natural tools are not available to individuals in the lab, and thus the full effect of the stressor is not being observed.
- An ideal field experiment not only increases external validity, but does so in a manner in which little internal validity is foregone.
- Two important parts of the experimental environment:
 - the physical place of the actual experiment
 - whether subjects are informed that they are taking part in an experiment.



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Natural Field Experiments: Experimental Site

- The relationship between behavior and the environmental context in which it occurs refers to one's physical surroundings (viz., noise level, extreme temperatures, and architectural design) and the nature of the human intervention (viz., interaction with the experimental monitor).
- Environment-behavior relationships are more or less in flux continuously.



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Natural Field Experiments: Experimental Proclamation and decisions

- Whether subjects are informed that they are taking part in an experiment may be an important factor. (Hawthorne Effect)
- To the extent that experimenters focus on individual decision making when group decision-making is more natural, there is a risk that the results will be misleading. Similarly, even if the decision is made by an individual, there is a possibility of social learning or "cheap talk" advice to aid the decision.





Natural Experiments



- Natural experiments arise when the experimenter simply observes naturally occurring, controlled comparisons of one or more treatments with a baseline.
- The main attraction of natural experiments is that they reflect the choices of individuals in a natural setting, facing natural consequences that are typically substantial.
- The main disadvantage of natural experiments derives from their very nature: the experimenter does not get to pick and choose the specifics of the treatments, and the experimenter does not get to pick where and when the treatments will be imposed.



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Summary of Experimental Games Used to Measure Social Preferences

<i>Name of game</i>	<i>Summary</i>	<i>Typical finding</i>	<i>Social preference interpretation</i>
Ultimatum game ^a	A two-stage game where two people, a proposer and a responder, bargain over a fixed amount of money. In the first stage, the proposer offers a split of the money, and in the second stage, the responder decides to accept or reject the offer. If accepted, each player receives money according to the offer; if rejected, each player receives nothing.	<i>Proposer:</i> Majority of offers in the range of 25–50% of fixed amount. Few offers below 5%. <i>Responder:</i> Frequently reject offers below 20% of fixed amount.	<i>Proposer:</i> Fairness <i>Responder:</i> Punish unfair offers: negative reciprocity, fairness preferences, such as inequity aversion
Dictator game ^b	A variant of the ultimatum game: strategic concerns are absent as the proposer simply states what the split will be and the proposer has no veto power, rendering the proposed split as effective.	Usually more than 60% of subjects pass a positive amount of money, with the mean transfer roughly 20% of the endowment.	Altruism; fairness preferences, such as inequity aversion.
Trust game ^c	A sequential prisoner's dilemma game wherein the first mover decides how much money to pass to the second mover. All money passed is increased by a factor, $f > 1$, and the second mover then decides how much money to return to the first mover. In this light, the second mover is a dictator who has been given his	<i>Proposer:</i> Average transfer of roughly 50% of endowment. <i>Responder:</i> Repayment is increasing in transfer. Average repayment rate is nearly 50% of transfer.	<i>Proposer:</i> Trust; foresee positive reciprocity <i>Responder:</i> Trustworthiness, positive reciprocity



Gift exchange
game^d

mover. In this light, the second mover is a dictator who has been given his endowment by the first mover. Similar to the trust game, but the money passed by the first mover (often labeled the “wage” or “price” offer), is not increased by a factor, rather it represents a pure lump-sum transfer. Also, the first mover requests a desired effort, or quality, level in return for the “wage” or “price” offer. The second mover then chooses an effort or quality level that is costly to provide, but increases the first mover’s payoff.

transfer.

Proposer: “Wage” or “price” offer is typically greater than the minimum allowed.
Responder: Effort or quality increases in “wage” or “price” offer.

Proposer: Trust; foresee positive reciprocity
Responder: Trustworthiness, positive reciprocity

Public goods
game^e

Generalization of the prisoner’s dilemma game in that n group members decide simultaneously how much to invest in the public good. The payoff function is given by $P_i = e - g_i + \beta \sum_n g_j$, where e represents initial endowment; g_i is the level of tokens that subject i places in the group account; β is the marginal payoff of the public good; and $\sum_n g_j$ is the sum of the n individual contributions to the public good. By making $0 < \beta < 1 < n\beta$, the dilemma follows.

Players’ contribution to public good is roughly 50% of endowment in one-shot games. Many players’ contributions unravel to approach 0% in latter rounds of multi-period games

Altruism; fairness preferences, conditional reciprocity



Scrutiny That Is Unparalleled in the Field

- List (2006) carries out gift exchange experiments. The social preferences so routinely observed in the lab - even for this very same group of traders - were attenuated in the field.
- Bandiera, Rasul, and Barankay (2005) find that when workers cannot monitor each other, it rules out pure altruism as the underlying cause of workers' behavior.
- Benz and Meier (2006) find that those who chose not to give to the charities in the two-year period after the experiment gave more than 50 percent of their experimental endowment to the charities in the lab experiment.
- Laury and Taylor (2008) find little correlation between an "altruism parameter" estimated from a public goods lab experiment and actual contributions to a real public good.



Anonymity in the Lab and the Field

- In the typical lab experiment, the identity of the subject can readily be linked to individual choices by the experimenter. Theory predicts that the absence of anonymity will be associated with an increased level of pro-social behavior relative to settings in which individuals are more anonymous.
- Hoffman et al. (1994) find that 46% dictators donate under normal experimental conditions, but when subject-experimenter anonymity is added, only 16% donate. The observed behavior may be due not to a taste for 'fairness', but rather to a social concern for what others may think.
- Individuals are also more likely to conform with the social norm of hand-washing when they are being observed (Harris and Munger, 1989)



Context Matters and Is Not Completely Controlled By the Experimenter (I)

- Rates of defection in prisoner dilemma games swing wildly depending on whether subjects are playing a "Community" or "Wall Street" game (Ross and Ward, 1996)
- Using terms like "opponents" versus "partners" influences play in a myriad of games (Burnham, McCabe, and Smith, 2000)
- Asking people to "contribute" or to "allocate" funds in a linear public goods game matters, as does whether the game is framed as a positive externality or a negative one (Andreoni, 1995)
- Whether the agent "punishes" or "assigns" points to other agents can considerably influence play (Gintis, 2001).



Context Matters and Is Not Completely Controlled By the Experimenter (II)

- Henrich et al. (2005) conducted one-shot ultimatum, dictator, and public goods games in 15 different small-scale communities in developing countries and found enormous variation in behavior across communities, differences they were able to relate to patterns of everyday life and the social norms operating in these various communities.
- Many real-world activities that have aspects of dictator, ultimatum, trust, or gift exchange games, public good provision, and other social dilemmas are typically not one-time encounters, but rather repeated games. Effectively, personal experiences may cause the subjects to play these one-shot games as if they have some repetition, and the experimenter may have little or no ability to moderate this phenomenon.



Artificial Restrictions on Choice Sets

- Pro-social behavior might be observed less frequently in markets merely because people can avoid situations where they must make costly contributions to signal their generosity.
- Lazear, Malmendier, and Weber (2006) allowed agents an opportunity to pay to opt out of playing the dictator game. The majority of subjects share without really wanting to, as evidenced by their willingness to avoid the dictator game and to even pay for avoiding it.



Time Horizons

- Real-world contexts typically offer the option of both giving and receiving. The typical dictator game is framed such that "giving nothing" is the least generous act, and substantial sums of money are given away.
- If instead, the subject is given \$10 and is told that the rules allow giving any portion of this money away to the second player, or confiscating up to an additional \$10 from the other player, subjects give little to the other player.