**Introduction to Sociology**

Chapter 3 “Methods”: Assignments with answers

**3.1 Is your smartphone making you stupid?**

**Q1**

Can you mention three purposes of empirical research in sociology?

Answer:

(1) describing social phenomena, (2) testing hypotheses and (3) exploration.

**3.2 Measurement quality**

**Q1.**

Suppose you want to study the following hypothesis: “The more people feel threatened by ethnic outgroups, the more likely they are to support anti-immigrant political parties”.

Q1a. What is the independent variable in this hypothesis?

Answer:

Independent variable: ‘degree of ethnic outgroup threat’.

Q1b. How would you measure this independent variable?

Answer:

One option would be to directly ask people about their degree of ethnic outgroup threat. Example: “How strongly do you feel threatened by ethnic outgroups?”.

Q1c. Is this a valid measure? Why (not)?

Answer:

Measurement validity is about the degree to which the measure corresponds to the theoretical concept. In this case, the measure and the concept seem to be strongly related.

Q1d. What is the dependent variable in this hypothesis?

Answer:

Dependent variable: ‘support for anti-immigrant political parties’.

Q1e. How would you measure this dependent variable?

Answer:

One could ask people about their support for parties, e.g. “If there would be elections today, which political party would you then support –if any?”.

Q1f. Is this a valid measure? Why (not)?

Answer:

Measurement validity is about the degree to which the measure corresponds to the theoretical concept. In this case, the measure and the concept seem to be strongly related.

**Q2**

Suppose you are concerned about the well-being of your fellow students and the impact of these “discussion questions” may have on their stress levels. As an aspiring sociologist, you aim to measure this relation and deliver the results to the teacher in protest. You decide that you shall ask students the following question: “*All things considered, how happy are you today?”*. You decide that, in addition, you will ask this question twice: Once halfway the course (t1), and again during the final exam (t2). At t1, you raise the question in a group setting (so not individually), discussing the issue face-to-face, and on t2 you ask the question individually to each student, using a written questionnaire. Reflect on 1) possible problems with respect to measurement validity and 2) possible problems with respect to measurement reliability.

Answer:

Answer might contain the following elements:

1. Measurement validity is whether a measure captures the concept of interest. One might wonder whether a question about *happiness* captures something else than *stress*.
2. Reliability may also be problematic, because the method of collecting data has changed. It could very well be the case that students say something differently in a group discussion than when they are asked individually via a written questionnaire.

**3.3 External Validity**

**Q3.**

Is a “biased sample” related to the issue of “external validity”? Can you give an example?

Answer:

A biased sample is a sample, for which observations in the study cannot be generalized to the population. This poses a threat to external validity, as the results of the study are not generalizable beyond the study. Example: if you interview students (sample), then you cannot generalize the conclusions of that study to other groups than students.

* 1. **Internal Validity**

**Q4.**

Consider the following scenario. A researcher proposes to investigate the impact of students’ consumption of alcoholic beverages on their popularity. She proposes to record the number of alcoholic beverages consumed by 20 students from her university in May. She will measure in the following month, June, the popularity of those students by asking each of them how many friends they have. After pitching her research proposal, several colleagues have suggestions. We now note some of the suggestions she received.

1. Someone argued that she should investigate a larger number of students, and from different universities.
2. Someone argued that she should measure the drinking behavior and popularity repeatedly, not only once.

Which of these suggestions relate to the external validity of the study? Which relate to the internal validity?

Answer:

1. External validity: the (small group of) students of her own university may not be representative of all students.
2. Internal validity: although popularity is measured after drinking behavior, it could well be the case that students who drink a lot (measured in May) and who appear to be more popular (measured in June) than those who drink less, were already more popular before the data collection started.

**3.6 Qualitative and quantitative methods**

**Q1.**

What is, generally speaking, the difference between quantitative and qualitative research? Which of these is deemed more efficient in testing hypotheses and describing the world numerically and which can be seen as more explorative in nature?

Answer:

Quantitative research involves numeric depictions of reality, allowing for the description of populations (relying on representative samples) and testing of hypotheses. It relies on large-scale survey data, experiments, online data and statistical analyses. Qualitative research has a stronger focus on exploration and to construct new concepts and theories. It uses ethnographic designs and case studies. Since both approaches serve different purposes in science, they can be deemed complementary.

**3.10 Big Data  
  
Q1.**

Suppose you are interested in the existence and development of political polarization in the US. What kind of advantages would big data give you over surveys when studying this topic? And what are some of the pitfalls you can think of?

Answer:

Advantages big data: (1) more observations, (2) behavioral data, (3) continuous time. Pitfalls: (1) threats to external validity due to selectivity of the sample (think of privacy settings on Facebook for example or the availability of internet), (2) poor measurement quality.

**3.11 Experiments**

**Q1.**

Sociologists sometimes use laboratory experiments.

Q1a. What is a major advantage of laboratory experiments in comparison to observational research? Explain in your own words.

Answer:

Laboratory experiments are typically excellent in terms of internal validity, because individuals are randomly assigned to the control group and the experimental group. In observational studies, this is not the case, which means that the relation found between X and Y can be spurious.

Q1b. What is a common disadvantage of laboratory experiments in sociology? Explain in your own words.

Answer:

A common disadvantage of lab experiments in sociology, is the lack of external validity. This is because the (artificial) lab setting, and/or the participants in the lab experiment (often students) may not be representative of the larger population. Additionally, processes of random assignment may not always be feasible for ethical reasons. For instance, to study the effects of marriage in a laboratory setting would require us to randomly assign people to a marital partner, which is ethnically questionable at best. This restricts the range of social phenomena which can be tested in the laboratory.

Q1c. What is another type of (quasi-)experiment that sociologist use to overcome (some of) the disadvantages of lab experiments? Explain in your own words.

Answer:

Field experiments offer a way to overcome problems of external validity. Such experiments are conducted in the ‘real world’, in non-artificial settings and among more representative samples.

**Chapter generic assignments**

**Q1.**

Think about designing your own sociological research. Select a social problem you find interesting, try to find a news article about this problem; it can be anything you like. You might be interested in the rising income inequality in western countries, crime among young people, anything goes. Please answer the following questions with respect to your research:

1. Formulate a sociological research question about this social problem.
2. What type of question is this (descriptive, theoretical, application)?
3. If it’s theoretical: can you come up with a hypothesis?
4. What is the purpose of your empirical research (descriptive, hypothesis testing, explorative)?
5. What kind of data will you use and why (administrative, survey, online data, qualitative field research, experiment)? Please give a sufficiently detailed description of your data.
6. Please reflect on the issues of *internal validity and external validity* and how do you deal with them? Do they threaten the conclusions of your study?

Make sure that you can present your research in the meeting.

**Q2.**

Read the article ‘Migration is slowing Australia’s rate of ageing, but not necessarily in the regions’, published in *The Conversation* in 2018. The article can be found through the following link: <https://theconversation.com/migration-is-slowing-australias-rate-of-ageing-but-not-necessarily-in-the-regions-94970>

Q2a. What was the effect of overseas migration flows on the ageing of the population of Australia in general?

Answer:

Overseas migration flows slowed the aging rate of the Australian population.

Q2b. Suppose the research had only considered one region of the country, Tasmania. Would the effects be the same for this study? If not, what can you say about the importance of external validity and sampling in such a study?

Answer:

Given factors causing a strong rise in population age, we might have underestimated the effect of Tasmania. It is thus important that one can generalize the findings of a study to the intended population. This is why unbiased sampling strategies (random samples) are important.