

Possible forms of master thesis projects at the chair of Heiko Rauhut

POSSIBLE FORMATS	1
AVAILABLE DATA SETS	2
PROJECT IDEAS	5

Possible formats

Replication studies
<p>General Idea: Science is currently in a crisis of replication even though replicating existing work is working right at the cutting edge of the field. Sociologically, the possibility that one’s work could be replicated provides a social control mechanism that ideally discourages shoddy or fraudulent work. Replications are thus a norm of organized skepticism, contributing to successful functioning of science. The general idea here is to use an existing data set as a starting point and conduct various verifiability and robustness analyses.</p> <p>Literature:</p> <p>Freese, J. and Peterson, D. (2017). Replication in Social Sciences. <i>Annual Review of Sociology</i> 43: 1-19.</p> <p>King, G. (1995). Replication, replication. <i>PS: Political Science & Politics</i>, 28(3), 444-452.</p> <p>King, G. "Publication, publication." <i>PS: Political Science & Politics</i> 39.1 (2006): 119-125.</p>
<p>Examples for replications</p> <p>McCullough, B. D., McGeary, K. A., & Harrison, T. D. (2006). Lessons from the JMCB Archive. <i>Journal of Money, Credit, and Banking</i>, 38(4), 1093-1107.</p> <p>Wicherts, J. M., Borsboom, D., Kats, J., & Molenaar, D. (2006). The poor availability of psychological research data for reanalysis. <i>American Psychologist</i>, 61(7), 726.</p>
Meta-analyses
<p>General idea: Meta analyses are statistical analyses of a large collection of results from individual studies. They are especially interesting in cases when the research question is about a comparison of an aspect or improvements of methods or for evaluating the magnitude of the underlying overall effect of a phenomenon. The general idea here is to find a phenomenon worth investigating, compile a bibliography, estimate effect sizes and calculate combined results.</p> <p>Literature:</p> <p>Field, A.P. and Gillet, R. (2010). How to do a meta-analysis. <i>British Journal of Mathematical and Statistical Psychology</i> 63: 665-694.</p>
<p>Examples for meta-analyses (also check successfully completed master theses)</p> <p>Balliet, D., Mulder, L. B., & Van Lange, P. A. (2011). Reward, punishment, and cooperation: a meta-analysis. <i>Psychological bulletin</i>, 137(4), 594.</p> <p>Lensvelt-Mulders, G. J., Hox, J. J., Van der Heijden, P. G., & Maas, C. J. (2005). Meta-analysis of randomized response research: Thirty-five years of validation. <i>Sociological Methods & Research</i>, 33(3), 319-348.</p> <p>Zelmer, J. (2003). Linear public goods experiments: A meta-analysis. <i>Experimental Economics</i>, 6(3), 299-310.</p>
Field research
<p>General idea: Primary research is any type of research conducted by the researcher themselves. This can vary from a survey to an online experiment or a study with qualitative methods (e.g.</p>

interviews). The general idea here is to come up with an own research design and conduct field research. Further, students can check out available data sets (e.g. the ones presented above).

Literature:

Creswell, J. W., & Creswell, J. D. (2017). Research design: Qualitative, quantitative, and mixed methods approaches. Sage publications.

O'leary, Z. (2004). The essential guide to doing research. Sage.

For examples check successfully completed master theses.

Available data sets

Behavioral games in Z-Proso

General Idea:

Our study within z-Proso combines observational with experimental data and mainly focuses on fundamental human capabilities such as honesty, cooperation and trust and their relation to delinquency. We implemented a series of simple decision-making games, in which subject's claim, bargain or steal money from each other and thus face real consequences of their own and others' actions. Our study tries to amplify the understanding of human behavior by asking both causal and observational, as well as methodological questions.

Previous evidence suggests that trust is an indispensable requirement for social and economic success; we, therefore, aim to explore the determinants of trust and the closely related concept of positive reciprocity. Further, our study allows investigating the use of signals and their effects on trusting behavior across strategic and non-strategic conditions. With this, we are particularly interested in whether people with criminal tendencies process suspicious information differently and use such signals strategically to cheat others.

Another important aspect we investigate is the tendency to punish unfair behavior, even at individual costs. Negative reciprocity is of significant importance for the establishment and maintenance of cooperation and norms. Within z-Proso, we therefore ask the question who are these strong reciprocators. We are particularly interested in whether individuals with socially undesirable delinquent tendencies are those who maintain cooperation and fairness.

We also address general methodological concerns for both observational and experimental studies. A significant threat to the validity of survey data proposes subjects' tendencies to lie. We developed a method to identify survey items that suffer particularly from lying behavior (e.g., due to social desirability) as well as particularly trustworthy responders. In experimental studies, abstract games are used to mimic real-world situations to infer actual behaviors. We test the external validity of the public goods game on a diverse sample using detailed information about respondents' police records, including fare-dodging.

Overall, the study combines large-scale survey data with monetarily incentivized behavioral experiments to leverage our understanding of essential human behavior and research methodology.

Literature:

Fehr, E., Fischbacher, U., Von Rosenblatt, B., Schupp, J., & Wagner, G. (2003). A nation-wide laboratory: Examining trust and trustworthiness by integrating behavioral experiments into representative survey.

Exemplary questions

Methodological questions (e.g. How do problems of understanding affect decision-making in behavioral games? What is the effect of socio-economic background on behavior in lab experiments?),

Dice game (e.g. What are patterns of lying? Do delinquents use signals differently? Do they cheat more or in patterns?)

Trust game (e.g. What are the roots of trust? Do delinquents interpret signals differently? Do delinquents respond differently to trust by others?)

Public goods game (e.g. Do anti-social people behave anti-social in public goods game? Are there factors in childhood that affect the ability to cooperate within groups?)

Dictator and ultimatum game (e.g. Do delinquents evaluate risk differently? Are there childhood factors that trigger fairness propensities?)

Further information

Website: <https://www.jacobscenter.uzh.ch/en/research/zproso/aboutus.html>

Publication list: https://www.jacobscenter.uzh.ch/en/research/zproso/aboutus/publication_list.html

Instruments: https://www.jacobscenter.uzh.ch/en/research/zproso/aboutus/inst_erheb/inst_summ.html

Zurich Survey of Academics

General idea:

Recent developments, such as the significant increase in the number of large and interdisciplinary research teams, the strengthening of the open access movement and calls for more transparency in research, but also the replication crisis, pose new challenges for modern science.

The Zurich Survey of Academics is a large-scale and representative web survey among scientists at universities in Switzerland, Germany, and Austria (DACH region). The survey was conducted in 2020 and includes N=15,972 scientists from 236 universities. The survey is motivated by recent developments, such as the significant increase of team work in science and problems of how to organize fair and sustainable collaborations, the strengthening of the open access movement and calls for more transparency in research. It also reflects recent discussions around the replication crisis, problems of scientific integrity, and the apparently increasing pressures in scientific work.

The aim of the survey is to obtain in-depth insights from researchers in the German-speaking part of Europe. The survey includes a number of new measurements, such as vignettes, factorial surveys, behavioral games, an Implicit Association Test on misconduct, indirect questioning techniques for eliciting scientific misconduct, randomized survey experiments on selective publishing behavior, and more. These measurements are applied to elicit, among others, selfish versus prosocial behavior of scientists, authorship norms, and provisions of collective goods in science.

The survey further focuses on work and research situations (e.g. employment position, work load, publication pressure, discrimination due to personal characteristics, satisfaction with different areas of life) norms and practices of authorship (e.g. order of authorship, who is collaborating with whom, what tasks are deemed sufficient to be named as an author, authorship conflicts), publication strategies (e.g. preferred criteria for journal submissions, risk and time preferences, publication bias (e.g. dissemination and causes), scientific misconduct (explicit and implicit attitudes, experiences with and justification of misconduct), and science communication (e.g. mental models of good communication). The survey is part of the larger-scale SNF/ERC Starting grant project "Social Norms, Cooperation and Conflict in Scientific Collaborations".

Literature:

Rauhut, Heiko; Johann, David; Jerke, Julia; Rathmann, Justus; Velicu, Antonia (2020). The Zurich Survey of Academics: Methods, Design, and Data. Zurich: University of Zurich.

<https://www.zora.uzh.ch/id/eprint/188304/> (last accessed on 6.7.20)

Exemplary questions

Collaboration (e.g. What are the advantages and the challenges of team work in science? Are there free-rider problems, or even volunteer's dilemmas in large author groups with respect to controlling scientific integrity? On the other hand: do many authors contribute to the wisdom of crowds and produce more interesting research?)

Selfishness (e.g. How selfish are scientists? Do selfish or altruistic scientists better in their career? Does it depend on team vs. solo disciplines? How common is lying among scientists?)
 Scientific misconduct (e.g. How widespread is scientific misconduct? How can we explain it, how can we measure it?)
 Social norms in science (e.g. What are the social norms of collaboration in science? How to deal with different expectations about the order of authors? Methodological questions (e.g. How do problems of understanding affect decision-making in behavioral games? What is the effect of socio-economic background on behavior in lab experiments?)

Further information

Website: <https://www.suz.uzh.ch/en/institute/professors/rauhut/zurich-survey-of-academics.html>

School studies with cooperation and networks

General idea:

This project examines processes, mechanisms and dynamics of building values and norms in children and adolescents. In particular, the focus is on the evolution of prosocial values, such as cooperativity, and the question to what extent social processes in friendship networks in school classes play a role here.

Schools are one of the core institutions for children and adolescents that act as a social environment and influence human behavior. Within schools, classes are the places where students spend most of the time, where they are continuously asked to work together, and to develop together and individually. To understand who we are and what we become, schools can be seen as early determinants of cooperative behavior, and as a basis for conveying prosocial and altruistic values. On the other hand, competition in schools can also trigger anti-social behavior or emphasize selfish values. These values and behaviors have a strong impact on performance in school and later in life. Prosocial values are crucial for the development of a variety of social norms, such as voluntary work, contributions to the intergenerational contract, an environmentally friendly life or participation in democracy.

Most behavioral research on prosocial values and cooperation standards is carried out in relatively small laboratory facilities. The present project analyzes data from the field and pursues the goal of shedding more light on the mechanisms of norm formation. For this purpose, the network structures in school classes in the formation and development of cooperation should be examined in particular. By systematically examining these structures, we will understand in more detail how contextual, individual and network characteristics influence value creation in children and adolescents.

Literature:

Kindschi, M., Ciecuch, J., Davidov, E., Ehlert, A., Rauhut, H., Tessone, C. J., & Algesheimer, R. (2019). Values in adolescent friendship networks. *Network Science*, 7(4), 498-522.

Exemplary questions

How does having prosocial values impact individual outcomes?
 How do friendship structures affect value formation in school classrooms?

Project ideas

Attractiveness, social norms and cooperation
<p>General idea: Recent evidence has suggested that more attractive persons are trusted more, helped more and treated more cooperatively. Hence, more attractive persons receive higher wages, are more productive and more successful. This is particularly interesting in areas which are thought to be independent of such attributes, such as working in science. One way to tackle this phenomenon is to take the pictures of the scientists of their homepage and let a sample (e.g. Amazon Mechanical Turk) rate the attractiveness.</p> <p>Literature:</p> <p>Banchefsky, A.; Westfall, J.; Park, B.; Judd, Ch.M. (2016): But You Don't Look Like a Scientists!: Women Scientists with Feminine Appearance are Deemed Less Likely to be Scientists, Sex Roles, verfügbar unter: http://jakewestfall.org/publications/femininity.pdf</p> <p>Helman, E., Carpinella, C. M., Johnson, K. L., Leitner, J. B., & Freeman, J. B. (2014). Early processing of gendered facial cues predicts the electoral success of female politicians. <i>Social Psychological and Personality Science</i>, 5(7), 815-824.</p> <p>Marlowe, C. M., Schneider, S. L., & Nelson, C. E. (1996). Gender and attractiveness biases in hiring decisions: Are more experienced managers less biased?. <i>Journal of applied psychology</i>, 81(1), 11.</p> <p>Muñoz-Reyes, J. A., Pita, M., Arjona, M., Sanchez-Pages, S., & Turiegano, E. (2014). Who is the fairest of them all? The independent effect of attractive features and self-perceived attractiveness on cooperation among women. <i>Evolution and Human Behavior</i>, 35(2), 118-125.</p> <p>Mulford, M., Orbell, J., Shatto, C., & Stockard, J. (1998). Physical attractiveness, opportunity, and success in everyday exchange. <i>American journal of sociology</i>, 103(6), 1565-1592.</p> <p>Putz, Á., Palotai, R., Csertő, I., & Bereczkei, T. (2016). Beauty stereotypes in social norm enforcement: The effect of attractiveness on third-party punishment and reward. <i>Personality and Individual Differences</i>, 88, 230-235.</p> <p>Wong, J. S., & Penner, A. M. (2016). Gender and the returns to attractiveness. <i>Research in Social Stratification and Mobility</i>, 44, 113-123.</p>
<p>Literature on MTurk (https://mturk.com)</p> <p>Hauser, D. J., & Schwarz, N. (2016). Attentive Turkers: MTurk participants perform better on online attention checks than do subject pool participants. <i>Behavior research methods</i>, 48(1), 400-407.</p> <p>Huff, C., & Tingley, D. (2015). "Who are these people?" Evaluating the demographic characteristics and political preferences of MTurk survey respondents. <i>Research & Politics</i>, 2(3), 2053168015604648.</p> <p>Sharpe Wessling, K., Huber, J., & Netzer, O. (2017). MTurk character misrepresentation: Assessment and solutions. <i>Journal of Consumer Research</i>, 44(1), 211-230.</p>
Neutralization techniques in science studies
<p>General idea: There are numerous examples for scientific misconduct in academia. To determine how such violations can be targeted, it is important to understand how academics think about and justify misconduct. Criminology provides useful techniques to determine different ways of legitimizing, or neutralizing, undesirable behavior by using techniques of neutralization (Sykes/Matza) that provide episodic relief from moral constraints and allow individuals to drift back and forth between delinquent and conventional behaviors. One way to investigate this topic could be analyzing the interviews famous delinquent scientists gave or books they wrote after their conviction (e.g. Diederik Stapel).</p> <p>Literature:</p> <p>Bryant, E., Schimke, E. B., Nyseth Brehm, H., & Uggen, C. (2018). Techniques of neutralization and identity work among accused genocide perpetrators. <i>Social problems</i>, 65(4), 584-602.</p> <p>Levelt, W. J., Drenth, P. J. D., & Noort, E. (2012). Flawed science: The fraudulent research practices of social psychologist Diederik Stapel.</p> <p>Martinson, B. C., Anderson, M. S., & De Vries, R. (2005). Scientists behaving badly. <i>Nature</i>, 435(7043), 737.</p> <p>Maruna, S., & Copes, H. (2005). What have we learned from five decades of neutralization research?. <i>Crime and justice</i>, 32, 221-320.</p>

Nelson, E. D., & Lambert, R. D. (2001). Sticks, stones and semantics: the ivory tower bully's vocabulary of motives. *Qualitative Sociology*, 24(1), 83-106.

Rauhut, H., Krumpal, I., & Beuer, M. (2009). Rechtfertigungen und Bagatelldelikte: Ein experimenteller Test. In *Klein aber fein!* (pp. 373-396). VS Verlag für Sozialwissenschaften.

Sykes, G. M., & Matza, D. (1957). Techniques of neutralization: A theory of delinquency. *American sociological review*, 22(6), 664-670.

Literature on textanalysis

Mayring, P., & Fenzl, T. (2014). Qualitative inhaltsanalyse. In *Handbuch Methoden der empirischen Sozialforschung* (543-556). Springer VS, Wiesbaden.

Titscher, S., Wodak, R., Meyer, M., & Vetter, E. (2013). *Methoden der Textanalyse: Leitfaden und Überblick*. Springer-Verlag.

Intersectional discrimination of scientists

General idea: Given that the academic system is often interpreted as an environment that produces and reproduces patriarchal power relations and is thus considered a masculine environment, insights into intersectional discrimination of scientists are particularly valuable. One way to research this phenomenon is to employ a qualitative methodology and conduct interviews with scientists that share their experiences.

Literature:

Beaufaÿs, S., & Kraus, B. (2005). Doing Science—Doing Gender. Die Produktion von Wissenschaftlerinnen und die Reproduktion von Machtverhältnissen im wissenschaftlichen Feld. *Feministische Studien*, 23(1), 82-99.

Crenshaw, K. (1990). Mapping the margins: Intersectionality, identity politics, and violence against women of color. *Stan. L. Rev.*, 43, 1241.

Foschi, M. (2000): Double Standards for Competence: Theory and Research, *Annual Review of Sociology* 26: 21-42.

Kraus, B. (2000): Das soziale Feld Wissenschaft und die Geschlechterverhältnisse, in: Kraus, B. (Hg.): *Wissenschaftskultur und Geschlechterordnung: Über die verborgenen Mechanismen männlicher Dominanz in der akademischen Welt*. Frankfurt/Main: Campus, S. 31-54.

Merton, R. K. (1973): The normative structure of science, in: Merton, R. (Hg.): *The Sociology of Science: Theoretical and Empirical Investigations*, Chicago: The University of Chicago Press, S. 267-78.

Paludi, M. A.; Strayer, L. A. (1985): What's in an Author's Name? Differential Evaluations of Performance as a Function of Author's Name, in: *Sex Roles* 12(3/4): 353-361.

Examples for qualitative studies of discrimination in academia

Johansson, M., & Śliwa, M. (2014). Gender, foreignness and academia: An intersectional analysis of the experiences of foreign women academics in UK business schools. *Gender, Work & Organization*, 21(1), 18-36.

Sang, K., Al-Dajani, H., & Özbilgin, M. (2013). Frayed careers of migrant female professors in British academia: An intersectional perspective. *Gender, Work & Organization*, 20(2), 158-171.

Development of moral sentiments

How do human moral sentiments develop? While many people behave collaboratively, others develop a self-centered or anti-social character. Understanding the roots of social behaviors such as honesty, trust, and fairness is an essential way to raise cooperation and avoid people straying away from the right path. Various reasons might lead to deviation and can be investigated, such as drug abuse, bullying, delinquency, or the role of social isolation or integration. Projects can combine ten years of survey responses with the actual decision-making in economic games of over 1`000 adolescents.

Gintis, H. (2014). *The Bounds of Reason: Game Theory and the Unification of the Behavioral Sciences-Revised Edition*. Princeton University Press. [Book]

Mussen, P., & Eisenberg-Berg, N. (1977). *Roots of caring, sharing, and helping: The development of pro-social behavior in children*. WH Freeman. [Book]

Gintis, H., Henrich, J., Bowles, S., Boyd, R., & Fehr, E. (2008). Strong reciprocity and the roots of human morality. *Social Justice Research*, 21(2), 241-253.

Gibbs, J. C. (2019). *Moral development and reality: Beyond the theories of Kohlberg, Hoffman, and Haidt*. Oxford University Press. [Book]

Gintis, H., Bowles, S., Boyd, R. T., & Fehr, E. (Eds.). (2005). *Moral sentiments and material interests: The foundations of cooperation in economic life (Vol. 6)*. MIT press. [Book]

Note: Dependent on the kind of social behavior, various (more specific) research articles can be found.