



**Masterseminar ‘Economic Behavior in Human-Robot and Human-Computer interactions’
summer term 2019 (6 ECTS)**

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Expected number of participants: 15

Modul: M.WIWI-VWL.0026 & M.WIWI.VWL-0036

Computers and computational decision-making systems such as algorithms or robots are increasingly disseminating into various stages of economic, political and societal decision-making. This process endows economic entities with new, powerful tools, that have the potential to fundamentally disrupt traditional market dynamics and pose new problems to regulators as well as private actors. Depending on the decision-making system’s degree of sophistication, human decision-makers might be forced to collaborate, cooperate or even compete with intelligent autonomous systems – a process that is largely unprecedented in economic history. In this seminar, students are expected to design their own economic experiment based on an original research questions within a wide variety of behavioral topics. Experiments might build on the provided literature, but additional literature research is highly encouraged. All research questions should relate to aspects of human behavior in the context of (i) computational/machine actors, (ii) algorithmic decision-making tools or (iii) digitization.

Interested students who write promising seminar papers will be offered the opportunity to further develop their experimental design in close collaboration with their supervisors as part of their master’s thesis.

Application

Places will be awarded following the ‘first-come-first-serve’ principle. To apply for the seminar, please write an email to alexander.erlei@wiwi.uni-goettingen.de until May 2nd and state your three preferred topics.

Exam requirements

- Seminar paper (15 pages, $\pm 10\%$; English)
- Presentation (15 minutes; English/German)
- Co-referat (5 minutes; English/German)
- Participation in the seminar and discussion



Dates

Preliminary discussion	8th May, 16:15 - 17:45, ifh Göttingen (Heinrich-Düker-Weg 6)
Registration and de-registration	Until 15th May via FlexNow
First-Ideas Presentation	11th June, 16:15 - 17:45, ifh Göttingen (Heinrich-Düker-Weg 6)
Submission deadline	5th July, per email addressed to the corresponding supervisor and signed and printed in the secretary's office
Blocked seminar	12th July, ca. 10:00 - 17:00, ifh Göttingen (Heinrich-Düker-Weg 6)

Basic literature

1. General

- Colin F Camerer (2011). *Behavioral game theory: Experiments in strategic interaction*. Princeton University Press
- Ajay Agrawal et al. (2019). *The Economics of Artificial Intelligence*. National Bureau of Economic Research. (All articles are available as NBER Working Papers)

2. Classical games

- *The Ultimatum Game*: Werner Güth et al. (1982). 'An experimental analysis of ultimatum bargaining'. In: *Journal of economic behavior & organization* 3.4, pp. 367–388
- *The Dictator Game*: Robert Forsythe et al. (1994). 'Fairness in simple bargaining experiments'. In: *Games and Economic behavior* 6.3, pp. 347–369
- *The Public Goods Game*: Ernst Fehr and Simon Gächter (2002). 'Altruistic punishment in humans'. In: *Nature* 415.6868, p. 137
- *The Trust Game*: Joyce Berg et al. (1995). 'Trust, reciprocity, and social history'. In: *Games and economic behavior* 10.1, pp. 122–142
- *Gift-Exchange*: Ernst Fehr and Simon Gächter (2000). 'Fairness and retaliation: The economics of reciprocity'. In: *Journal of economic perspectives* 14.3, pp. 159–181

Topics

1. Algorithm Aversion

- Berkeley J Dietvorst et al. (2015). 'Algorithm aversion: People erroneously avoid algorithms after seeing them err.' In: *Journal of Experimental Psychology: General* 144.1, p. 114
- Berkeley J. Dietvorst et al. (2018). 'Overcoming Algorithm Aversion: People Will Use Imperfect Algorithms If They Can (Even Slightly) Modify Them'. In: *Management Science* 64.3, pp. 1155–1170
- Jennifer M Logg et al. (2019). 'Algorithm appreciation: People prefer algorithmic to human judgment'. In: *Organizational Behavior and Human Decision Processes* 151, pp. 90–103

2. Human-Robot Interaction

- Clifford Nass and Youngme Moon (2000). 'Machines and mindlessness: Social responses to computers'. In: *Journal of social issues* 56.1, pp. 81–103
- Eduardo Benítez Sandoval et al. (2016). 'Reciprocity in human-robot interaction: a quantitative approach through the prisoner's dilemma and the ultimatum game'. In: *International Journal of Social Robotics* 8.2, pp. 303–317
- Elizabeth Broadbent (2017). 'Interactions with robots: The truths we reveal about ourselves'. In: *Annual review of psychology* 68, pp. 627–652
- Anna-Lisa Vollmer et al. (2018). 'Children conform, adults resist: A robot group induced peer pressure on normative social conformity'. In: *Science Robotics* 3.21
- Alain Cohn et al. (2018). 'Honesty in the Digital Age'. In: *University of Zurich, Department of Economics, Working Paper No. 280*.

3. Human-Computer Interaction

- Clifford Nass and Youngme Moon (2000). 'Machines and mindlessness: Social responses to computers'. In: *Journal of social issues* 56.1, pp. 81–103
- Alan G Sanfey et al. (2003). 'The neural basis of economic decision-making in the ultimatum game'. In: *Science* 300.5626, pp. 1755–1758
- Celso De Melo et al. (2016). 'People do not feel guilty about exploiting machines'. In: *ACM Transactions on Computer-Human Interaction (TOCHI)* 23.2, p. 8
- Alain Cohn et al. (2018). 'Honesty in the Digital Age'. In: *University of Zurich, Department of Economics, Working Paper No. 280*.
- Celso M de Melo et al. (2019). 'Human Cooperation When Acting Through Autonomous Machines'. In: *Proceedings of the National Academy of Sciences* 116.9, pp. 3482–3487

4. Consumer Behavior under Price Discrimination

- Richard Thaler (1985). 'Mental accounting and consumer choice'. In: *Marketing science* 4.3, pp. 199–214
- Ernst Fehr and Klaus M Schmidt (1999). 'A theory of fairness, competition, and cooperation'. In: *The quarterly journal of economics* 114.3, pp. 817–868
- Teck-Hua Ho and Xuanming Su (2009). 'Peer-induced fairness in games'. In: *American Economic Review* 99.5, pp. 2022–49
- Chi-Cheng Wu et al. (2012). 'Consumer responses to price discrimination: Discriminating bases, inequality status, and information disclosure timing influences'. In: *Journal of Business Research* 65.1, pp. 106–116

5. Using Crowdsourcing Platforms for Economic Experiments

- John J Horton et al. (2011). 'The online laboratory: Conducting experiments in a real labor market'. In: *Experimental economics* 14.3, pp. 399–425
- Joseph K. Goodman et al. (2013). 'Data Collection in a Flat World: The Strengths and Weaknesses of Mechanical Turk Samples'. In: *Journal of Behavioral Decision Making* 26.3, pp. 213–224
- Haotian Zhou and Ayelet Fishbach (2016). 'The pitfall of experimenting on the web: How unattended selective attrition leads to surprising (yet false) research conclusions.' In: *Journal of Personality and Social Psychology* 111.4, pp. 493–504
- Neil Stewart et al. (2017). 'Crowdsourcing Samples in Cognitive Science'. In: *Trends in Cognitive Sciences* 21.10, pp. 736–748
- Eyal Peer et al. (2017). 'Beyond the Turk: Alternative platforms for crowdsourcing behavioral research'. In: *Journal of Experimental Social Psychology* 70, pp. 153–163
- Antonio A Arechar et al. (2018). 'Conducting interactive experiments online'. In: *Experimental Economics* 21.1, pp. 99–131

6. Innovating in the Crowd

- Lixiu Yu and Jeffrey V. Nickerson (2011). 'Cooks or Cobblers?: Crowd Creativity Through Combination'. In: *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*. CHI '11. Vancouver, BC, Canada: ACM, pp. 1393–1402

- Allan Afuah and Christopher L. Tucci (2012). 'Crowdsourcing As a Solution to Distant Search'. In: *Academy of Management Review* 37.3, pp. 355–375
- Aniket Kittur et al. (2013). 'The Future of Crowd Work'. In: *Proceedings of the 2013 Conference on Computer Supported Cooperative Work*. CSCW '13. San Antonio, Texas, USA: ACM, pp. 1301–1318
- Teppo Felin and Todd R. Zenger (2014). 'Closed or open innovation? Problem solving and the governance choice'. In: *Research Policy* 43.5, pp. 914–925
- Kevin J. Boudreau and Karim R. Lakhani (2015). "Open" disclosure of innovations, incentives and follow-on reuse: Theory on processes of cumulative innovation and a field experiment in computational biology'. In: *Research Policy* 44.1, pp. 4–19

7. Behavioral Design in Digital Environments

- Eric J. Johnson et al. (2013). 'Can consumers make affordable care affordable? The value of choice architecture'. In: *PloS one* 8.12, pp. 1–6
- Adam S. Brasel and James Gips (2014). 'Tablets, touchscreens, and touchpads: How varying touch interfaces trigger psychological ownership and endowment'. In: *Journal of Consumer Psychology* 24.2, pp. 226–233
- Tibor Besedeš et al. (2015). 'Reducing Choice Overload without Reducing Choices'. In: *Review of Economics and Statistics* 97.4, pp. 793–802
- Gabriele Esposito et al. (2017). 'Nudging to prevent the purchase of incompatible digital products online: An experimental study'. In: *PloS one* 12.3, pp. 1–15
- Mette Trier Damgaard and Christina Gravert (2018). 'The hidden costs of nudging: Experimental evidence from reminders in fundraising'. In: *Journal of Public Economics* 157, pp. 15–26

8. Choice Architecture for Reflective Privacy Decision Making

- Laura Brandimarte et al. (2013). 'Misplaced Confidences'. In: *Social Psychological and Personality Science* 4.3, pp. 340–347
- Alessandro Acquisti et al. (2015). 'Privacy and human behavior in the age of information'. In: *Science (New York, N.Y.)* 347.6221, pp. 509–514
- Idris Adjerid et al. (2018a). 'Choice Architecture, Framing, and Cascaded Privacy Choices'. In: *Management Science*
- Idris Adjerid et al. (2018b). 'Beyond the Privacy Paradox: Objective Versus Relative Risk in Privacy Decision Making'. In: *MIS Quarterly* 42.2, pp. 465–488