

# Report 2020-2023

MAX PLANCK INSTITUTE FOR RESEARCH ON

**COLLECTIVE GOODS** 



# Report 2020-2023

#### Please note:

For technical reasons concerning the print layout, some pages in this document have been left empty.

#### **Imprint**



Max Planck Institute for Research on Collective Goods

Kurt-Schumacher-Str. 10

53113 Bonn

Layout & Typesetting: Marc Martin

Editor: Brian Cooper

#### Photos:

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# **Table of Contents**

A.	A Short History of the Institute					
B.	B. Publications in Target Journals					
C.	Research Program	17				
	C.I Behavioral Law and Economics	19				
	C.II Experimental Economics	31				
	C.III Research Group "Economic Design & Behavior"	43				
	C.IV International Max Planck Research School on Behaviorally Smart Institutions (IMPRS BeSmart)	49				
D.	Research Portraits	57				
D. E.	Research Portraits  Conferences & Workshops	57 225				
E.	Conferences & Workshops	225				
E.	Conferences & Workshops Research Seminars	225 227				
E.	Conferences & Workshops Research Seminars F.I External Speakers in our Research Seminars	225 227 228				





# A. A Short History of the Institute

The Max Planck Institute for Research on Collective Goods was founded in 1997 as a temporary project group "Common Goods: Law, Politics and Economics" and transformed into a permanent institute in 2003. Its mission is to study the law, economics, and politics of collective goods, defined to encompass all those goods whose provision and enjoyment are treated as community concerns.

In the early years, the institute had teams of lawyers and political scientists, led by Christoph Engel (who leads the *Behavioral Law and Economics Group*) and Adrienne Héritier. When Adrienne Héritier left in 2003 to accept a joint chair at the European University Institute and the Schuman Centre in Florence, the Max Planck Society appointed economist Martin Hellwig to replace her. After Martin Hellwig's retirement in 2017, Matthias Sutter, an experimental economist, succeeded him as new co-director and established the *Experimental Economics Group*. In 2023, Axel Ockenfels joined, establishing the *Economic Design and Behavior* group. At this point, therefore, the institute consists mainly of lawyers and applied economists.

From the beginning, the work of the institute had three main goals: It aimed to understand collective-goods problems better, to find better solutions, and to understand the political, legal, and economic processes of defining problems and choosing solutions. In the years of the project group, major research efforts concerned

- the law and politics of waste management,
- the governance of the Internet, and
- the transformation of the nation state into a multi-level system of governance.

Martin Hellwig and his group mainly focused on the mechanism-design foundations of the theory of collective goods, and on the analysis and mitigation of the financial crisis.

Today, the major research efforts of the institute are concerned with

- the analysis of incentive problems in public-good provision,
- behavioral law and economics,
- the analysis of credence-goods markets and how to design better institutions,
- the experimental investigation of the development of economic preferences in childhood and adolescence, and
- the design of institutions from a behaviorally informed perspective

The different lines of research show that the institute aims at striking a balance between fundamental research and applied work with practical implications for society. Research objectives and strategies are laid out in this report.









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# **B.** Publications in Target Journals

#### **Publications in Target Journals**

In 2009, following a recommendation by the Max Planck Society, the institute defined a list of top journals, separately for each of the disciplines represented in the institute. Consulting with the researchers, this list was revised in October 2023 to reflect the current composition of the institute. If a paper is accepted for publication in the list the researchers (with a TVöD contract) receive a bonus. Category 1 means full bonus, and category 2 half a bonus. To express clearly which journals are regarded as flagship journals all information is published in the institute's MAX section.

In this section, we list all publications between 2020 and today that have (or, in the case of directors and group heads, would have) qualified for a bonus. For researchers who have left the institute, only publications are listed that go back to work undertaken at the institute. For researchers currently working at the institute, all publications that would have qualified for a bonus are listed, even if they have been published before a researcher joined the institute.

Journals that published articles by MPI scholars between the years 2020 and up to now are marked in bold in the following list.

#### **Economics Journals**

#### Category 1

American Economic Review

Econometrica

Journal of Political Economy

Quarterly Journal of Economics

The Review of Economic Studies

#### Category 2

American Economic Journal: Applied Economics

American Economic Journal: Economic Policy

American Economic Journal: Microeconomics

The Economic Journal

**European Economic Review** 

**Experimental Economics** 

Games and Economic Behavior

International Economic Review

Journal of Development Economics

Journal of Economic Behavior and Organization

Journal of Economic Theory

The Journal of Finance

Journal of Health Economics

Journal of Human Resources

The Journal of Industrial Economics

Journal of Labor Economics

Journal of Monetary Economics

Journal of Political Economy: Macroeconomics

Journal of Political Economy: Microeconomics

Journal of Public Economics

Journal of the European Economic Association

Management Science

Quantitative Economics

The Rand Journal of Economics

The Review of Economics and Statistics

The Review of Financial Studies

#### Law Journals

#### Category 1

American Law and Economics Review

Criminology

Journal of Empirical Legal Studies

The Journal of Law and Economics

The Journal of Law, Economics and Organization

Journal of Legal Analysis

The Journal of Legal Studies

#### Category 2

AcP Archiv für die civilistische Praxis

AöR Archiv des öffentlichen Rechts

Der Staat

Die Verwaltung

Journal of Experimental Criminology

Journal of Quantitative Criminology

Law and Human Behavior

Law and Society Review

Psychology, Public Policy, and Law

ZGR Zeitschrift für Unternehmens- und Gesellschaftsrecht

ZHR Zeitschrift für das gesamte Handelsrecht

#### Category 2

**European Sociological Review** 

Social Science Research

Social Networks

Sociological Science

The Journal of Politics

#### **Psychology Journals**

#### Category 1

Journal of Personality and Social Psychology

Personality and Social Psychology Review

Psychological Review

**Psychological Science** 

#### Category 2

Cognition

Cognitive Psychology

**Emotion** 

**European Journal of Personality** 

European Review of Social Psychology

Journal of Experimental Social Psychology

Journal of Experimental Psychology, i.e.:

Journal of Experimental Psychology: General

Journal of Experimental Psychology: Applied

Journal of Experimental Psychology: LMC

Journal of Personality

Judgment and Decision Making

Personality and Social Psychology Bulletin

Social Psychological and Personality Science

#### **Interdisciplinary Journals**

#### Category 1

Nature

Science

#### Category 2

Nature Climate Change

**Nature Communications** 

Nature Human Behaviour

Nature Sustainability

**PNAS** 

#### **Sociology Journals**

#### Category 1

The American Journal of Sociology

American Political Science Review

American Sociological Review

Social Forces

# **B. Publications in Target Journals**

### 2023 and forthcoming

Author	Journal	Details	Title
Ackfeld, V.; Güth, Werner	Games and Economic Behavior	Vol. 140 (2023), 1-32	Personal information disclosure under competition for benefits: Is sharing caring?
Alan, S.; Corekcioglu, G.; Sutter, Matthias	Quarterly Journal of Economics	Vol. 138 (2023), 1, 151-203	Improving workplace climate in large corporations: A clustered randomized intervention
Álvarez Benjumea, Amalia	European Sociological Review	Vol. 39 (2023), 3, 449-463	Uncovering hidden opinions: The erosion of norms and the expression of xenophobic attitudes
Angerer, S.; Bolvashenkova, J.; Glätzle-Rützler, D.; Lergetporer, P.; Sutter, Matthias	Journal of Public Economics	Vol. 220 (2023), April, 104837	Children's patience and school-track choices several years later: Linking experimental and field data
Balafoutas, L.; Batsaikhan, M.; Sutter, Matthias	Management Science	forthcoming	Competitiveness of entrepreneurs and salaried workers
Baumann, F.; Friehe, T.; Langen- bach, Pascal	The Journal of Legal Studies	forthcoming	Fines versus damages: Experimental evidence on care investments
Baumert, Anna; Maltese, S.; Lischetzke, T.	European Journal of Personality	forthcoming	Linking the momentary processing of injustice to intraindividual change in dispositional victim sensitivity
Baumert, Anna; Mentrup, F. E.; Klümper, L; Sasse, Julia	Journal of Personality	forthcoming	Personality processes of everyday moral courage
Bortolotti, Stefania; Soraperra, I.; Sutter, Matthias; Zoller, C.	The Review of Eco- nomics and Statistics	forthcoming	Too lucky to be true: Fairness views under the shadow of cheating
Buffat, J.; Praxmarer, Matthias; Sutter, Matthias	Journal of Economic Behavior and Organi- zation	Vol. 209, (2023), 560-571	The intrinsic value of decision rights: A note on team versus individual decision-making
Bursztyn, L.; Egorov, G.; Haaland, I.; Rao, A.; <b>Roth, Christopher</b>	Quarterly Journal of Economics	Vol. 158 (2023), 3, 1403-1451	Justifying dissent
Cerrone, Claudia; Hermstrüwer, Yoan; Kesten, O.	The Economic Journal	Conditionally accepted	School choice with consent: An experiment
Charness, G.; Cobo-Reyes, R.; Eyster, E.; Katz, G.; Sánchez, Á.; Sutter, Matthias	European Economic Review	Vol.159 (2023), 104562	Improving children's food choices: Experimental evidence from the field
Chatziathanasiou, Konstantin; Hippel, Svenja; Kurschilgen, Michael	The Journal of Legal Studies	Vol. 15 (2023), 62, 249-481	Does the threat of overthrow discipline the elites? Evidence from a laboratory experiment
<b>Dertwinkel-Kalt, Markus;</b> Ebert, S.; Köster, M.	Journal of Economic Behavior and Organi- zation	Vol. 215 (2023), 292-306	On correlated lotteries in economic applications
Dertwinkel-Kalt, Markus; Frey, J.	International Economic Review	forthcoming	Optimal stopping in a dynamic salience model
Dertwinkel-Kalt, Markus; Wey, C.	The Journal of Indus- trial Economics	forthcoming	Resale price maintenance in a successive monopoly model
Dertwinkel-Kalt, Markus; Köster, M.	Management Science	forthcoming	Salient cues and complexity
Dertwinkel-Kalt, Markus; Wey, C.	The Rand Journal of Economics	forthcoming	Why "energy price brakes" encourage moral hazard, raise energy prices, and reinforce energy savings
Dertwinkel-Kalt, Markus; Wey, C.	The Journal of Indus- trial Economics	Vol. 71 (2023), 2, 464-490	Third-degree price discrimination in oligopoly when markets are covered

Engel, Christoph; Helland, E.	American Law and Economics Review	forthcoming	Does the fundamental transformation deter trade? An experiment
Falk, A.; Kosse, F.; Schild- berg-Hörisch, Hannah; Zimmer- mann, F.	Journal of Public Economics	Volume 223 (2023), 104908	Self-assessment: The role of the social environment
Fang, X.; Goette, L.; Rockenbach, Bettina; Sutter, Matthias; Tiefen- beck, V.; Schoeb, S.; Staake, T.	Journal of Public Economics	forthcoming	Complementarities in behavioral interventions: Evidence from a field experiment on resource conservations
Friehe, T.; Langenbach, Pascal; Mungan, M. C.	The Journal of Legal Studies	Vol. 52 (2023), 1, 83-106	Does the severity of sanctions influence learning about enforcement policy? Experimental evidence
Grimalda, G.; Murtin, F.; Pipke, D.; Putterman, L.; Sutter, Matthias	European Economic Review	Vol. 156 (2023), 104472	The politicized pandemic: Ideological polarization and the behavioral response to COVID-19
Hager, A.; Hensel, L.; Roth, Christopher; Stegmann, A.	The Review of Eco- nomics and Statistics	forthcoming	Voice and political engagement: Evidence from a field experiment
Hager, A.; Hensel, L.; Hermle, J.; Roth, Christopher	The Economic Journal	Vol. 133 (2023), 653, 2068-2084	Political activists as free riders: Evidence from a natural field experiment
Haushofer, Johannes; Lowes, S.; Musau, A.; Ndetei, D.; Nunn, N.; Poll, M.; Qian, N.	Journal of Political Economy: Microeco- nomics	Vol. 1 (2023), 2, 225-269	Stress, ethnicity, and prosocial behavior
Hermstrüwer, Yoan; Langenbach, Pascal	Psychology, Public Policy, and Law	Vol. 29 (2023)	Fair governance with humans and machines
Huber, C.; Rahal, Rima-Maria; Fiedler, Susann; Saral, Ali Seyhun; [and many others]	PNAS	Vol. 120 (2023), 23, e2215572120	Competition and moral behavior: A meta-analysis of forty-five crowd-sourced experimental designs
Kerschbamer, R.; Neururer, D.; Sutter, Matthias	Journal of Public Economics	Vol. 222, (2023), 104891	Credence goods markets, online information and repair prices: A natural field experiment
Kiessling, Lukas; Norris, J.	The Economic Journal	Vol. 138 (2023), 1, 151-203	The long-run effects of peers on mental health
Luebber, F.; Krach, S.; Marina, M. M.; Paulus, F. M.; Rahal, Rima-Maria; Specht, J.	Nature Human Behaviour	Vol. 7, (2023), 1031- 1033	Rethink funding by putting the lottery first
Mischkowski, Dorothee	Psychological Science	forthcoming	Mimicry and prosocial behavior: A direct replication and extension of Van Baaren, Holland, Kawakami, and Knippenberg (2004)
Opitz, Saskia; Sliwka, D.; Vogelsang, T.; Zimmermann, T.	Management Science	forthcoming	The algorithmic assignment of incentive schemes
Praxmarer, Matthias; Rocken- bach, Bettina; Sutter, Matthias	European Economic Review	forthcoming	Cooperation and norm enforcement differ strongly across adult generations
Rahal, Rima-Maria; Fiedler, Susann; Adetula, A.; Berntsson, R. PA.; Dirnagl, U.; Feld, G. B.; Azevedo, F.	Nature Human Behaviour	Vol. 7, (2023), 164- 167	Quality research needs good working conditions
Rockenbach, Bettina; Tonke, Sebastian; Weiß, A.	The Review of Eco- nomics and Statistics	forthcoming	A large-scale field experiment to decrease non-payment for water: From diagnosis to treatment
Stefan, M.; Huber, J.; Kirchler, M.; Sutter, Matthias; Walzl, M.	European Economic Review	Vol. 156 (2023), 104458	Monetary and social incentives in multi-tasking: The ranking substitution effect

# **B. Publications in Target Journals**

Tonke, Sebastian	Journal of Develop- ment Economics	forthcoming	Providing procedural knowledge: Evidence from a field experiment to encourage resource conservation in Namibia
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#### 2022

Author	Journal	Details	Title
Bade, Sophie	Games and Economic Behavior	Vol. 134 (2022), 117-126	Dynamic semi-consistency
Álvarez Benjumea, Amalia; Breznau, N.; Rinke, E. M.; Wuttke, A.;; Żółtak, T.	PNAS	Vol. 119 (2022), 44, e2203150119	Observing many researchers using the same data and hypothesis reveals a hidden universe of uncertainty
Ambuehl, S.; Ockenfels, Axel; Stewart, C.	The Review of Economics and Statistics	(2022), 1-45	Who opts in? Composition effects and disappointment from participation payments
Bašić, Zvonimir; Quercia, S.	Games and Economic Behavior	Vol. 133 (2022), March, 162-169	The influence of self and social image concerns on lying
Berger, S.; Kilchenmann, A.; Lenz, O.; <b>Ockenfels, Axel</b> ; Schlöder, F.; Wyss, A. M.	Nature Human Behavior	Vol. 6, (2022), 1381-1385	Large but diminishing effects of climate action nudges under rising costs
Chowdhurry, S. K.; Sutter, Matthias; Zimmermann, K. F.	Journal of Political Economy	Vol. 130 (2022), 9, 2361-2419	Economic preferences across generations and family clusters: A large-scale experiment in a developing country
Dufwenberg, M.; Johansson- Stenman, O.; Kirchler, M.; Lindner, Florian; Schwaiger, R.	Journal of Public Economics	Vol. 209 (2022), May, 104648	Mean markets or kind commerce?
Egger, D.; Haushofer, Johannes; Miguel, E.; Niehaus, P.; Walker, M.	Econometrica	Vol. 90 (2022), 6, 2603-2643	General equilibrium effects of cash trans- fers: Experimental evidence from Kenya
Engel, Christoph	Journal of Empirical Legal Studies	Vol. 19 (2022), 4, 1179-1221	Lucky you: Your case is heard by a seasoned panel
Engel, Christoph; Georg, Sebastian J.; Traxler, Christian	Journal of Empirical Legal Studies	Vol. 19 (2022), 2, 447-490	Intensified support for juvenile offenders on probation: Evidence from Germany
Farid, A.; Efendić, E.; Olsen, Jerome; Arslan, R. C.; Malte, E.; Schneider, I. K.	Social psychological and personality science	Vol. 14 (2023), 6, 727-737	Bias in self-reports: An initial elevation phenomenon
Gill, A.; Heinz, Matthias; Schumacher, H.; Sutter, Matthias	Management Science	Vol. 69 (2023), 7, 3759-4361, iii-iv	Social preferences of young professionals and the financial industry
Hamann, Hanjo	PNAS	Vol. 119 (2022), 15, 119 (15) e2122274119	On getting it right by being wrong: A case study of how flawed research may become self-fulfilling at last
Hausmann, R.; Łoskot-Strachota, A.; <b>Ockenfels, Axel</b> ; Schetter, U.; Tagliapietra, S.; Wolff, G.; Zach- mann, G.	Science (Letter Section)	Vol. 376 (2022), (6592)	How to weaken Russian oil and gas strength
Kiessling, Lukas; Radbruch, J.; Schaube S.	Management Science	Vol. 65 (2022), 11, 7793-8514, iii-iv	Self-selection of peers and performance
Langenbach, Pascal	Die Verwaltung	Vol. 55 (2022), 2, 191-218	Zur Rezeption empirischer Forschung und psychologischer Verfahrenstheorie in der verwaltungsrechtlichen Debatte zur Akzep- tanz des Stromnetzausbaus

O'Hara, Laurence	Der Staat	Vol. 61 (2022), 2, 1-31	Intuitionen in der staatlichen Normarbeit: Wertungsgründe im Recht des psychol- ogisch aufgeklärten Staates zwischen utilitaristischer Rechtsstaatskritik und identitätspolitischem Misstrauen
Rahal, Rima-Maria; [and many others]	PNAS	Vol. 119 (2022), 22, e2111091119	A global experiment on motivating social distancing during the COVID-19 pandemic
Rahal, Rima-Maria; [and many others]	PNAS	Vol. 119 (2022), 30, e2120377119	Examining the generalizability of research findings from archival data
Romano, Angelo; Sutter, Matthias; Liu, J. H.; Yamagishi, T.; Balliet, D.	Nature Communica- tions	Vol. 13 (2022), 15, 196	Author correction: National parochialism is ubiquitous across 42 nations around the world
Sasse, Julia; Halmburger, A.; Baumert, Anna	Emotion	Vol 22 (2022), 6, 1321-1335	The functions of anger in moral courage: Insights from a behavioral study
Sendroiu, Ioana; Levi, R.; Hagan, J.	Social Forces	Vol. 101 (2022), 1, 281-308	Legal cynicism and system avoidance: Roma marginality in Central and Eastern Europe
Toribio-Flórez, Daniel; Sasse, Julia; Baumert, Anna	Personality and Social Psychology Bulletin	Vol. 29(2023), 3, 331-492	"Proof <i>under</i> reasonable doubt": Ambiguity of norm violation as boundary condition of third-party punishment
Van Doesum, N. J.; [] Fiedler, Susann; [] Romano, Angelo; [] Winter, Fabian; [and many others]	PNAS	Vol. 119 (2022), 4, e2119303118	Reply to Komatsu et al.: From local social mindfulness and prosociality to global sustainability efforts?
Van Doesum, N. J.; [] Romano, Angelo; [] Winter, Fabian; [and many others]	PNAS	Vol. 119 (2022), 9, e2122077119	Reply to Nielsen et al.: Social mindfulness is associated with countries' environmental performance and individual environmental concern
Watkins, H. M.; Li, Mengyao; Allard, A.; Leidner, B.	Personality and Social Psychology Bulletin	Vol. 48 (2022), 2, 315-327	The effect of war commemorations on support for diplomacy: A five-nation study
<b>Zhang, Nan;</b> Gerecke, J.; Baldassarri, D.	European Sociological Review	Vol. 38 (2022), 5, 679-693	Everyday discrimination in public spaces: A field experiment in the Milan Metro

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Author	Journal	Details	Title
Ackfeld, V.; Ockenfels, Axel	Games and Economic Behavior	Vol. 128 (2021), 128, 58-72	Do people intervene to make others behave prosocially?
Ambuehl, S.; Bernheim, D.; Ockenfels, Axel	American Economic Review	Vol. 111 (2021), 3, 787-830	What motivates paternalism? An experimental study
Anvari, F.; Olsen, Jerome; Wing, Y. H.; Feldman, G.	Journal of Experimen- tal Social Psychology	Vol. 92 (2021), January, 104052, available online 16 October 2020	Misprediction of affective outcomes due to different evaluation modes: Replication and extension of two distinction bias experiments by Hsee and Zhang (2004)
Barron, K.; Harmgart, H.; Huck, S.; Schneider, Sebastian O.; Sutter, Matthias	The Review of Economics and Statistics	(2021), 1-34	Discrimination, narratives and family history: An experiment with Jordanian host and Syrian refugee children
Bigoni, M; Bortolotti, Stefania	Games and Economic Behavior	Vol. 126 (2021), March, 387-401	Economic polarization and antisocial behavior: An experiment
Cerrone, Claudia; Hermstrüwer, Yoan; Robalo, Pedro	Games and Economic Behavior	Vol. 129 (2021), September, 114-143	Debarment and collusion in procurement auctions: An experiment

# **B. Publications in Target Journals**

Charness, G.; Feri, F.; Melendez- Jimenez, M; Sutter, Matthias	The Review of Economics and Statistics	(2021), 1-45	An experimental study on the effects of communication, credibility, and clustering in network games
Chatziathanasiou, Konstantin	Der Staat	Vol. 60 (2021), 2, 177-210	Sozio-ökonomische Ungleichheit: Ver- fassungstheoretische Bedeutung, ver- fassungsrechtliche Reaktionen
Chen, Y.; Cramton, P.; List, J.; Ockenfels, Axel	Management Science	Vol. 67 (2021), 9, 5317-5348	Market design, human behavior and management
Christensen, D.; Dube, O.; Haushofer, Johannes; Siddiqi, B.; Voors, M.	Quarterly Journal of Economics	Vol. 136 (2021), 2, 1145-1198	Building resilient health systems: Experimental evidence from Sierra Leone and the 2014 Ebola outbreak
Dang, J.; Barker, P.; <b>Baumert,</b> <b>Anna</b> ; et al.	Social Psychological and Personality Science	Vol. 12 (2021), 14-24	A multilab replication of the ego depletion effect
Engel, Christoph; Grgić-Hlača, Nina	Journal of Legal Analysis	Vol. 13 (2021), 1, 284-340	Machine advice with a warning about machine limitations: Experimentally testing the solution mandated by the Wisconsin Supreme Court
Eriksson, K.; Strimling, P.; Gelfand, M.; Wu, J.; Abernathy, J.;Fiedler, Susann; van Lange, P.	Nature Communica- tions	Vol. 12 (2021), 1, 1-11	Perceptions of the appropriate response to norm violations in 57 societies
Froehlich, L.; Dorrough, A. R.; Glöckner, Andreas; Stürmer, S.	Social Psychological and Personality Science	Vol. 12 (2021), 8, 1486-1498	Similarity predicts cross-national preferences
Glätzle-Rützler, D.; Lergetporer, P.; Sutter, Matthias	Games and Economic Behavior	Vol. 130 (2021), November, 131-147	Collective intertemporal decisions and heterogeneity in groups
Gulesci, S.; Puente-Beccar, Manuela; Ubfal, D.	Journal of Develop- ment Economics	Vol. 153 (2021), 102716	Can youth empowerment programs reduce violence against girls during the COVID-19 pandemic?
Hamann, Hanjo	Archiv für die civilistische Praxis	Vol. 221 (2021), 3, 287-316	Deutsche Zivilrechtslehre: Eine recht- statsächliche Untersuchung ihrer Demographie, Institutionalisierung und Lehrstuhldenominationen
Kassis, M.; Schmidt, S.; Schreyer, D.; Sutter, Matthias	Games and Economic Behavior	Vol. 126 (2021), March, 278-287	Psychological pressure and the right to determine the moves in dynamic tournaments: Evidence from a natural field experiment
Kiessling, Lukas	European Economic Review	Vol. 139 (2021), October, 103906	How do parents perceive the returns of parenting styles and neighborhoods?
Li, Mengyao; Leidner, B.; Petrovic, N.; Prelic, N.	Personality and Social Psychology Bulletin	Vol. 42 (2021), 4, 657-672	Close or distant past? The role of temporal distance in responses to intergroup violence from victim and perpetrator perspectives
Romano, Angelo; Sutter, Matthias; Liu, J; Yamagishi, T.; Balliet, D.	Nature Communica- tions	Vol. 12 (2021), 4456	National parochialism is ubiquitous across 42 nations around the world
Schmidt, K.; Ockenfels, Axel	PNAS	Vol. 118 (2021), 11, e2013070118	Focusing climate negotiations on a uniform common commitment can promote cooperation
Terrier, C.; Chen, D. L.; Sutter, Matthias	PNAS	Vol. 118 (2021), 46, e2110891118	COVID-19 within families amplifies the prosociality gap between adolescents of high and low socioeconomic status

Van Doesum, N. J.; [] Fiedler, Susann; [] Romano, Angelo; [] Winter, Fabian; [and many others]	PNAS	Vol. 118 (2021), 35, e2023846118	Social mindfulness and prosociality vary across the globe
Weiss, A.; Michels, C.; Burgmer, P.; Mussweiler, T.; Ockenfels, Axel; Hofmann, W.	Journal of Personality and Social Psychology	Vol. 121 (2021), 1, 95-114	Trust in everyday life

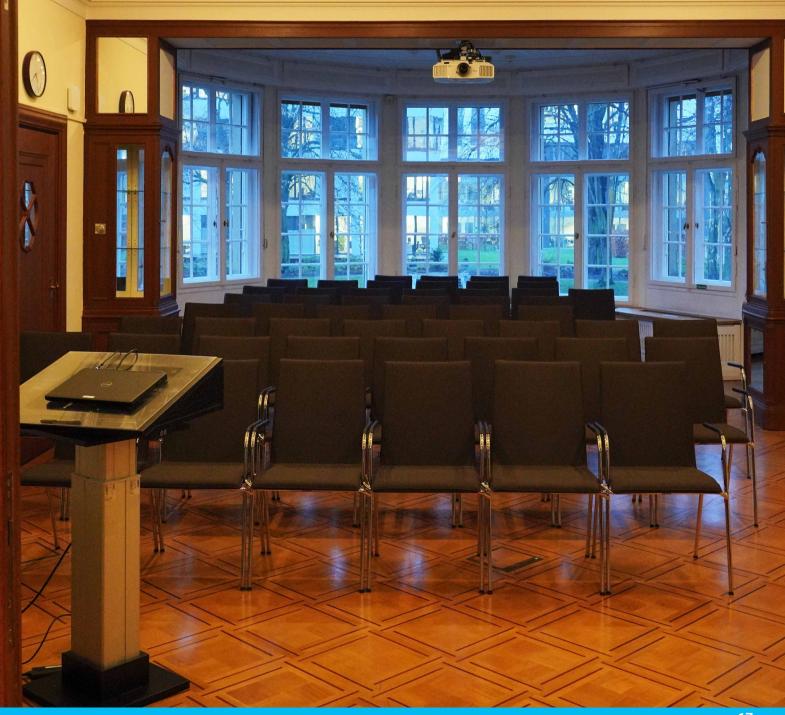
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Author	Journal	Details	Title
Álvarez-Benjumea, Amalia	Social Science Research	Vol. 117 (2020), November, 102480	Exposition to xenophobic content and support for right-wing populism: The asymmetric role of gender
Álvarez-Benjumea, Amalia; Winter, Fabian	PNAS	Vol. 117 (2020), 37, September 15, 22800-22804	The breakdown of anti-racist norms: A natural experiment on hate speech after terrorist attacks
Baumert, Anna; Maltese, S.; Reis, D.	Social Psychological and Personality Science	Vol. 11 (2020), 7, 899-907	A cross-cultural study of justice sensitivity and its consequences for cooperation
Baumert, Anna; Li, Mengyao; Sasse, Julia; Skitka, L.	Journal of Experimental Social Psychology	Vol. 88 (2020), May, 103951	Standing up against moral violations: Psychological processes of moral courage
Bolton, G.; Mans, J.; Ockenfels, Axel	The Economic Journal	Vol. 130 (2020), 1248-1261	Norm enforcement in markets: Group identity and the volunteering of feedback
Boosey, L.; <b>Brookins, Philip</b> ; Ryvkin, D.	Management Science	Vol. 66 (2020), 11, November, 5128- 5150	Information disclosure in contests with endogenous entry: An experiment
Boosey, L.; Goerg, Sebastian	Games and Economic Behaviour	Vol. 124 (2020), November, 254-280	The timing of discretionary bonuses: Effort, signals, reciprocity
Cramton, P.; Ockenfels, Axel; Roth, A. E.; Wilson, R. B.	Nature	582, 334-336	Borrow crisis tactics to get COVID-19 supplies to where they are needed
Dertwinkel-Kalt, M.; Köster, M.; Sutter, Matthias	European Economic Review	Vol. 130 (2020), November, 103593	To buy or not to buy? Price salience in an online shopping field experiment
Engel, Christoph; Timme, S.; Glöckner, Andreas	Psychology, Public Policy, and the Law	Vol. 26 (2020), 3, 333-352	Coherence-based reasoning and order effects in legal judgments
Engel, Christoph; Weinshall, K.	Journal of Empirical Legal Studies	Vol. 17 (2020), 4, 722-752	Manna from heaven for judges: Judges' reaction to a quasi-random reduction in caseload
Evans, A. M.; Fiedler, Susann; Kogler, C.	Journal of Experimen- tal Social Psychology	Vol. 90 (2020), September, 104007, available online 6 June 2020	Process tracing methods in social psychology: Editorial
Fiedler, Susann; Hillenbrand, Adrian	Games and Economic Behavior	Vol. 121 (2020), May, 232-252	Gain-loss framing in interdependent choice
Haushofer, Johannes C.; Metcalfe, J.A.	Science	Vol. 368 (2020), 6495, 1063-1065. Online: 05 June 2020	Which interventions work best in a pandemic?
Heinz, Matthias; Jeworrek, S.; Mertins, V.; Schumacher, H.; Sutter, Matthias	The Economic Journal	Vol. 139 (2020), November, 2546- 2568	Measuring indirect effects of unfair employer behavior on worker productivity: A field experiment

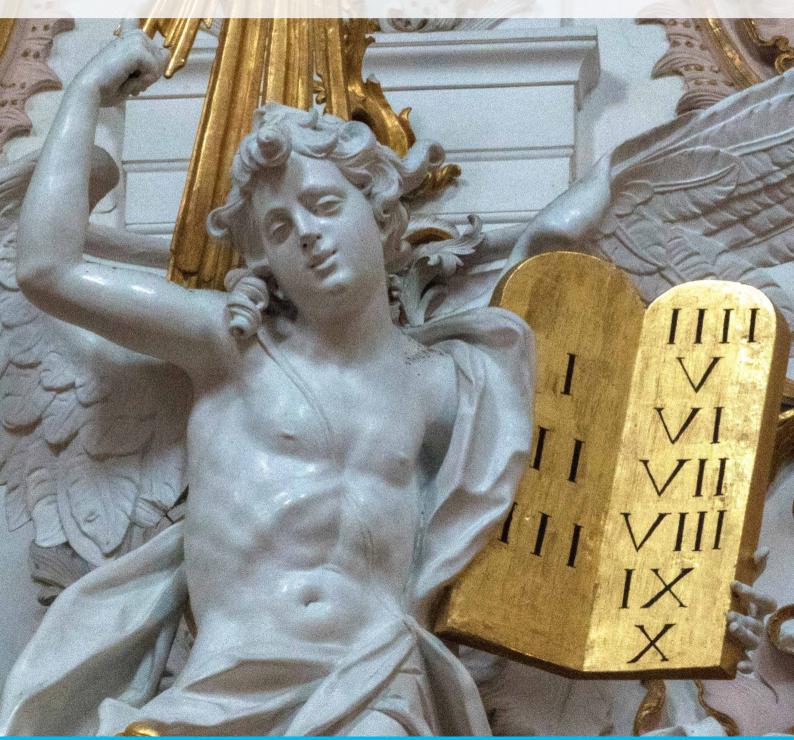
# B. Publications in Target Journals

Hermstrüwer, Yoan	Archiv des öffentlichen Rechts	Vol. 145 (2020), 3, 479-521	Fairnessprinzipien der algorithmischen Verwaltung: Diskriminierungsprävention beim staatlichen Einsatz von Machine Learning
Holzmeister, F; Huber, H.; Kirchler, M; <b>Lindner, Florian</b> ; Weitzel, U.; Zeisberger, S.	Management Science	Vol. 66 (2020), 9, 3977-4002	What drives risk perception? A global survey with financial professionals and laypeople
Li, Mengyao; Leidner, B.; Fernan- dez-Campos, S.	Personality and Social Psychology Bulletin	Vol. 46 (2020), 3, 424-438	Stepping into perpetrators' shoes: How ingroup transgressions and victimization shape support for retributive justice through perspective-taking with perpetrators
Mõttus, R.; Baumert, Anna; et al.	European Journal of Personality	Vol. 34 (2020), 6, 1175-1201	Descriptive, predictive and explanatory personality research: Different goals, different approaches, but a shared need to move beyond the big few traits
Ockenfels, Axel; Schier, U.	Journal of Economic Behavior and Organi- zation	Vol. 172 (2020), 97-106	Games as frames
Ockenfels, Axel; Werner, P.; Edenhofer, O.	Nature Sustainability	Vol. 3 (2020), 872-877	Pricing externalities and moral behaviour
O'Hara, Lawrence	Archiv des öffentlichen Rechts	Vol. 145 (2020), 1, 133-187	Grundrechtsschutz vor psychisch ver- mittelter Steuerung: Beschränkte Auton- omie und verhaltenswissenschaftliche Annahmen in der Grundrechtsdogmatik
Weitzel, U.; Huber, C.; Huber, J.; Kirchler, M.; Lindner, Florian; Rose, J.	The Review of Finan- cial Studies	Vol. 33 (2020), 6, 2659-2696	Bubbles and financial professionals

# C. Research Program



# C.I Behavioral Law and Economics



#### **Behavioral Law and Economics** C.I

Director: Prof Dr Dr h.c. Christoph Engel

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Dr Stefanie Egidy (law, joined in 2016 from Würzburg and Yale Universities, left in 2023 to become full professor at Mannheim University)

Dr Dr Hanjo Hamann (law and economics, joined as postdoc in 2016, left in 2022 for a tenure track position at EBS Wiesbaden)

Dr Dr Yoan Hermstrüwer (law and economics, joined as postdoc in 2017, left in 2023 to become full professor at Zurich University)

Dr Dr Pascal Langenbach (law and economics, joined as postdoc in 2018)

Dr Dorothee Mischkowski (psychology, joined in 2022 from Cologne University)

Dr Laurence O'Hara (law, joined from Bucerius Law School in 2018)

Dr Rima-Maria Rahal (psychology, joined in 2020 from Tilburg University)

Dr Frederike Zufall (law and computer science, joined in 2020, left in 2023 for a tenure-track position at KIT Karlsruhe)

**Part-Time** 

Prof Dr Andreas Glöckner (psychology, Cologne University)

Prof Dr Sebastian Kube (economics, Bonn University)

Dr Martin Sternberg (law, former PhD student, intern)

**External Habilitation Project** 

Dr Dana Burchardt (law, Free University Berlin)

#### **Doctoral Students**

Alexander Egberts (law, joined in 2021)

Nina Grgić-Hlača (computer science, joined in 2020, joint with MPI Saarbrücken)

Arian Henning (law, joined in 2021)

Thomas Holzhausen (law, joined in 2022)

Fabian Jäkel (law, joined in 2021)

Mahdi Khesali (law, joined in 2020)

Kirsten Marx (economics, joined in 2020, left for Finance Ministry in 2023)

Johannes Rottmann (law, joined in 2020)

Robin Scheuch (economics, joined in 2022)

Cornelius Schneider (economics, Dr. rer. pol. 2021, left in 2021 for Mannheim University)

Marcel Schubert (economics and computer science, Dr. rer. pol. 2021, left for industry)

Saparya Sood (law, joined in 2022)

Matthew Trail (law, joined in 2020)

Yugi Wang (economics, joined in 2020)

**External Doctoral Students** 

Tom Brinker (economics, IMPRS, joined in 2022)

Sophia Hornberger (economics, IMPRS, joined in 2022)

Stefan Tontrup (law and economics, former IMPRS, Dr. jur. 2023)

This will be the last report about the work of the group, as Christoph Engel will be emeritus at the next meeting of the advisory council. Let us therefore start our report by looking back: What has the group been able to achieve?

We are certainly most proud of having put Germany on the map of empirical legal scholarship, as documented by publications in all the relevant journals: the *Journal of Legal Studies* (Baumann et al., 2024; Bjørnskov et al., 2022; Chatziathanasiou et al., 2022; Engel & Zhurakhovska, 2017; Friehe et al., 2023), the *Journal of Empirical Legal Studies* (Buijze et al., 2017; Eisenberg & Engel, 2014, 2016; Engel, 2019, 2022b; Engel & Glöckner, 2013; Engel et al., 2022; Engel et al., 2015; Engel et al., 2018; Engel & Kurschilgen, 2011; Engel & Weinshall Margel, 2020), the *Journal of Law and Economics* (Bar-Gill & Engel, 2016, 2018; Mischkowski et al., 2019), the *Journal of Law, Economics and Organization* (Langenbach & Tausch, 2019) and the *Journal of Legal Analysis* (Engel & Grgić-Hlača, 2021).

While we have not been confined to that, the group has been most visible for a behavioral perspective on law, in particular adapting the conceptual and empirical tools from behavioral economics, as documented by multiple joint projects with experimental economists (e.g., Bünstorf et al., 2016; Cerrone et al., 2021; Engel & Goerg, 2018; Normann & Sternberg, 2023). But there have always also been collaborative ventures between lawyers and psychologists, (e.g., Engel, Timme, et al., 2020; Engel & Van Lange, 2021; Hertwig & Engel, 2016) and, more recently, between lawyers and computer scientists (e.g., Engel & Grgić-Hlača, 2021; Grgić-Hlača et al., 2019; Zufall, Hamacher, et al., 2022).

Empirical legal scholarship is a thoroughly international enterprise. We are very happy to know that a former member of the group is now a professor at Washington University (Jens Frankenreiter), another has a center at ETH Zurich (Stefan Bechtold), Yoan Hermstrüwer has just started his chair at U Zurich, and Armin Steinbach is a professor at HEC Paris. 1 However, we are equally glad that so many former members of the group have become law professors in Germany, which provides them with the opportunity to open the German legal discourse gradually towards a social-science perspective. Actually, all lawyers who have passed habilitation have become full professors, Florian Becker (U Kiel), Indra Spiecker (U Frankfurt), Stefan Magen (U Bochum), Anne van Aaken (U Hamburg), Jörn Lüdemann (U Rostock), Niels Petersen (U Münster), Emanuel Towfigh (EBS Wiesbaden), Alexander Morell (U Frankfurt), and Stefanie Egidy (U Mannheim).2

The fact that the group will come to a close in less than two years has had a predictable effect on its composition. Stefanie Egidy and Yoan Hermstrüwer have passed habilitation, and have taken up their positions at Mannheim and Zurich, respectively. Two more former postdocs in law have taken up tenure-track positions, Hanjo Hamann (EBS Wiesbaden) and Frederike Zufall (KIT Karlsruhe), but plan to complete the habilitation projects they started while at the institute. Dana Burchardt has also handed in her habilitation thesis. Pascal Langenbach and Laurence O'Hara are working hard on finishing their habilitation projects. The two postdocs in psychology are also on the market. Dorothee Mischkowski has won a prestigious Marie Curie Fellowship and divides her time between Leiden and Bonn. Rima Rahal is applying for a research group. Yet, to my great satisfaction, four new senior members will join the group for the time until my retirement: Johannes Kruse joined in November 2023 and has started a habilitationproject (to be completed on outside funds after the closure of the group in August 2025). Pjotr Bystranowski comes from Poland, with a project at the intersection of behavioral research and legal philosophy. Amit Haim will come after finishing his PhD in Stanford, and will spend a good year before going on the Israeli market. Finally, Jakob Merane will arrive in July 2024, start his habilitation project, and will finish it on a position at ETH Zurich. That said, the group has devoted the resources to a considerably larger number of PhD students than it had in the past, given that for them time is still suffi-

Since the group is headed by a legal scholar, the following report is organized along areas of law in which we have been active over the last three years, namely private law (1), public law (2), criminal law (3), and legal studies (4). The report concludes with a view on the plurality of empirical methods the group has brought to bear on these research topics (5).

#### **Private Law**

The international discourse in empirical legal studies is much more active in the area of private law than in public law (which is the home turf of many of the lawyers in the group). This explains why multiple empirical projects have focused on topics that, traditionally, have been brought under the rubric of private law.

**Torts.** In a law and economics perspective, legal sanctions change incentives. This is why tort law is interpreted as a technology for deterring socially undesirable behavior. If one assumes that the law's addressees maximize expected utility,

<sup>1</sup> Monika Leszczynska left the institute after her PhD, is now an assistant professor at U Maastricht, and will likely also make it on the US market.

<sup>2</sup> Two former PhD students in law are now working on their habilitation projects in Münster (Konstantin Chatziathanasiou) and at Humboldt University Berlin (Leonhard Hoeft).

they should estimate two pieces of information: the severity of the sanction, and the probability that it will be inflicted on them. In theory, these two estimates should be independent. In their experiment, published in the *Journal of Legal Studies*, Friehe et al. (2023) show that, actually, participants use severity as a signal for the likelihood of intervention, arguably because participants infer from severity how strongly the legislator cares about a conduct of behavior.

From this rational-choice perspective, one should also expect that damages are just a technology for causing disutility for the tortfeasor. Consequently, the deterrent effect of damages and of a fine of equal size should be indistinguishable. In another experimental paper, also published in the *Journal of Legal Studies*, Baumann et al. (2024) show that this is empirically not true. When exposed to torts liability, potential tortfeasors invest much more into precaution, arguably because they appreciate that the victim is made whole.

An earlier experiment conducted by the group has shown that an independent reason why torts liability is effective in governing behavior is blame: Even if there is no monetary effect, participants try to avoid explicit blame (Eisenberg & Engel, 2016). In their vignette study, Lima, Grgić-Hlača, et al. (2023) show that the content of the ex-post explanation indeed influences how people attribute blame to system designers and users. Actually, perceptions of fairness, justice, and trust depend on the terminology used to characterize the computerized agent: "algorithm", "artificial intelligence", or "computer program" (Langer et al., 2022). Laypersons expect both developers and users to be held financially liable for harm caused by an algorithm (Lima, Grgić-Hlača, et al., 2023).

Contract. In a market economy, trade is voluntary. Goods and services are allocated to buyers who express the strength of their preference by the price they are willing to pay. This is why trade is efficient. Yet, this normatively desirable property only obtains from an ex-ante perspective. This is not an issue if trade is ad-hoc. Yet, in several business relationships, having fulfilled the initial contract does not complete the interaction. Often, for either side the contract only makes sense if the relationship continues as expected. This is particularly true if, relying on the prospect of a long-term relationship, either side has made relation-specific investments. Then, what Oliver Williamson has coined a fundamental transformation takes place. Both parties end up in a bilateral monopoly. Engel and Helland (2024) test experimentally whether the anticipation of the resulting risk deters mutually beneficial trade.

In an ongoing experimental project with Oliver Hart, Christoph Engel allows for "shading": If, after the fact, either side of the contractual relationship is unhappy with the outcome, she may inflict harm on her contractual partner. Specifically the design builds on a standard situation of "efficient breach of contract":

one party gains an attractive outside option. The experiment tests whether the contractual relationship is more likely to continue, and the incidence of shading can be reduced, if the parties have agreed ex-ante on treating each other in good faith, should unexpected contingencies materialize.

This work is also related to two field experiments by Matthias Sutter on trade in credence goods (Bindra et al., 2021; Kerschbamer et al., 2023).

Property. Christoph Engel has continued his line of research with Oren Bar-Gill on behavioral advantages of property over contract (Bar-Gill & Engel, 2016, 2018). The new experiment isolates a cognitive advantage. If property is enforceable, there is no need to anticipate whether, eventually, a taking war would be futile, as the counterpart has greater taking power (Bar-Gill & Engel, 2024).

Hamann (2023) studies the relationship between landlord and tenant through the lens of cultural psychology. If doctrine interprets tenancy in terms of property, rather than contract, it buys into an interdependent, not an independent, self-construal.

In his PhD project, Tom Brinker investigates whether patent protection, i.e., intellectual property, is sufficient to incentivize innovative solutions for protecting the climate, which would help justify that regulatory intervention focuses on carbon pricing.

Antitrust. Collusion is a pervasive concern in auctions. A frequent response of auctioneers is debarment: Bidders who have been found to collude are excluded from the next auctions. In their experiment, Cerrone et al. (2021) investigate under which conditions this intervention is effective. It turns out that the sanction must be sufficiently severe, in terms of the exclusion period being sufficiently long, to have a deterrent effect

In more and more markets, buying and selling decisions is delegated to algorithms. In their experiment, Normann and Sternberg (2023) investigate a market in which human participants trade with algorithms. The presence of an algorithm makes markets more collusive, in particular if it is possible, but not certain, that one of the suppliers is a computer.

Two PhD projects also deal with antitrust issues. Johannes Rottmann investigates the anti-competitive effect of price-beating guarantees and meeting-competition clauses. Sophia Hornberger tests experimentally how participants react to suppliers' attempts at near-perfect price discrimination.

Comparative Law. The field of comparative law is fascinated by the possibility of considering multiple jurisdictions at a time on the same legal question, not the least due to the availability of digital corpora of legislative acts or jurisprudence. Engel (2021) discusses why description is usually insufficient, and why causal inference is hard when comparing the solutions adopted by different jurisdictions.

#### **Public Law**

**Democracy.** In a democracy, power is precarious by design. At the next election, those ruling the country may lose their positions. Arguably, anticipating the risk disciplines the elites. In a lab experiment, published in the *Journal of Legal Studies*, Chatziathanasiou et al. (2022) test the effect. They introduce a hierarchy of wealth and influence, but give the powerful the option to prevent revolt with the help of redistribution. Yet, it turns out that the strong players employ the option insufficiently, and therefore overthrowal is not kept in check.

In a paper published in the same issue of the *Journal of Legal Studies*, Bjørnskov et al. (2022) take a close look at declarations of a state of emergency across jurisdictions and find that a considerable fraction of them has actually violated the respective constitution.

Democracy theory distinguishes "output legitimacy" (the substantive policy is considered acceptable) from "input legitimacy" (the decision which policy to adopt has been taken in an acceptable democratic procedure). Engel, Mittone, et al. (2023)³ use an experiment to compare these competing sources of legitimacy, which they measure by the degree of tax evasion. Both sources matter, but for the most part input legitimacy is sought as a technology to guide the policy choice into an accepted direction (i.e., a concern for output legitimacy).

The German party landscape is becoming more and more fractionated. This puts stress on the traditional electoral system, aiming at local representation as well as proportionality. Achieving both goals requires overhang seats in parliament and has led to a steady increase in the number of its members. A survey by Haffert et al. (2023) elicits the preferences of members of the general public regarding reform. Support strongly differs by the degree of understanding that respondents have about the system and reform options.

A policy paper by Egidy (2022a) discusses the challenges for the democratic process resulting from the micro-targeting of political advertising.

Constitutional Jurisprudence. In public perception, the German Constitutional Court acts as an arbiter. Some political force is not happy with an act or omission of another political force, and asks the court to decide. Some citizen feels aggrieved by sovereign intervention and asks the court for

help. In this perspective, the political and the legal conflict is out there, and the court dissolves it. In her *habilitation* thesis, Egidy (2023) takes a different view. What if the parties go to court because they have a goal that transcends the concrete conflict? And what if the court itself tries to attract, or select, cases that make it possible to shape the political agenda? She not only meticulously documents the issue. She also offers a normative assessment and develops solutions if the strategic effect is considered excessive.

In the US, a whole industry explores the technical possibility of analyzing jurisprudence quantitatively. The German Constitutional Court has made its rulings available online for more than 20 years, but thus far, the quantitative analysis of these data is still in its infancy. Engel (2022b) exploits a characteristic feature of the German judiciary to identify the effect of familiarity, defined as co-tenure, on case outcomes. Causal inference is made possible by the fact that the composition of chambers of three repeatedly changes in ways that the individual justice cannot influence, and can only partly predict. It turns out that higher familiarity helps the applicant.

A descriptive paper shows that the attention that the Constitutional Court devotes to classes of social conflicts has changed over time. In particular, the number of rulings discussing economic freedom has steadily declined (Engel, 2022a).

The proportionality principle developed by the German Constitutional Court has been adopted by multiple jurisdictions all over the world. In its final doctrinal step, it requires "balancing" normative concerns, expressed in competing normative currencies. Zufall et al. (2021) and Zufall, Kimura, et al. (2022) propose a mathematical model for rationalizing the approach. Egidy (2021) critically discusses a decision of the Constitutional Court that extends proportionality analysis to the monetary policy adopted by the European Central Bank. She proposes an alternative mechanism for generating democratic legitimacy.

Need for Intervention. Under German law, teleological interpretation is the predominant approach. This is not least because any statutory provision, any administrative act, and any court decision are subject to constitutional scrutiny. Applying the balancing test requires defining a "legitimate aim". Traditionally, these aims are defined in the abstract. There is some social ill, to which the law reacts. In his habilitation project, Pascal Langenbach questions the approach. He investigates in which ways the implicit assumption is overly simplistic that all the laws' subjects are sufficiently similar, so that they can be treated alike. He also discusses the pros and cons of fine-tuning legal intervention to the observed heterogeneity of the addressees.

<sup>3</sup> R&R in Economic Inquiry.

Engel and Rockenbach (2023)<sup>4</sup> provide empirical evidence. In a well-known paper, Fischbacher and Gächter (2010) have argued that contributions in a standard public-goods experiment decay over time because conditional cooperation is imperfect. Reanalyzing their data, it turns out that true conditional cooperation is near-perfect. Using simulation, the authors show that the primary source of decay is the heterogeneity of participants. If conditional cooperators meet free-riders, they adjust their expectations about cooperativeness and their behavioral response. The finding suggests that managing heterogeneity is critical for the provision of public goods. Bartosch and Mischkowski (2023) show that many participants classified as selfish in a test for social-value orientation still cooperate in a dilemma situation for strategic reasons. Westfal et al. (2023) investigate when there is a chance that prosocial behavior is merely copied.

There is a mature literature on the motivating power of social preferences. If taken literally, it suggests that the need for sovereign intervention is much less pronounced than one would think when assuming "standard preferences", i.e., the maximization of individual profit. One experimental paradigm that shows the effect is social mindfulness. When given a choice between two items, most experimental participants pick the one that preserves the opportunity for a second mover to choose (Van Doesum et al., 2013). Engel and Van Lange (2021) show that the effect disappears once giving the second mover a choice comes at a pecuniary cost.

In the economic textbook, not only standard preferences are assumed, but common knowledge of such preferences. Individuals not only exclusively care about their own payoff; they also expect those with whom they interact to do the same. On this assumption, the option that one participant could spend money on punishing another participant is immaterial. This assumption has been clearly rejected by the data (Fehr & Gächter, 2000), but why? Funk and Mischkowski (2022) show that the motive is not only consequentialist, but also retributional.

Punishing sentiments can be instrumental for the solution of social problems. But if punishment is costly, it is important to understand the conditions under which the economic counter-incentive is likely to be overcome. Offer et al. (2023) use an ultimatum game to test whether participants exploit ambiguity to avoid the urge of punishing a selfish first mover (by refraining from retrieving information about the payoff structure of the game). In his PhD project, Yuqi Wang is also interested in such motivated reasoning. In a series of experiments, he investigates whether individuals enable a self-serving interpretation of the situation with the help of motivated memory recall.

In his contribution to the new edition of the *Handbuch des Staatsrechts*, Engel (2023b) discusses to which degree competition (in markets for goods and services; for votes; for ideas; between sovereign states) solves regulatory problems, or, on the contrary, creates them.

Administrative Intervention. From a behavioral perspective, much of administrative law can be reconstructed as sovereign intervention aiming at removing or at least mitigating a perceived social problem. This is the perspective Yoan Hermstrüwer adopts in his habilitation thesis. He analyses a whole area of administrative law that has largely escaped scholarly attention: market design. The theoretical and empirical literature in economics offers powerful options for improving existing regulatory solutions. In a thought-provoking way, Yoan Hermstrüwer exemplifies the analysis in three areas of administrative law: admission to childcare, university admission, and the geographical distribution of refugees. (Cerrone et al., 2023) generate complementary empirical evidence. In an experiment, they test the novel mechanism EADEM, meant to strike a balance between stability and efficiency.

A behavioral perspective invites the question whether more light-handed interventions might suffice. One such intervention is informational. In an experiment, Engel et al. (2021) show that merely managing expectations can be instrumental, but only if the additional information is sufficiently salient, resulting from the fact that it is at variance with the predominant expectation.

Two PhD projects can also be brought under this rubric. Tom Brinker interprets the interaction between the regulator and firms as a signalling game in which the only channel of communication is the regulatory outcome, e.g., observed emissions. Saparya Sood is interested in responsibility along the supply chain. She wants to test experimentally whether the degree of foreseeability is an important moderator of oversight by downstream firms.

**Algorithmic Governance.** There has been considerable interest in the group in governance through algorithm, be that as a challenge that regulation intends to address, or as the solution to a differently motivated governance problem.

Kyi et al. (2023) show that the term "legitimate interest" is routinely abused to have users consent to cookies. In his legal PhD project, Alexander Egberts wants to delve deeper into such "dark patterns". Mahdi Khesali wants to understand better in his PhD project, both conceptually and empirically, which regulatory challenges result from generative artificial intelligence, like ChatGPT. Zufall and Zingg (2021) transpose a limitation to competition that has been well understood in telecommunications regulation (portability) to the online context.

<sup>4</sup> R&R in the Journal of Economic Psychology.

Another focus has been algorithmic fairness. Hermstrüwer and Langenbach (2023) use vignettes to show that perceived fairness is highest if there is a human in the loop. But it suffices if the human has power to intervene; perceived fairness does not increase if each and every algorithmic decision is actually subject to human control. Grgić-Hlača, Lima, et al. (2022) show that political views and personal experience with the algorithmic decision context significantly influence perceptions about the fairness of the algorithm using certain informative features.

A frequently voiced concern with algorithmic decision-making is opaqueness. A whole sub-branch of computer science reacts by developing ex-post explanations. Lima et al. (2022) show that this can be a double-edged sword. The ex-post explanation might direct blame away from developers to users, or even to vulnerable groups who are discriminated against. On the other hand, as Arian Henning investigates in his legal PhD project, the possibility of constructing a counterfactual (which element of the case would have flipped the outcome, had it been different?) might open up a thought-provoking and powerful alternative approach to the justification of administrative acts.

Inside the Administration. In his habilitation project, Laurence O'Hara directs the behavioral lens inside the administration: which insights are to be gained from analyzing frontline administrators, like the police, but also parts of the administration that are less exposed to contact with citizens, in the light of experimental economics and psychology? Under which circumstances do their superiors, government or the legislator, stand a better chance of guiding their action towards being responsible, and in line with the normative expectations of government?

Three PhD projects look into specific groups of public administration. Matthew Trail capitalizes on a decade of professional experience in the US childcare system. He empirically investigates how both childcare workers and the courts interpret the standard of child welfare. Fabian Jäkel is interested in a group of public officials that have a specific status. Under German law, the large majority of schools is public, and teachers are usually public servants (Beamte). This status comes with a number of privileges (like tenure), but also with special obligations. One of them is the requirement of a health exam before hiring. Anecdotal evidence has it that many future teachers shy away from seeing a doctor when experiencing mental-health issues, for fear of putting their future status as public servant at risk. Fabian Jäkel empirically investigates the concern and develops solutions. Finally, Johannes Rottmann runs a large-scale survey that includes experimental elements with legal interns. The investigation is triggered by government increasingly having difficulty attracting first-rate law students

to a career in the judiciary or administration. The project aims at finding the most relevant causes.

Behavioral Perspective on Public Law. The core task for the group is of course empirical. But by design each individual empirical project has a narrow focus. This is a precondition for generating causal inference. Yet, after more than a decade of such investigations, it seemed time to play the existing evidence back to the German legal community, and to identify promising routes for future empirical undertakings. As we want to reach the German legal community with this publication, we have written it in German. The book charts the landscape of both constitutional and administrative law from the angle of behavioral effects. All the senior public lawyers in the group (including those who have left the institute in the meantime) have contributed to this collective endeavor (Engel et al., 2024).

#### **Criminal Law**

Crime. The institute benefits from a joint venture with the Freiburg MPI. Within the framework of Max Planck Law, both institutes together have been able to attract a highly visible criminologist as a fellow. Dan Nagin is active in both institutes, with a research program that focuses on bystander intervention on the crime scene. He exploits a difference in methodological orientation. Together with the criminology department in Freiburg, he looks at the topic through the lens of a longitudinal study undertaken in collaboration with the criminology institute of the University of Zürich and also plans to use virtual reality. In collaboration with our institute, he runs a series of tightly controlled and fully incentivized lab experiments. We manipulate the conditions for costly intervention on behalf of a third party who is the victim of theft. In 2024, we will also jointly organize a symposium that brings economists working on crime together with criminologists, with the intention of building a bridge across this surprisingly deep divide.

This collaboration has been triggered by a first success in convincing criminology that the discipline has something to gain from the established paradigm of experimental economics. This first paper builds on Desmet and Engel (2021). In that paper, we have shown that not only is cooperation conditional (Fischbacher et al., 2001), but so is the willingness to follow a rule just because it is the rule. The more rule-abiding peers there are, the more the individual in question, on average, is willing to abide by the rules as well. The new project puts the effect upside down (Engel, 2023a). It does not inform participants about the degree of rule-abiding in the community, but about the degree of rule violation. The effect replicates, showing criminology that the heavily-investigated peer effect actually has a very basic root: When deciding whether to abide

by the law or to engage in crime, individuals are motivated by what others in their community are doing.

Social media overwhelms enforcement agencies with the sheer amount of activity, and with its complexity. The impediment is particularly constraining in legal attempts at preventing and prosecuting hate speech. Zufall, Hamacher, et al. (2022) have developed a tool that can flag suspicious language for closer inspection by enforcement agencies.

In his PhD project, Robin Scheuch plans to continue where Engel, Mittone, et al. (2020) left off. He wants to analyze tax evasion from a behavioral perspective. He is particularly interested in the governance effect of enforcement activities that would be too weak to deter a citizen determined to maximize her income.

Intervention. Engel et al. (2022) had the good fortune to convince the regional court of Cologne to let them randomize a criminal sanction. The court exploited considerable leeway left by the Code for Juvenile Crime (JGG). For the duration of almost two years, the court classified each juvenile convict as to whether he was eligible for "intense probation", as a last attempt at keeping him out of jail. If the scheme applied, a probation officer strongly intervened in the convict's life, with the intention of bring him back to a normal civil life. Unfortunately, the number of observations that they could collect was too small to identify a standard randomized control trial effect. However, with the help of regression discontinuity, they did find that convicts just at the border of eligibility benefited most from the program, in terms of reducing the incidence of recidivism.

Further intervention studies focused on the famous COMPAS dataset. The original purpose of the algorithm is estimating recidivism risk, which under American law is relevant for the decision (not) to release an apprehended person on bail. The data set is prominent, since ProPublica, using freedom-of-information legislation, has provided ground truth (Larson et al., 2016). Engel, Linhardt, et al. (2023) demonstrate a bias that has hitherto escaped public attention: The algorithm strongly privileges potential victims over potential criminals. It does so by putting much more stress on avoiding false negatives (the criminal is released on bail, but has committed another crime before being tried), rather than avoiding false positives (the defendant is kept in custody, although she would not have engaged in new crime). Grgić-Hlača, Castelluccia, et al. (2022) show that, in the COMPAS setting, human participants prefer advice from algorithms that make errors more similar to typical human errors than from algorithms that complement human knowledge. Lima et al. (2021) show that human observers do hold the algorithm morally responsible for mistakes, and expect the algorithm to justify its advice.

As the first court, the Supreme Court of Wisconsin has in principle cleared the use of COMPAS: not only for bailing, but even for sentencing. The court has, however, obliged the administration to add a set of warnings to the output of the algorithm. Engel and Grgić-Hlača (2021) show that these warnings are either ineffective or, if made much stronger than mandated by the Supreme Court, counterproductive.

#### **Legal Studies**

Some publications do not focus on specific legal rules. They are instead interested in the law in general, as a technology for governing society. Engel and Weinshall Margel (2023) explain why it cannot be taken for granted that a new legal rule, or a new interpretation of an existing rule for that matter, automatically and immediately changes social practice. They explain, and model, why the diffusion of legal innovation may take time, and characterize the conditions for fast or slow, complete or only partial diffusion. In his PhD project, Thomas Holzhausen uses experimental methods to understand one of the reasons better: Before the introduction of the new rule, its addressees had automatized their behavior. He tests the impediments for unlearning and relearning.

The study of Desmet and Engel (2021) has already been mentioned. The propensity of most individuals to fulfil the normative expectations of the law, just because they are the law, is a very valuable resource. But this resource is weakened by its conditionality: If individuals gain the impression that others around them will not abide, this reduces their own willingness to follow the law.

The typical legal case is ill-defined, even in the technical sense of the term. Judicial triers know that they do not know enough to decide the case. They even have reason to anticipate that the parties try strategically to bias the assessment of the facts, and of the interpretation of the relevant legal provisions. Nonetheless, they are forced to decide and will only rarely avoid the decision on the merits by relying on the burden of proof. This forces judges to cut the Gordian knot and come down for plaintiff or defendant. Mischkowski et al. (2021) show that the need to decide, and to justify the decision, does not go as far as biasing the search for information. In line with this finding, Engel and Rahal (2023), using eye-tracking, show that the attention during the process of forming the decision is not biased by the final outcome. They further show that attention (as measured by a number or the duration of fixations) and explicit justifications (as measured by stated weights on the importance of factual items) are completely unrelated, while independently predicting the decision with fairly high accuracy.

#### Methods

The group is certainly best known for its experimental work, chiefly adhering to the standards established in experimental economics. This orientation is reflected in publications in peer-reviewed law journals, such as the Journal of Legal Studies (Baumann et al., 2024; Chatziathanasiou et al., 2022; Friehe et al., 2023) and the American Law and Economics Review (Bar-Gill & Engel, 2024; Engel & Helland, 2024); in economics journals such as the Economic Journal (Cerrone et al., 2023), the European Economic Review (Normann & Sternberg, 2023), Games and Economic Behavior (Cerrone et al., 2021), the Journal of Economic Behavior and Organization (Engel et al., 2021), and the Journal of Economic Psychology (Desmet & Engel, 2021; Mischkowski et al., 2021); in the esteemed Journal of Research in Crime and Delinquency (Engel, 2023a); and in psychology journals such as Psychological Science (Westfal et al., 2023) and Judgment and Decision Making (Engel & Van Lange, 2021).

For some research questions, the radical decontextualization that is characteristic for economic experiments is too constraining. This is when we have instead randomly assigned participants to one version of a vignette. This work has led to publications in peer-reviewed law journals such as the *Journal of Legal Analysis* (Engel & Grgić-Hlača, 2021), *Psychology, Public Policy and the Law* (Hermstrüwer & Langenbach, 2023) and in numerous high-ranking computer-science conference proceedings (Grgić-Hlača, Castelluccia, et al., 2022; Grgić-Hlača, Lima, et al., 2022; Kyi et al., 2023; Langer et al., 2022; Lima et al., 2023; Lima et al., 2023; Lima et al., 2023; Lima et al., 2022).

Randomized control trials are appealing, as they not only test an analogue to the normative problem; they test the very problem itself. Yet, for the problems calling for legal intervention, or for the design of the intervention, there are obvious ethical concerns. Randomly assigning some subjects of the law to a constraining intervention, or randomly depriving them of help, is not easy to justify. We had the good fortune to exploit the fact that resources for an arguably helpful intervention (intense probation for criminal defendants on the brink of being incarcerated) were so limited that assignment to the program came with a degree of arbitrariness anyway. The Cologne Regional Court allowed us randomly to assign the intervention (to defendants classified as eligible by the competent judge). The results have been published in the *Journal of Empirical Legal Studies* (Engel et al., 2022).

Most empirical legal scholarship works with observational data. The group has also contributed to this strand of research. A paper using data about government calling a state of emergency has been published in the *Journal of Legal Studies* (Bjørnskov et al., 2022). Another paper, published in the

Journal of Empirical Legal Studies, uses data from the German Constitutional Court to identify the causal effect of familiarity among the judges on the bench (Engel, 2022b). In other applications, the normative problem is arguably in the data itself as, for instance, if there is the concern that social media might be used to distribute hate speech. Zufall, Hamacher, et al. (2022) use natural language-processing to flag such content.

#### **Career Paths of Alumni**

Stefanie Egidy passed her habilitation in early 2023, when she already had an informal offer from Mannheim University to become full professor. Thereafter she received competing offers from the universities of Darmstadt and Bielefeld. This has given her the opportunity to negotiate a very favorable package with Mannheim, where she has now been appointed as full professor for public law, economic analysis of law, and public economic law.

Yoan Hermstrüwer won a tenure-track position at the University of Zurich for legal tech, law and economics, and public law. The only tenure condition is *habilitation*, which he passed in June 2023. He will soon be appointed as full professor.

Hanjo Hamann has been appointed tenure-track professor at EBS Wiesbaden. In 2021, the Hochschulverband awarded him the honor of being "junior scientist of the year", an honor bestowed on a single scientist in all of Germany. In 2022, the German Science Foundation awarded him the Heinz Maier Leibnitz Prize, as one of ten scientists in the country, the first legal scholar after more than a decade, and one of two prizewinners in the entire Max Planck Society.

# Follow-Up on Previous Report by the Advisory Council

The report of the advisory council has been as rich and precise as it has been helpful. In multiple respects, we have been able to benefit from the recommendations.

Publication outlets. The peer-reviewed journals in law, economics, psychology, criminology, and computer science remain our prime target. However, following a suggestion by the advisory council, we have also published in outlets meant to build a bridge from the social-science discourse to a broader legal audience (Egidy 2021, Engel 2021, Engel and Weinshall Margel 2023), in law reviews (Zamir and Engel 2021, Egidy 2024), and have jointly written a book that showcases the power of a behavioral approach to German public law (Engel, Egidy et al. 2024).

Diversity. Diversity is never complete. But we have seized the opportunity created by the fact that resources freed up by postdocs leaving could not meaningfully be filled by new postdocs, and we have hired a larger number of PhD students, including a student from Iran (Mahdi Khesali), another from India (Saparya Sood), and one from China (Yuqi Wang). Nina Grgić-Hlača is from Croatia and will soon take up her position as a postdoc.

Onboarding. All new PhD students are part of the International Max Planck Graduate School. The school offers an established onboarding process. Happily, when most PhD students arrived, there was still a larger number of postdocs at the group, so that each of them could mentor one of the PhD students (and Dorothee Mischkowski even accepted two of them, Konstantin Offer and Thomas Holzhausen). Only for the latest cohort must we revert to solutions that are more pragmatic.

Job-market preparation. In the past, the job-market preparation for legal scholars used to be straightforward. If they had joined the institute as PhD students, they had the intention to prepare for an academic career. Many of them stayed as postdocs and prepared for habilitation (Florian Becker, Indra Spiecker, Stefan Magen, Niels Petersen, Emanuel Towfigh, Stefan Bechtold, Jörn Lüdemann, Armin Steinbach, Alexander Morell, Stefanie Egidy, Yoan Hermstrüwer, Pascal Langenbach, and Laurence O'Hara). Others took up tenure-track positions elsewhere (Anne van Aaken, Hanjo Hamann, Frederike Zufall) or moved to a different place for habilitation (Konstantin Chatziathanasiou, Leonhard Hoeft). With the last generation of PhD students in law, the opportunity to stay at the institute will no longer exist. This will make it more important to coach them carefully on their way out.

The two senior psychologists in the group (*Dorothee Mischkowski* and *Rima Rahal*) had on their radars right from the start that they would have to make sure the psychology community remained open, ideally attracted especially by their participation in empirical legal scholarship; with *Andreas Glöckner* and *Susann Fiedler*, this strategy has worked out very well. *Nina Grgić-Hlača* is already highly visible in computer science, precisely because of branching out to behavioral research, and will surely make a very impressive academic career.

The most difficult market is probably behavioral economics. Former members of the group have made it in that market, like Nikos Nikiforakis, Aniol Llorente-Saguer, Sebastian Kube, Sebastian Goerg, and Claudia Cerrone. But career paths tend to be protracted, and critically depend on publication success, which cannot be taken for granted. Some former PhD students in economics are doing well, like Eugenio Verrina (CNRS), Cornelius Schneider (U Mannheim), Carina Hausladen (CalTech), but this cannot be taken for granted. As they phase out, it will

be important to support the current PhD students in economics in their search.

Cross-fertilization across groups. The arrival of Axel Ockenfels has opened up a very promising avenue for cross-fertilization. Even before his group is established, Christoph Engel, Axel Ockenfels, and Max Großmann have already begun a joint project on experimentation with the help of large language models – with more to come.

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Dr Zvonimir Bašić (until 08/2023)

Dr Laura Breitkopf (from 10/2022)

# **C.II Experimental Economics Group (EEG)**

**Director: Prof Dr Matthias Sutter** Prof Christopher Roth, PhD (Economics, University of Cologne)

(from 10/2021)

**Doctoral Students** 

Prof Dr Hannah Schildberg-Hörisch (Economics, University of **Postdocs** 

Düsseldorf) (from 10/2021)

Ranveig Falch, PhD (08/2020 - 01/2021) Nathan Maddix (until 01/2022)

Dalila Figueiredo, PhD (from 09/2023) Sofia Monteiro (until 11/2021)

Mustafa Kaba, PhD (from 01/2021) Shambhavi Priyam (until 09/2021)

Dr Lukas Kiessling (until 08/2021) Sebastian Riedmiller

Dr Shambhavi Priyam (from 10/2021 - 08/2022) Daniel Salicath (until 12/2021)

Manuela Puente Beccar, PhD (from 09/2022) Theresa Schätze (from 10/2023)

Dr Daniel Salicath (from 01/2022 - 05/2023) Stefan Schmidt

Dr Ali Seyhun Saral (part-time; full-time lab manager at MPI, Jana Tissen (from 10/2022)

until 06/2021)

Dr Sebastian O. Schneider

Nicole Stoelinga, PhD (from 07/2023)

Dr Sebastian Tonke

Part-Time Researchers at the EEG (10%-contracts)

Prof Dr Markus Dertwinkel-Kalt (Economics, University of Münster) (from 10/2021)

Prof Dr Johannes Haushofer (Psychology, Princeton University; now Economics, Stockholm University)

Prof Dr Matthias Heinz (Economics, University of Cologne)

Prof Dr Bettina Rockenbach (Economics, University of Cologne)

In this report, I take stock of what the EEG – the Experimental Economics Group at the MPI for Research on Collective Goods in Bonn – has done from January 2021 (the time of the last evaluation) until August 2023 (the time of writing this report).

#### **Composition of the Group**

As you can see from the above list of EEG members, we have had a regular turnover, as the MPI only can offer limited positions, both for PhD students and postdocs. Based on a recommendation during the last scientific advisory board's meeting in January 2021, we have been recruiting new postdocs on the international job market (instead of advertising them whenever open positions become available). More precisely, in December 2021 and December 2022, we interviewed for postdoc positions at the EEA (European Economic Association) job market. We have been successful in attracting Manuela Puente-Beccar (from Bocconi University Milan) and Laura Breitkopf (from the University of Düsseldorf), both of whom started in 2022, and Dalila Figueiredo and Nicole Stoelinga (both from EUI - European University Institute Florence), who started in 2023. On the side of PhD students, our group has taken on board Jana Tissen (in 2022) and Theresa Schaetze (in 2023) since the last evaluation in early 2021. Both first successfully passed the application for the Cologne Graduate School in Economics (CGS) and were then offered positions as doctoral students in our IMPRS, joint with the CGS.

In parallel to taking on board six new members, we have "lost" former members during the reporting period, which again reflects the conditions of limited contracts. Zvonimir Bašić (University of Glasgow) and Ranveig Falch (NHH Bergen) have taken on tenure-track positions, while Ali Seyhun Saral (Institute for Advanced Studies Toulouse) accepted a postdoc position in academia. Shambhavi Priyam has moved to the World Bank in Washington D.C., Daniel Salicath to the Norwegian Labour and Welfare Administration (NAV) in Oslo, and Lukas Kiessling joined a consultancy firm in Bonn. Overall, we are very satisfied with these placements, as they illustrate a good mix of academic careers and applied work in the governmental or private sector, which reflects very well the research interests in our group. In order to promote our members' networks before they go on the job market, we also provide generous support for research stays abroad. For instance, Mustafa Kaba spent three months at the University of California Berkeley in 2023, while Sebastian Riedmiller is about to spend four months at Stanford University on a Fulbright scholarship in the spring of 2024.

Importantly, EEG is complemented by a group of six parttime members (roughly on 10% contracts). We have been benefiting tremendously from the engagement of Markus Dertwinkel-Kalt (University of Münster), Johannes Haushofer (National University of Singapore and Stockholm University), Matthias Heinz (University of Cologne), Bettina Rockenbach (University of Cologne), Chris Roth (University of Cologne), and Hannah Schildberg-Hörisch (University of Düsseldorf). All part-time members regularly contribute plenty of time to give feedback on projects of junior members, to attend and give seminars, and also on joint projects between our part-time members and EEG core members. This group of six part-time members is extremely important for the whole group, as it compensates for the lack of senior economists other than Matthias Sutter himself and naturally also broadens expertise, not the least with respect to career development. Fortunately, since August 2023, there is a second senior economist at the MPI, as Axel Ockenfels has joined as (part-time) director with his own group.

#### **Publication Performance**

As expected, when the EEG started in August 2017, it took us some time to organize the group, start large and promising research projects, and get them through the refereeing process. In the period 2021 to 2023, we succeeded in meeting our own goals to strive for the best publication outlets in economics. Including the output of our part-time members, we have published five papers in the top-5 journals of economics (3 in the QJE, 1 in JPE, and 1 in Econometrica), and more than 20 papers in leading field or general-science journals (like, e.g., Review of Economics and Statistics (5), Management Science (3), Economic Journal, Journal of Development Economics, PNAS, Science Advances, Nature Communications). Given our relatively small group (compared to full-fledged economics departments at universities), we consider our publication output as excellent. We currently have many papers as revise-and-resubmits (R&R) in our pipeline – two of them in AER and JPE – and are thus confident to continue striving for excellent research in the years to come.

Before moving on to presenting several highlights of our research in the period 2021 to 2023, we briefly touch upon what is often referred to as a "third mission" of academic institutions, namely, to communicate with the public and disseminate academic knowledge into society.

#### **Third Mission and External Recognition**

While the EEG strives to provide excellent research, we are also committed to communicating our research to the general public. Our Twitter (now X) account for the EEG has about 1,250 followers and covers mainly personnel news, academic achievements, and our seminar series (see https://twitter.com/eeg\_mpi). For six years in a row now, we have organized an annual workshop with the Cologne School of Journalism

(see https://koelnerjournalistenschule.de/) to improve our communication skills and to disseminate our work into the public. These efforts have helped us to receive widespread media coverage, in particular in the German-speaking area, including appearances on TV (on ZDF, 3sat, ARD Alpha, ORF Vorarlberg, ORF Tirol), online interviews (e.g., ZDF online, ZEIT online, Welt online, Wirtschaftswoche), interviews in print media (e.g., ZEIT, FAZ, Welt, Spiegel) and on the radio (e.g., Ö3, Deutschlandfunk, HR, Ö1, SWR). In total, the EEG has generated more than 150 media-clip entries in the period 2021 to August 2023, which is an unusually large number for such a small research group (and an MPI that does *not* have an administrative position for public relations; for the full list of media clips, please see a separate section of this report).

Matthias Sutter has also been involved in consulting public policy by having been a member of the Government of Vorarlberg's group of experts, initially advising mainly on COVID-19 and later on economic policy (this group is headed by governor (Landeshauptmann) Markus Wallner).

Matthias Sutter has received an offer to become director of the Institute for Advanced Studies (IHS – Institut für Höhere Studien) in Vienna, which is one of the two most prominent economic-policy research institutions in Austria and has large public outreach and influence in politics. For the benefit of continuing the excellent trajectory of the EEG, he turned down this offer to further promote young PhD students and post-docs in his group.

#### **Highlights in Academic Research**

The following is organized in themes under which we can subsume sets of our research output and ongoing projects. In each of the themes, we highlight only a few projects and publications in order not to overburden this report. Of course, we are happy to provide more detail during the on-site visit or earlier upon request. We start with the arguably largest and most important research agenda, which revolves around a panel of several thousand households in Bangladesh.

#### **Household Panel in Bangladesh**

The panel has been jointly set up with Shyamal Chowdhury (University of Sydney) and Hannah Schildberg-Hörisch (University of Düsseldorf), and it is financed both by permanent research funds from the Max Planck Society (for Matthias Sutter's group) and by two large grants from the German Science Foundation with Hannah Schildberg-Hörisch as principal investigator (Deutsche Forschungsgemeinschaft, grant no. SCHI 1377/1 and SCHI 1377/2). The rural area of Bangladesh (for which the sample is roughly representative) allows collect-

ing data on the formation of economic preferences in a very poor, underdeveloped country. Despite the large interest in the economics profession to study how non-cognitive skills (like economic preferences, such as patience) are formed, there is a surprising lack of data from poor countries. So far, most of the work on the formation and intergenerational transmission of economic preferences has originated from Western countries. However, non-cognitive skills might be particularly important to raise poor people out of poverty, which is why we believe that collecting data in poor countries is an indispensable next step in this literature on the formation of such skills and preferences.

Data collection (of experimental choices, personality traits, and demographic variables) is done by a professional survey firm in Bangladesh (ECONS) under the main guidance (and training) by Shyamal Chowdhury. So far, we have been collecting data on risk, time, and social preferences once a year (in 2018, 2019, 2021, and 2022), with intermittent data collection for additional projects, and one large intervention study so far with children in primary schools.

The most visible output from our Bangladesh panel is the paper by Chowdhury, Sutter, and Zimmermann (2022) in the Journal of Political Economy. This paper investigates with a subset of households how economic preferences of children and parents relate to each other, what determines a potential link between children and parents, and whether it is possible to classify whole families into clusters of economic preferences. Based on data from 544 families (and 1,999 individuals) from rural Bangladesh, Chowdhury et al. (2022) find a large degree of intergenerational persistence of economic preferences. Both mothers' and fathers' risk, time, and social preferences are significantly (and largely to the same degree) positively correlated with their children's economic preferences, even when controlling for personality traits and socioeconomic background data. Chowdhury et al. (2022) discuss possible transmission channels for these relationships within families and find indications that there is more than pure genetics at work. Moving beyond an individual-level analysis, this paper is the first to classify a whole family into one of two clusters, with either relatively patient, risk-tolerant, and pro-social members, or relatively impatient, risk-averse, and spiteful members. Socioeconomic background variables like household income correlate with the cluster to which a family belongs.

The following projects are either under review for the first time, working papers, or close to becoming a working paper. The most promising ones are probably Breitkopf, Chowdhury, Kamhöfer, Schildberg-Hörisch, and Sutter (2023a, 2023b). These papers are based on an intervention in 135 primary schools in Bangladesh – with about 3,000 children. Schools were randomly assigned to an intervention with the Skills for Growth Program of Lion's Quest to study its influence on

economic preferences - like patience and prosociality - and on academic achievements. Breitkopf et al. (2023b) report strong effects on academic performance in a standardized nationwide test: up to about 50% of a standard deviation, in comparison to a control group. Breitkopf et al. (2023a) ask the important question about when an intervention would yield the largest effects. For this reason, they apply the same intervention in different grades of primary school, showing that earlier interventions have stronger effects for patience, while for prosociality there seem to be no specific sensitive periods for the formation of these preferences through an intervention. These two papers are very promising, as they evaluate for the first time a widely-used intervention program (in more than 100 countries), finding strong and important effects that will shape our understanding of the malleability of cognitive as well as non-cognitive skills.

Breitkopf, Chowdhury, Priyam, Schildberg-Hörisch, and Sutter (2023c, 2023d) examine whether economic preferences of children can predict their behavior, and how the latter is related to parenting styles of mothers and fathers. Kiessling, Chowdhury, Schildberg-Hörisch, and Sutter (2022) study whether and how parents interfere paternalistically in their children's intertemporal decision-making, which is important for many lifetime outcomes. Based on experimental data from over 2,000 members of 610 families, they find that parents anticipate their children's present bias and aim to mitigate it. More than half of all parents forego money to override their children's choices with implications for the formation and intergenerational transmission of patience: Parents willing to interfere have more patient children, but they do not transmit their own time preferences to their children. Rather, the transmission is driven by non-interfering parents. The latter introduces a completely novel twist into the literature on the intergenerational transmission of economic preferences. The paper, however, is also novel, as it develops an incentive-compatible method to study the degree of parental paternalism when interfering with their children's preferences. In Chowdhury, Schildberg-Hörisch, Schneider, and Sutter (2022), the authors exploit the advent of the COVID-19 pandemic to assess the effectiveness of an information campaign as well as of monetary incentives to adhere to social-distancing measures to prevent infection and further spread of COVID-19 in rural Bangladesh. Chowdhury et al. (2022) measures health, knowledge and beliefs, and compliance with social-distancing measures of more than 3000 participants from 150 villages (with about 20-25 households per village). The measures were taken at a comparatively early stage of the pandemic in Bangladesh (in April/May 2020) and then again in August 2020 after the intervention had been run in May 2020. The results show a strong increase of treated subjects in their knowledge about the disease and appropriate measures to protect against it significantly. Most importantly, the intervention reduced the number of deaths reported by households by almost 50%, which - scaled for the

whole country – could have avoided more than 1,000 casualties during this early phase of the pandemic. Chowdhury, Puente-Beccar, Schildberg-Hörisch, Schneider, and Sutter (work in progress) develop approaches to estimate spatial effects on cognitive and non-cognitive skills in our sample of about 5,000 households in Bangladesh, thus extending the examination of factors that affect the formation of cognitive and non-cognitive skills beyond family and peer effects. We will be able to report on this – and a nascent project that exploits the panel structure of our data set to estimate the intertemporal stability of cognitive and non-cognitive skills – in our next evaluation in 2027.

### **Development**

Many of our projects can be subsumed under the label of development economics. Most important are two publications by our part-time member Johannes Haushofer, published in Econometrica and in the Quarterly Journal of Economics. Egger, Haushofer, Miguel, Niehaus, and Walker (2022) study the effects of one-time cash transfers of about USD 1,000 to over 10,500 poor households across 653 randomized villages in rural Kenya. Such an intervention is the equivalent of about 15% of the local GDP, which is huge. As expected, they find large impacts on consumption and assets for recipients. Importantly, however, there are also large positive spillovers on non-recipient households and firms, but only minimal price inflation. Based on an estimated local transfer multiplier of 2.5, they thus show that one-time transfers can have large positive effects on local communities. Christensen, Dube, Haushofer, Siddiqi, and Voors (2021) report about interventions in 254 government-run health clinics in Sierra Leone. The first intervention improved accountability of physicians and the clinic in general by providing patients with information about the means to make frontline health providers accountable through a reporting system. The second intervention introduced a competition between clinics for non-monetary rewards, with the aim of improving their service. Compared to a control condition (of no intervention), both interventions improved patient satisfaction and usage of the clinics. Most importantly, however, the interventions had a strong impact two years after their introduction when Ebola broke out. During this crisis, the intervention districts had a higher number of reported cases, but a lower mortality. The authors provide evidence that increased trust in the public-health system led more people to seek treatment, and in an earlier phase of the sickness, thus saving lives.

One of the problems in promoting development out of poverty seems to be that poverty itself has negative consequences on human decision-making, thus creating a vicious circle. Haushofer and Salicath (2023) provide the first review of the related literature, yielding important insights how to organize

the partly contradictory results in the literature, which can be traced back to differences in methodology. Despite such differences, the main result of negative effects of poverty on the quality of decision-making persists. Based on this review, Salicath and Sutter (work in progress) examine how poverty and financial shocks interact with each other. Using a lab-inthe-field experiment with 1,917 factory workers in Nairobi, Kenya, they manipulated poverty levels and financial shocks by varying monthly paydays and the timing of a substantial part of the payment from the experiment. Their results reveal significant impacts of financial shocks on several dimensions of economic decision-making, including time preferences, higher-order risk preferences, and competitiveness. These findings are further supported by a cluster analysis revealing distinct clusters of economic preferences among participants. Overall, this study highlights the importance of considering the impact of financial shocks in understanding economic decision-making in low-income populations facing persistent poverty.

### **Environment and Health**

The lack of access to purified water sources leads to waterborne diseases like diarrhea and typhoid fever, infant mortality, and inferior educational attainment. Affordable and dependable access to water is also a crucial input factor for industrial and agricultural productivity. Yet, two thirds of the world's population already experience severe water scarcity for at least one month a year. Threats to sustainable water management from the consumer side are the non-payment of water utility bills and overconsumption. Rockenbach, Tonke, and Weiss (2023) and Tonke (2023) address both threats. Their study is based on a cooperation with the public water utility of Namibia and implements interventions to reduce non-payments. They first report that a large fraction of customers seems to be willing to pay, but neither receives the invoice properly, nor understands its content. Rockenbach et al. (2023) address these informational frictions by using simplified text messages and applying psychological commitment techniques to narrow the gap between customers' willingness to pay and actual payments. In fact, payments increase by 29% to 55%, making the interventions highly cost-effective.

Tonke (2023) uses the same collaboration with the public water utility in Namibia to encourage water conservation during a drought. Providing mass-targeted conservation strategies via text message decreases consumption by 5.5 percent. Additional treatments encouraging individuals to develop own strategies are ineffective and rule out alternative explanations such as reminders, awareness of water scarcity, or being asked to reduce consumption.

Fang, Götte, Rockenbach, Sutter, Tiefenbeck, Schoeb, and Staake (2023) examine how to reduce water consumption in

a very energy-intensive activity, i.e., showering. Working with occupants of single apartments in German student dorms, they investigate the savings potential of real-time feedback of water consumption (through a shower meter that shows instantaneous usage) and of home-energy reports (which illustrate the environmental consequences of energy consumption through showering). They find that putting both interventions on top of each other generates tremendous additional savings of about 50% of what can be achieved with real-time feedback alone. This showcases how barrier multiplicity can generate complementarities in saving energy. Dertwinkel-Kalt and Wey (2022, 2023a, 2023b) contribute to a better understanding of (German) energy markets by providing IO models with oligopolistic structures, and Dertwinkel-Kalt, Feldhaus, Ockenfels, and Sutter (2023) study in a field experiment the effects of the German "gas-price break", failing to find systematic effects of the incentives put into this price break.

An ongoing project in India by Priyam, Salicath, and Sutter (work in progress) addresses how to reduce the contamination of groundwater through arsenic. As of today, arsenic-contaminated groundwater is consumed by approximately 200 million people worldwide and has severe health consequences. Using an RCT conducted in 150 Indian villages and more than 2,000 households, Priyam et al. (work in progress) test the effectiveness of an information-based intervention, focused on spreading awareness about arsenic in the groundwater and mitigation techniques. Results show clear improvements in knowledge about arsenic, in ways to cope with it, and treated households self-report better health conditions. In a follow-up study, Priyam, Salicath, and Sutter extend the health measurement by taking urine samples and analyzing the content of arsenic consumption in treated households.

Related to mental health, Kiessling and Norris (2023) study how students' relative ranks in their school cohort affect their mental well-being both in the short as well as in the long run. Based on more than 18,000 subjects in the USA, they show that having a higher rank in school improves not only students' immediate mental health, but these effects last for at least 14 years and carry over to economic outcomes in adulthood. The findings of their study thus provide evidence on how the school environment can have long-lasting consequences for the well-being (and professional success) of individuals.

Another health-related aspect is analyzed in Puente-Beccar (2023). She asks the novel question whether health preferences can have an impact on sorting decisions within cities. In other words, can health preferences lead to segregation within cities? Her answer is a clear yes. Based on data from New York City, she can show that more health-conscious people sort into different areas of the city (often close to parks), thus yielding a kind of gentrification of different areas and segregation in the housing market.

The EEG has also produced several papers closely related to the COVID-19 pandemic. Among them are Terrier, Chen, and Sutter (2021), who show that the pandemic reduced prosociality; Gulesci, Puente-Beccar, and Ubfal (2021), on how to protect women from violence during the pandemic with its stay-at-home orders (on violence, see also Stoelinga, 2023); Egger et al. (2021), on falling living standards during the pandemic; Grimalda et al. (2023) and Kaba, Koyuncu, Schneider, and Sutter (2023), on how political attitudes relate to polarization with respect to pre-cautionary behavior and vaccination against COVID-19; and Chowdhury, Schildberg-Hörisch, Schneider, and Sutter (2022), about information interventions to contain COVID-19.

Regarding ongoing projects, Puente-Beccar, Tissen, and Tonke (work in progress) investigate with an intervention how the take-up rates of vaccinations for children can be increased in Bolivia. Monteiro, Larmuth, Wiesen, Kroff, and Sutter (work in progress) examine whether real-time feedback can help patients cope with type 2 diabetes.

### **Labor and Education**

The most important publication in this area is certainly Alan, Corekioglu, and Sutter (2023), published in the *Quarterly Journal of Economics*. They evaluate the impact of a training program aimed at improving the workplace climate in companies. They implement this program using a clustered randomized design involving over 3,000 headquarter employees of 20 large corporations in Turkey. They find that treated firms have a lower likelihood of employee separation at leadership level; fewer employees lacking professional and personal help; and denser, less segregated, support networks. They also find that employees in treated corporations are less inclined to engage in toxic competition, exhibit higher reciprocity toward each other, and report higher workplace satisfaction and a more collegial environment.

In a promising follow-up project, Alan, Corekcioglu, Kaba, and Sutter (2023) examine the role of a leader's gender on workplace climate and tenure in 24 Turkish companies, covering about 2,000 employees. They show that female leaders shape the relational culture in the workplace differently than male leaders. Males form homophilic professional ties under male leadership, but female leadership disrupts this pattern, creating a less segregated workplace. Female leaders are more likely to establish professional support links with their subordinates. Under female leadership, female employees are less likely to quit their jobs, but no more likely to get promoted. These results suggest that increasing female presence in leadership positions may be an effective way to mitigate toxic relational culture in the workplace.

Other prominent projects in this area are the following: Balafoutas, Batsaikhan, and Sutter (2023) compare the competitiveness of entrepreneurs and salaried workers in a lab-in-thefield-experiment, finding that there is no genuine difference in a private condition, but that entrepreneurs are keen to appear very competitive once choices become publicly observable. The authors explain this with role expectations on the side of entrepreneurs. Gill, Heinz, Schumacher, and Sutter (2023) study the social preferences of university students who later on start their professional career in the financial industry. Following students from their undergraduate years to their first permanent job, they find that those who move into the financial industry are less trustworthy than students who enter different branches of the economy. Bašić, Bortolotti, Salicath, Schmidt, Schneider, and Sutter (work in progress) examine how economic preferences, personality traits, and socioeconomic background are related to performance under different incentive schemes (like piece rate, flat payment, or a tournament scheme). They run their lab-in-the-field-experiment with about 2,000 high-school students. If self-selection into a scheme is possible, they observe strong sorting on abilities, but personality traits, economic preferences, and SES also play a role. In case of exogenous assignment, partly different factors matter, suggesting that optimal effort depends on the assignment of payment schemes and personality traits and preferences. Riedmiller (2023) examines the reasons for the very low take-up rates of financial student aid in Germany. He runs an intervention study with more than 20,000 German university students and examines how information provision can encourage students to apply more frequently for financial student aid. Related to educational issues, Figueiredo (2023) studies a large-scale intervention program of the Mexican government in which mothers were given extra cash when their children stayed longer in school. The intention of the program was to break the intergenerational poverty cycle by reducing poverty through increasing human capital. She shows that, despite the documented increases in education, the program led to increases in child marriage (below the age of 18). This means that the program had the contrary effect to what was expected from the literature due to an income effect, i.e., the program made early marriages more affordable, thus increasing them. Stoelinga (2023) reports the effects of occupation by Boko Haram in Nigeria on education. The anti-education insurgent group of Boko Haram had an immediate negative effect of school attendance, an effect that even persisted after the government had regained control over the formerly occupied areas, implying that it is not only the experienced violence that needs to be considered when looking at the impact of insurgencies on civilians.

# Higher-Order Risk Preferences – Measurement and Implications

Sebastian Schneider is the key player in this research area. He has developed novel methods to measure higher-order risk preferences - prudence and temperance - and to quantify them by eliciting utility points and then applying a customized, penalized spline-regression approach to determine utility functions that allow deriving second, third, and fourth derivatives. The two main methodological contributions are Schneider, Ibanez, and Riener (2022) and Schneider and Sutter (2022, currently R&R at American Economic Review). In the latter paper, they elicit and measure higher-order risk preferences in an experiment with 658 adolescents from Germany. In line with theoretical predictions, they find that higher-order risk preferences - particularly prudence - are strongly related to adolescents' field behavior, including their financial decision-making, eco-friendly behavior, and health-related behavior. Most importantly, Schneider and Sutter (2022) show that dropping prudence and temperance from the analysis of students' field behavior would yield largely misleading conclusions about the relation of risk preferences to these domains of field behavior. In light of these results, many contradicting results of previous research on the role of risk aversion for field behavior can be reconciled in light of the role of higher-order risk preferences. Other papers on higher-order risk preferences are Schneider et al. (work in progress), Schneider (work in progress), and the ongoing project of measuring higher-order risk preferences in the German Socioeconomic Panel, which captures a representative sample of the German population (Schneider, Riedmiller, and Trautmann, work in progress).

### **Other Highlights**

Bursztyn, Egorov, Haaland, Rao, and Roth (2023 in the Quarterly Journal of Economics) study how dissent can be justified. Dissent and voicing it is vital for any democracy. Yet, dissenters are often sanctioned (just think of the unfortunate cancel culture that has emanated in many parts of the world). Bursztyn et al. (2023) investigate how providing arguments supporting dissenters' causes can increase the public expression of dissent by providing a "social cover" for voicing otherwise stigmatized positions. They show in their experiment that liberals are more willing to post a tweet opposing the movement to defund the police, are seen as less prejudiced, and face lower social sanctions when their tweet implies they had first read credible scientific evidence supporting their position. Analogous experiments with conservatives demonstrate that the same mechanisms facilitate anti-immigrant expression. These insights are important to understanding the conditions under which a lively debate - which includes dissent - can be sustained in ever more polarized societies.

Sutter, Weyland, Untertrifaller, Froitzheim, and Schneider (2023, currently R&R at Journal of Political Economy) examine how a one-month intervention in training financial literacy affects risk and time preferences in adolescents for a time period of up to 5 years after the intervention. Financial literacy is generally understood as an individual's capability to handle financial aspects of everyday life and to make meaningful and informed decisions regarding investments, savings, and consumption. Following more than 600 German adolescents, aged 16 years on average, up to five years after the intervention that covered eight hours of teaching financial literacy, Sutter et al. (2023) provide causal evidence that teaching financial literacy has significant short-term and long-term effects on risk and time preferences. Compared to two different control treatments, they find that teaching financial literacy makes subjects more patient, less present-biased, and slightly more risk-averse. It also improves financial decision-making in the early 20s, i.e., up to five years after the curricular intervention.

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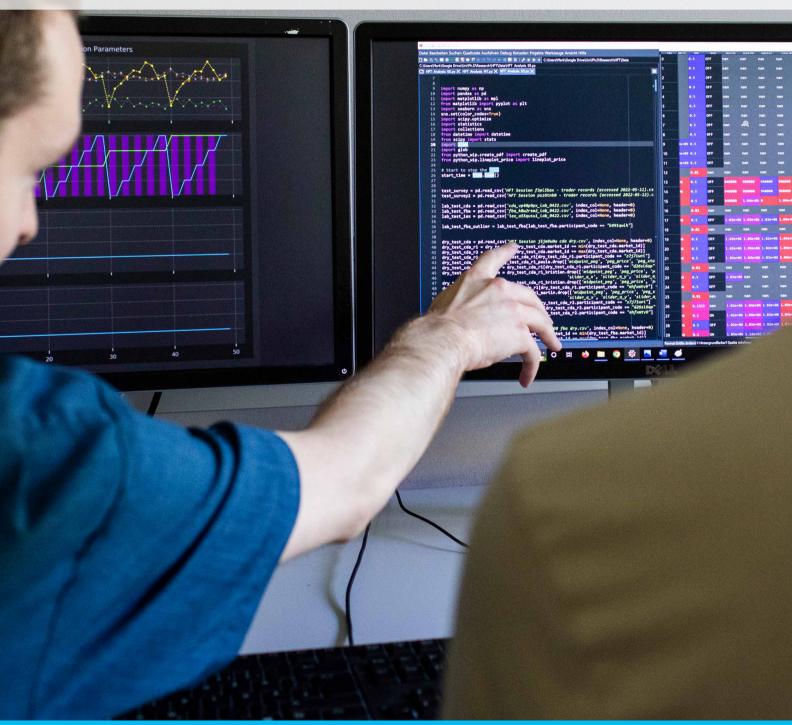
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# C.III Economic Design & Behavior



# **C.III** Economic Design & Behavior

Head

Prof Dr Axel Ockenfels

Post-Doctoral Fellows (preliminary)

Rastislav Rehák

**Doctoral Candidates (preliminary)** 

Melisa Kurtis Aenne Läufer Yero Samuel Ndiaye Saskia Opitz Our research focuses on what might be called "behavioral economic engineering", which combines tools from game theory and behavioral research to design markets, algorithms and competitive strategies. This has many useful applications.

Human behavior affects every aspect of our lives and determines the success of societies, markets, organizations, and individuals. Indeed, addressing complex economic and social challenges such as COVID-19, climate change, and various market failures requires significant behavioral changes and the design of innovative market and choice architectures. Our research explores the nature and determinants of human behavior and on this basis develops market and other mechanisms to effectively address behavioral and institutional challenges in our economy and society.

Approaching and understanding human behavior and real-world institutions often requires an interdisciplinary and multimethodological approach. Recognizing that human behavior can deviate from standard economic predictions, we use tools from game theory, behavioral and experimental economics, and related fields to study and model behavior. This research is integrated with an economic design approach, developing mechanisms that align incentives and behaviors with overarching goals. Experiments – both in the laboratory and in real-world settings – play a central role in studying behavior and in designing, testing, and implementing new mechanisms.

Since the Economic Design & Behavior group is not yet established at the time of this writing, I now describe my research plans, goals, and philosophy in more detail, and how I got there. The future members of the group are expected to strengthen, complement and further develop the research area described above.

### **Engineering Cooperation**

A central focus of my research revolves around cooperation. Early in my career, under the influence of Reinhard Selten, I was drawn to study the motivational and cognitive underpinnings of social and cooperative behavior. In a series of studies, I developed a model based on the premise that individuals are driven by both their personal financial gain and their relative payoff position. This model successfully reconciled a broad and seemingly unrelated set of laboratory observations into a coherent pattern that encompassed cooperation, competition, and fairness (1). This exploration over the past two decades has sparked a new literature on the determinants of social and economic behavior. Until recently, however, the practical application of these insights has remained somewhat nebulous. As the challenges posed by climate change and the Covid-19 pandemic illustrate, the absence of appropriate mechanisms to align self-interest with the common

good can lead to disastrous outcomes in social and economic interactions. Consequently, my current research seeks to use economic design approaches to foster cooperation.

In one project. I focus on the development of reputation-building systems that contribute to the phenomenal success of online marketplaces such as eBay, Amazon, Uber, and Airbnb. These platforms depend on trust and cooperation, a requirement that is particularly challenging when transactions involve strangers, span different geographic locations, and occur sequentially. While most online platforms use reputation-based "feedback systems" to incentivize trustworthiness, such systems are often plagued by problems of free-riding and low information content. My work in this area seeks to identify and correct inherent flaws in platform design, using theoretical models, laboratory experiments, and field studies to show how feedback systems can be improved to encourage cooperation, such as by managing information flows to protect "altruistic punishers" from retaliation (2). This research has benefited greatly from collaborations with platforms such as eBay and has influenced the design of their feedback systems. However, certain challenges remain, such as developing electronic systems that can effectively mediate conflict resolution between traders.

Another critical area of my research aims to promote climate cooperation at both the individual and the state level, addressing the issue from both academic and practical perspectives. For example, a study we conducted on climate action nudges to encourage cooperation showed that green defaults can significantly influence cooperative behavior, even when substantial amounts of money are at stake. This finding was based on a field study of carbon offsets for more than 30,000 flights booked by more than 11,000 airline customers. At the state level, I use theoretical and experimental methods to study the design of climate negotiations and climate clubs. My work suggests that focusing climate negotiations on a uniform common commitment can improve cooperation beyond what the Paris' negotiation approach can deliver (3). Further work is underway to assess the effectiveness of other negotiation design parameters. This research is driven in part by my advisory role on climate policy and climate club design for the previous and current German governments.

### **Market Design**

My foray into market design began nearly a quarter century ago, motivated by a collaboration with Alvin Roth. Together, in a series of papers, we demonstrated that seemingly trivial details in the rules of online auctions can significantly affect bidding behavior (4). This exploration of online auctions was part of a growing literature demonstrating that economic auction models provide a powerful framework for studying

the causal relationships between market design and human behavior. As auctions become increasingly prevalent in modern economies – from procurement auctions, to the sale of government securities, to auction markets for spectrum rights, electricity, financial assets, and online advertising – gaining a comprehensive understanding of the pitfalls of bidding behavior and auction design is paramount to innovating resilient auction markets and addressing existing design flaws (as illustrated in a TV documentary: https://www.3sat.de/wissen/wissenschaftsdoku/211014-sendung-wido-102.html).

During my tenure as Director of the Energy Institute of the University of Cologne (EWI), I used auction design to address a variety of electricity market design challenges, working with regulators, policymakers, and market platforms. My research during this time included the analysis of wholesale electricity markets, capacity markets, and climate markets, all of which require careful engineering to facilitate the transition to sustainable energy markets - an issue that will remain on the policy agenda for the foreseeable future (5). Despite my fascination with the science and practice of energy economics, I decided to leave EWI to expand my research beyond energy markets. Nevertheless, many of my current market design projects are still related to auctions and energy markets, or draw on my expertise in electricity markets.

This includes my recent work - mostly policy oriented - in response to the energy crisis in Germany and Europe. In collaboration with various co-authors, we have made several important contributions to the market design discourse, addressing issues such as capturing windfall profits, managing severe gas shortages, designing procurement mechanisms appropriate for crisis situations, using behavioral economics and other tools to incentivize gas conservation at the household and European level, and preventing blackouts (6).

Another example is my market design proposal for resilient vaccine production that was recently adopted by the German government. Vaccine markets falter in part because pricing plays a limited role in times of extreme scarcity and emergencies; auctioning scarce medical resources to the highest bidder is ethically untenable. Thus, effective market design requires the creation of a central clearinghouse and draws on design innovations from modern electricity and other markets to ensure resilient supply during crises (7).

As these examples illustrate, crises often provide promising and compelling opportunities to conduct practical market design research, and that research programs may respond to such opportunities. But my interests extend beyond reactive scenarios. Traffic congestion, for example, imposes significant social, economic, and environmental costs. By leveraging market design innovations and modern communications technology, we have proposed a transportation market that

could significantly reduce congestion (8). This proposal has attracted some attention of policymakers and market platforms, but many interesting questions and challenges remain, particularly with respect to understanding drivers' preferences and responses to such markets.

Finally, it's worth noting that my research on market design is deeply intertwined with my work on cooperation. Without cooperation and trust, markets cannot function effectively. Several of the challenges mentioned, such as ensuring a reliable supply of vaccines and mitigating traffic congestion, can be framed in terms of collective goods problems.

### Behavior, Design, and Ethics

The conventional view in economics is that institutions shape rational behavior. However, the concept that boundedly rational behavior can influence institutions, while less understood, often provides innovative insights. An example from my current research concerns the widespread use of "soft" (non-binding) reserve prices in real-world auction markets. Standard models of rational behavior find this puzzling, since nonbinding reserves are strategically redundant. However, this view changes when we consider more nuanced motivations of bidders. In previous studies, I have shown that regret can serve as a powerful motivator in economic decision making. For example, bidders may experience regret when they lose at a price at which they could have profitably won. This alters bidding behavior in auctions in ways that soft reserves can exploit to increase both efficiency and revenue (9). This illustrates how behaviorally accurate models can improve our understanding of real market institutions.

Another important observation is that while "efficiency" and "revenue" are the dominant goals in the economics literature, practical market design invariably includes additional goals such as fairness, transparency, and privacy. There may also be explicit or implicit constraints on the use of economic instruments in certain contexts, such as limits on the pricing of medical resources in emergencies. Indeed, over the past two decades, substantial arguments based on moral considerations have been made for the outright prohibition of some markets. These goals and constraints are not fully understood in economics, opening the door to intriguing questions that I plan to explore in the coming years.

I am particularly interested in the behavioral and empirical underpinnings of ethical concerns related to market interaction. For example, some of my recent work examines when incentives threaten a sense of autonomy, how they may constrain the potential for moral behavior, and what kinds of inconsistencies and biases in economic and moral reasoning influence economic interventions (10). One finding in this

regard is that monetary incentives attract less informed subjects, revealing a conflict between incentive payments and the ethical principle of informed consent. Another finding is the phenomenon we call "projective paternalism," where individuals who are willing to paternalistically intervene in others' choices often do so by aligning others' choices with their own preferences. We also show that, because of this bias, paternalistically motivated interventions may violate commonly accepted welfare criteria. The overall goal of this empirical line of research is to foster cross-disciplinary dialogue, and to provide guidance on how to reconcile economic design with ethical constraints.

### **Outlook and Wider Impact**

The field of design and behavioral research has experienced much momentum in recent years. There are two main reasons for this surge in interest. First, the pressing challenges of our time, such as COVID-19 and climate change, require behavioral change. Second, recent advances in communication technology have facilitated radical institutional innovations in social and economic interactions. This is evident in the transition of many marketplaces from human-based to partially algorithmic interactions. Such shifts present new opportunities and challenges, including ethical dilemmas regarding the acceptability of certain interactions, the need for regulatory mechanisms and behaviors, and the appropriate means to implement them.

I argue that a crucial aspect of future research agendas in economics, behavioral science, computer science, and related disciplines will be to understand the implications of these new systems and how they are shaped by our preferences and behaviors. One of the main goals of my research and that of our newly formed MPI group is to contribute to this effort. We aim to forge links between different research disciplines and explore design solutions that address the challenges facing society today and in the future.

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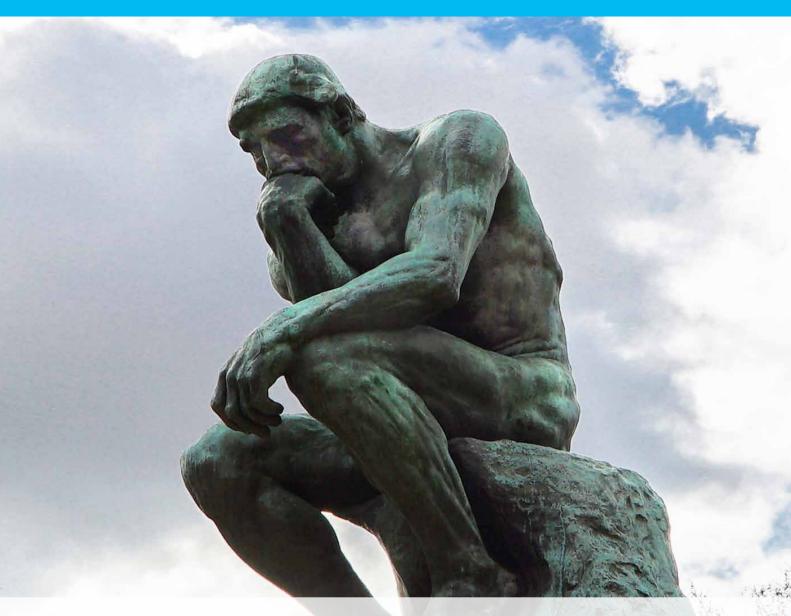
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# C.IV International Max Planck Research School (BeSmart)

# C.IV International Max Planck Research School on Behaviorally Smart Institutions (IMPRS BeSmart)

# Partners: Christoph Engel, MPI Bonn, Behavioral Law and Economics Matthias Sutter, MPI Bonn, Experimental Economics Felix Bierbrauer, University of Cologne, Faculty of Management, Economics and Social Sciences Daniel Zimmer, University of Bonn, Faculty of Law Uri Gneezy, UC San Diego, Rady School of Management Bertil Tungodden, Norwegian School of Economics Stefan Bechtold, ETH Zurich, Center for Law and Economics Eyal Zamir, Hebrew University, Law School Chair: Christoph Engel

# Interactions between Institutions and Humans in the (Neoclassical) Law and Economics Perspective

Institutions are ubiquitous. All human behavior is embedded in and guided by formal and informal institutions. The discipline of economics models individuals as having well-defined preferences, and as maximizing their personal well-being. In this perspective, institutions are constraints. The economic model predicts that different institutions give rise to differences in human behavior. This prediction resonates with observation: if one is by default an organ donor, many more organs are donated; if a reputation system reliably tracks the trustworthiness of sellers on an online platform, there is less fraudulent behavior; if the usage of roads is priced contingent on traffic conditions, there is less congestion; if free-riders can be sanctioned, all group members cooperate more. All of these examples illustrate how human behavioral dispositions and institutions interact.

Most formal institutions are legal, and many non-legal institutions are regulated by law. The disciplines of both law and economics are therefore complementary for analyzing the interplay of human behavior and institutions, and to develop institutions that promise outcomes that are individually or socially more desirable. Yet, (neoclassical) law and economics starts from a very narrow definition of human behavior. This is worrisome both from an analytic and from a normative perspective. While a particular institution might be optimal in case of a rational, well-informed, and forward-looking individual, this may not at all be the case when human behavior deviates from these assumptions. Addressing the key limitations of human behavior and deriving implications for institutional design from these limitations is the task of the proposed graduate school. In the following, we sketch some of the most troublesome, but also intellectually most interesting, limitations. Informing institutional analysis and design about these limitations will be the focus of the school.

# Introducing Behavioral Law and Economics to the Analysis of Interactions between Humans and Institutions

Real institutions do not address the agents of economic text-books; they address real people. Real people care more about goods than money. This can be captured by shifting from profit to utility space. But a richer utility function is still exclusively motivational. Arguably, the reason why real people behave in normatively undesirable ways is also cognitive. They may not understand what would be in their individual best interest. They may misinterpret the situation. They may overestimate a risk and underestimate an opportunity, or they may be overly optimistic. The way how they read the available incomplete

evidence may be tilted towards their personal interest. Even if an individual has the best of all intentions, she may lack the ability to act upon them. Socially undesirable behavior may be a habit that she cannot overcome at short notice. She may lack the necessary self-control, or the ability to plan her life on a sufficiently long time horizon. For these and many related reasons, it is paramount for institutional designers to understand the mental mechanisms and motivations that determine choices.

It is by no means the case, however, that all humans are the same. For the analyst and designer, heterogeneity in human behavior is a challenge. First-generation behavioral analysis tends to bracket heterogeneity. It implicitly assumes that variation in behavioral determinants is distributed in some well-behaved way around some central tendency. Technically, the variance is put into a noise term. Analysis focuses on the average population effect. Now, again, reality can be guite different. A huge literature has, for instance, shown that most populations consist of a sizeable minority of selfish individuals, a small minority of unconditional altruists, and a majority of conditional cooperators. This majority is good-natured only if it knows or expects a sufficient fraction of their interaction partners to be good-natured as well. Such patterned heterogeneity is not only much harder to identify and measure; it also exposes institutional designers to a much harder problem, because institutions should provide a useful framework not just for one particular type of human behavior, but for a possibly large set of different types. Ideally, institutions should engender desirable behavior even when humans are characterized by a series of behavioral limitations introduced above.

### **Building Behaviorally Smart Institutions**

Sometimes institutional designers can adopt a two-step approach. In the first step, they reduce behavioral complexity to a degree that makes it possible to ignore occasional deviations. Markets often have this effect, as suppliers who ignore market pressure are forced to leave the market. If behavior is embedded in formal or informal institutional structures, it becomes much more predictable what agents are likely to do. Quite often, however, institutional designers have to take their addressees with the behavioral patterns and limitations they happen to have. Therefore, in a second step, it is necessary to study these patterns empirically. Running experiments will be the prime method to do so in this graduate school, since by random assignment of subjects to different treatment conditions it is possible causally to identify which institutional features generate which type of behavior, conditional on behavioral patterns and limitations. As such, experiments in the laboratory or randomized control trials in the field allow for testing how institutional design affects human behavior. However, behaviorally informed institutional design need not

### C. Research Program

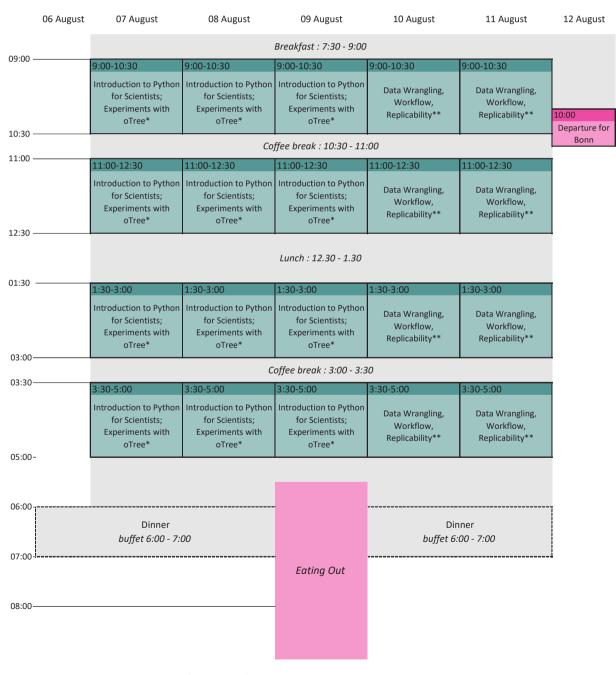
be more challenging than designing institutions for agents one expects to maximize profit. In many contexts, many individuals are good-natured. Or, to use the language introduced by Aristotle: Man is a social being. When taking action, humans tend to reflect the effects on others. Many care about being good members of the social groups to which they belong. This opens up an avenue for less intrusive intervention. It may suffice to overcome temptation, or the unsubstantiated fear of being harmed. It may even be enough to make the individual see the situation in the appropriate light. This approach has been prominently labeled "nudging". Compared with the inhabitants of the animal kingdom, the behavior of humans is extraordinarily plastic. One might even say that the human species specializes in reinventing itself with every new generation. It is not pigeonholed in evolutionary niches and has the ability to conquer whatever new environment it faces. Humans are the more plastic the younger they are. This makes it important to understand the ways in which the behavior of the next generation is shaped in their youth, and the degree to which this process is open to purposeful institutional intervention. An institutional designer is a social engineer. She wants to change the behavior of some discernible fraction of the population. If unconstrained, she goes for the intervention that promises to be most effective, or the monetary or political cost of which she deems affordable. Yet, humans do not want to be treated like pawns on a chessboard. They have dignity and care about being respected by the state and others under whose sway they are. Not everything that can be done should be done. A normative discourse is required. But for this discourse to be meaningful, one must understand the object of intervention, i.e., human behavior. Handing the issue over to the inhabitants of the philosophical ivory tower is not enough. The normative discussion must go hand in hand with a growing understanding of mental and social mechanisms.

In our research program, the following questions guide us: How can one help institutional analysts and designers make more adequate definitions of the problems that call for intervention? And how can one help them design interventions that are more effective, and ideally also less intrusive? How can this program of making institutional design smarter come to life? The answers will not be found in the silo of one discipline. One needs behavioral research to understand the determinants of human behavior more deeply. One needs comparative research to assess the variability of human behavior, as well as its plasticity. One needs the analysis of existing institutions: in which contexts have the interventions delivered on their promises? In which contexts have they been counter-productive? And when have they been robust to which changes in the environment, or the political landscape? Also, one needs input from those who understand the existing arsenal of interventions: what has been used where, and for which purposes? Which are the framework conditions that must be respected?

### IMPRS BeSmart Summer School August 06-12, 2023

**Program** 





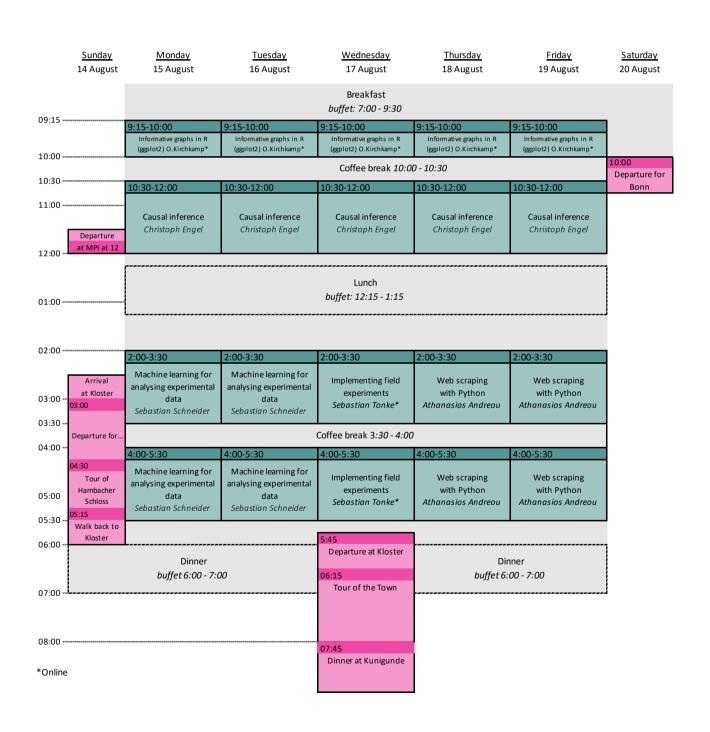
<sup>\*</sup>with Ali Seyhun Saral, PhD, https://www.saral.it/#about

<sup>\*\*</sup>with Prof. Christoph Engel, https://www.coll.mpg.de/engel.html, and Prof. Oliver Kirchkamp, https://www.kirchkamp.de/

### IMPRS BeSmart Summer School August 14-20, 2022

**Program** 





### **IMPRS Summer School 2021**

August 16th – 24th, 2021 Virtual / Zoom



### Program Week 1

Monday.	<b>August</b>	16th	2021

10:45 - 11:00	Welcome	Prof. Dr. Christoph Engel
	https://uni-jena-de.zoom.us/j/61430290195?pwd=d2x0VUJTZzg3V3BWTFM3aWRHcTcwUT09 Meeting-ID: 614 3029 0195, Passcode: BeSmart	

### Monday - Friday, August 16th - 20th, 2021

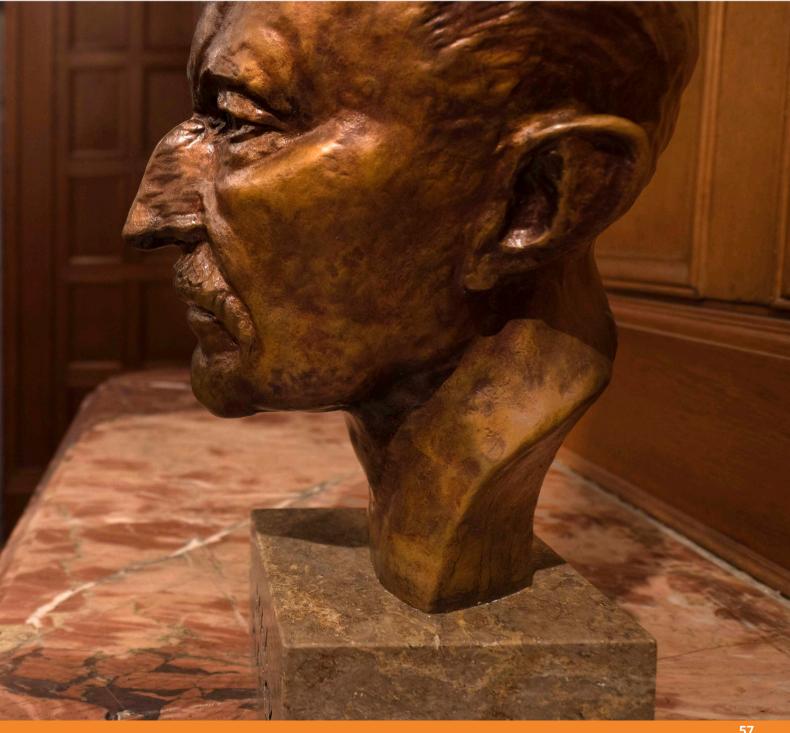
11:00 - 12:00	Introduction to R	Prof. Dr. Oliver Kirchkamp
	https://uni-jena-de.zoom.us/j/61430290195?pwd=d2x0VUJTZzg3V3BWTFM3aWRHcTcwUT09 Meeting-ID: 614 3029 0195, Passcode: BeSmart	
12:30 - 13:30	Workflow of statistical data analysis	Prof. Dr. Oliver Kirchkamp
	https://uni-jena-de.zoom.us/j/61430290195?pwd=d2x0VUJTZzg3V3BWTFM3aWRHcTcwUT09 Meeting-ID: 614 3029 0195, Passcode: BeSmart	
15:00 - 16:30	Natural Language Processing	Prof. Dr. Goran Glavaš
	https://uni-mannheim.zoom.us/j/9196757083?pwd=dzhHb2tuSndYY2pNbHQxMFZJTTkwdz09 Meeting-ID: 919 675 7083, Passcode: 210522	Anne Lauscher
17:00 – 18:30	Machine Learning	Prof. Dr. Christoph Engel
	https://zoom.us/ji/99831263906 Meeting ID: 998 3126 3906	

### Program Week 2

### Monday - Tuesday, August 23rd - 24th, 2021

10:00 - 11:00	An Introduction to Conducting Experiments in the Field	Shambhavi Priyam
	https://zoom.us/j/9746612840	
11:15 - 12:15	An Introduction to Conducting Experiments in the Field	Shambhavi Priyam
	https://zoom.us/j/9746612840	
13:30 - 14:45	Experimental Design: Treatment Assignment and Power Calculation in (Field) Experiments	Sebastian O. Schneider
	https://zoom.us/j/91018669147?pwd=Ti80dlpEcUZGOVd0WFh5cWR0bElXdz09 Meeting ID: 910 1866 9147, Passcode: 298303	
15:00 - 16:15	Experimental Design: Treatment Assignment and Power Calculation in (Field) Experiments	Sebastian O. Schneider
	https://zoom.us/j/91018669147?pwd=Ti80dlpEcUZGOVd0WFh5cWR0bElXdz09 Meeting ID: 910 1866 9147, Passcode: 298303	

# Research D. **Portraits**



## **List of Researchers in Alphabetical Order**

For researchers currently working at the institute, all publications are reported. For researchers who have left the institute before or during the period covered by this report, only publications are listed that have resulted from research undertaken at the institute.

Aya Adra59	Sophia Hornberger123
Amalia Álvarez Benjumea61	Fabian Jäkel 125
Zvonimir Bašić64	Mustafa Kaba127
Anna Baumert67	Mahdi Khesali129
Laura Breitkopf70	Lukas Kiessling 131
Tom Brinker72	Pascal Langenbach 133
Morten Broberg73	Mengyao Li 136
Marin Coerts76	Nathan Maddix139
Niklas Cypris78	Dorothee Mischkowski 141
Alexander Egberts80	Sofia Monteiro145
Stefanie Egidy82	Axel Ockenfels147
Christoph Engel85	Laurence O'Hara152
Alina Fahrenwaldt91	Jerome Olsen
Ranveig Falch95	Shambhavi Priyam 158
Susann Fiedler98	Manuela Puente-Beccar 160
Nina Grgić-Hlača102	Rima-Maria Rahal161
Werner Güth105	Sebastian Riedmiller 165
Hanjo Hamann 107	Johannes Rottmann 168
Martin F. Hellwig110	Daniel Salicath170
Arian Henning114	Ali Seyhun Saral173
Yoan Hermstrüwer115	Julia Sasse 175
Adrian Hillenbrand 119	Robin Scheuch 178
The man at the labeline in the state of the	Ctofor Cobroids 170

Cornelius Schneider 181
Sebastian O. Schneider 184
Marcel H. Schubert188
Saparya Sood190
Martin Sternberg192
Nicole Stoelinga194
Matthias Sutter197
Fiona tho Pesch202
Jana Tissen 204
Sebastian Tonke205
Daniel Toribio-Flórez208
Matthew Trail211
Nghi Truong213
Yuqi Wang215
Carl Christian von Weizsäcker 217
Nan Zhang219
Frederike Zufall222

### Aya Adra

### **Summary Report**

I was part of the Moral Courage Research Group as a Research Fellow at the Max Planck Institute for Research on Collective Goods from February 2018 to September 2021. I was also registered as a doctoral student at the Technical University of Munich. Since then, I have been a postdoctoral researcher at Esade Business School in Barcelona, Spain.

At the MPI, my research broadly centered around the dynamics of social justice and change. Specifically, I investigated various social psychological mechanisms relevant for intergroup relations and collective action, with an eye out towards mobilization by disadvantaged groups in understudied and repressive contexts, and solidarity by advantaged groups. Both of these streams of research resonate with the concept of moral courage, albeit at the collective level.

### Research Agenda

In my first research package, I investigated unexplored predictors of solidarity-based collective action, undertaken by advantaged group members in support of the disadvantaged. In two studies, published in a special issue of the European Journal of Social Psychology, entitled "Solidarity in the Spotlight: Understanding Allies' Participation in Social Change," we found that the endorsement of inactive and responsible meta-beliefs predicted higher collective-action tendencies among low White identifiers, mediated by feelings of guilt and an obligation to act. Conversely, we found that both predicted lower collective-action tendencies among high White identifiers, mediated by a perceived unfairness. Finally, we found that ally meta-belief was positively associated with collective-action tendencies, regardless of identification. These findings highlight

the importance of the meta-perspective in understanding solidarity-based collective action, and inform practical recommendations for activists looking to increase support against intergroup inequality among the ranks of the advantaged.

In my second research package, I took a multi-level approach to the question of protest, investigating the influence of macro-level (i.e., country-level) repression, in juncture with micro-level (i.e., individual-level) processes, in predicting collective action. Specifically, I led a large cross-cultural analysis using data from the seventh wave of the World Value Survey and the Political Liberties scale from the Varieties of Democracies project. I predicted and found that there is a direct negative relationship between country-level repression and protest, that country-level repression shapes micro-level predictors of protest, and that country-level repression moderates the relationships between protest, on the one hand, and some of its microlevel grievance-based and instrumental predictors, on the other. This manuscript is currently in preparation.

In my third research package, I zoomed in on micro-level repression by focusing on experiences with police violence, and I investigated its relationship with the willingness to engage in collective action in the context of the 2019 Chilean Spring movement. I predicted and found that there is a direct positive relationship between exposure to police violence and protest. I also found that exposure to police violence predicted protest via grievance-based, instrumental, and identity-based individual-level paths. Finally, exposure to police violence moderated the relationships between individual-level predictors of protest, on the one hand, and collective-action intentions, on the other. This research was part of a larger project conducted in Chile and



Contact

aya.adra@esade.edu

https://www.coll.mpq.de/aya-adra

Hong Kong, which has resulted in a manuscript accepted at *Political Psychology*.

During my PhD, I also had the pleasure of visiting Colin Leach, Professor of Social Psychology and Africana Studies at the University of Columbia in New York, for a few months at the end of 2019. My time in New York was supported by a European Association of Social Psychology travel grant, and Prof. Leach and initiated a project together with me, investigating Black and White Americans' reactions to images of Black Lives Matter protests, which diverge in terms of their racial and social composition.

### **Publications (since 2020)**

**Articles in Peer-Reviewed Journals** 

Baumert, A., Adra, A., & Li, M. (2022). Justice sensitivity in intergroup contexts: A theoretical framework. *Social Justice Research*, 35, 7–32

Aya, A., Harb, C., Li, M., & Baumert, A. (2020). Predicting collective action tendencies among filipina domestic workers in Lebanon: Integrating the social identity model of collective action and the role of fear. *Group Processes & Intergroup Relations*, 23(7), 967–978

Aya, A., Li, M., & Baumert, A. (2020). What they think of us: Meta-beliefs and solidarity-based collective action among the advantaged. European Journal of Social Psychology, 50(6), 1292–1305

### **Work in Progress**

Li, M., Adra, A., Yuen, S., Vargas Salfate, S., Ming Chan, K., & Baumert, A. (Accepted at *Political Psychology*). Understanding radical civil resistance under repression: Evidence from Hong Kong and Chile

Adra, A., Tausch, N., Schmid., K., Rocha, C., & Bode, S. (in preparation). Examining the role of positive contact in reducing affective polarization and enhancing democratic commitments: A look at the Scottish and Catalan independence movements

# Lectures and Presentations (since 2020)

2021

The Political Psychology of Radical Resistance under Repression Invited talk, Sussex University, United Kingdom 24 November 2021

2022

A Cross-Country Investigation of Protest: Exploring the Role of Macro-Level Repression Invited talk, International Society for Political Psychology 16 July 2022

Macro-Level Repression and Micro-Level Paths to Resistance: An Integrative Framework

Virtual talk, Resistance Psychology Network 22 August 2022

Examining (the Role of Emotions in)
Collective Action under Repression
Guest lecture, University of Geneva, Switzer-land

14 October 2022

### **Teaching**

Summer term 2021
Political Psychology of Intergroup Relations
Bergische Universität Wuppertal

### **Professional Activities**

Referee for

- Journal of Experimental and Social Psychology
- Journal of Social and Political Psychology
- Group Processes and Intergroup Relations
- European Journal of Social Psychology
- Social Psychology
- Cyberpsychology: Journal of Psychosocial Research on Cyberspace

## Amalia Álvarez Benjumea

### **Summary Report**

My general research interests focus on conditions under which social norms change and emerge, particularly the effects of social feedback and contextual information on perception and conformity to social norms. Most of my work has been concerned with social norms stigmatizing the overt expression of prejudice, such as racism, xenophobia, and sexism. Social norms against the public expression of views considered politically incorrect have developed over the last decades and constitute a powerful deterrent to the expression of prejudice in modern societies. However, these norms have been under threat in recent years, with the rise of hate speech online and the proliferation of populist rhetoric in politics.

In Álvarez-Benjumea & Winter (2018), for example, we test different social-norm interventions aimed at reducing online hate speech. This experiment measures the causal effect of two specific social-norm interventions or social-norm nudges: counter-speaking, i.e., informal verbal sanctions from other users, and censoring, i.e., deleting previous hateful content. Our results suggest that compliance with the social norm in online conversations might be motivated by descriptive norms and that censoring hate content helps reduce further hate speech on the platform. This experiment represents one of the first experimental studies investigating the social determinants of hate speech in online communities. The results helped advance the understanding of the micro-mechanisms that regulate online hate speech. Adding to a long line of research, Álvarez-Benjumea & Winter (2020) investigates the role of social norms in containing increases in prejudice after Islamist terrorist attacks using a natural experiment. We argue that, contrary to what was previously believed, attacks do not necessarily result in increased hate, but that social norms can contain

the expression of prejudice after the attacks. This work highlights the importance of social norms and social context to understand the societal response to terrorist attacks.

Álvarez-Benjumea (2020) and Álvarez-Benjumea (2023) make a more theoretical contribution. They empirically test a theoretical mechanism that is central in the research of social norms, namely the conditional compliance mechanisms or the idea that individuals want to follow a norm conditional on others doing so. These experiments investigate how exposure to online xenophobic content might weaken the effect of social norms, especially of those users who hold anti-immigrant beliefs. This line of research is still fruitful with one last manuscript (Álvarez-Benjumea, in preparation), in which I investigate whether and how frequently counterspeech is produced as a spontaneous response when participants encounter hate speech online, and whether participants are more likely to respond to hateful messages with counterspeech when they can observe that previous participants have done so.

In this line of research, we designed and developed an experimental online forum in which we implement the lab-in-thefield and natural experiments described before. This online forum combines the strengths of online field experiments with the kind of randomization seen in laboratory experiments. This method has proven very successful, as it allows causal identification in a field context. It provides tight control over what people see during the experiments. In addition to the controlled setting, this approach allows the researcher to collect additional information that is usually not openly available in existing networks. Besides, the experiments allow for the recruitment of representative samples, which increases generalizability and thus reduces the common trade-off between internal and external validity.



Contact

alvarezbenjumea@coll.mpg.de

https://www.coll.mpg.de/amalia-alvarez-benjumea

Extending this first line of research, which shows the link between social norms and the expression of hate, I was curious about the potential effects of normative change in democratic attitudes. In a new line of research, we test the erosion of the democratic -orms hypothesis, namely that behavior that was previously deemed unacceptable because it was considered anti-democratic has become normal - and, consequently, more frequent. Álvarez-Benjumea and Valentim (2022) provides tentative answers to the declining norm-enforcement hypothesis. Using an original survey, we asked respondents a number of questions about an individual who holds a counternormative political preference: support for a radical-right party, as indicated by a T-shirt they are wearing. After showing that individuals deem support for radical-right parties less appropriate than support for other parties, we move to the question of what sanctions individuals view as more acceptable. We find that these are indirect sanctions, which do not force interaction with the norm-breaching subject, like gossiping and avoiding interaction. Individuals also report that these are the types of sanctions they would engage with if confronted with someone showing a radical-right preference. It is an open question, however, to what extent these findings travel to the real world. Since willingness to sanction is self-reported, it may be influenced by social-desirability bias and lack of realworld consequences - problems that often affect survey item responses. To close this gap, we will draw upon a set of field experiments to check whether and how individuals sanction counternormative political preferences in the real world. Since we focus on political norms, the norm-breaching behavior in all experiments will be support for a radical-right party. Previous research has widely regarded such support as behavior that breaches social norms, and that is significantly affected by their strength.

Besides my research on social norms, I have explored the link between climate change and political mobilization. Cli-

mate change is a peculiar crisis – one that is, for the most part, projected into the future even as it is managed today. In the project, we grapple with this tension, assessing the links between individuals' expectations for the future and how these shape behavior relevant to climate change. We pay particular attention to the distribution and content of first-order and second-order climate opinions that exert an effect on political behavior, such as political engagement or mobilization (Sendroiu, Álvarez-Benjumea, and Winter, in preparation).

### Research Agenda

In the future, I plan to develop the "erosion of democratic norms" research agenda further. One result we have found is that, although people regard several types of anti-democratic behavior as inappropriate, they are not willing to punish said behavior. Building on these first results, we plan to focus on 1) the determinants of sanctions, i.e., what motivates people to sanction; 2) the types of sanction that people are more willing to implement; and 3) how the distribution of normative beliefs affects sanctioning behavior (Sonmez, Álvarez-Benjumea, and Valentim, work in progress).

### **Publications (since 2020)**

### **Articles in Peer-Reviewed Journals**

Álvarez Benjumea, A. (2023). Uncovering hidden opinions: Social norms and the expression of xenophobic attitudes. *European Sociological Review*, 39(3), 449–463

Álvarez Benjumea, A., Breznau, N., Rinke, E. M., Wuttke, A.,.., & Żółtak, T. (2022). Observing many researchers using the same data and hypothesis reveals a hidden universe of uncertainty, *PNAS*, 119(44): e2203150119

Álvarez Benjumea, A., & Winter, F. (2020). The breakdown of anti-racist norms: A natural experiment on normative uncertainty after terrorist attacks, *PNAS*, 117(37), e22800–22804

Álvarez Benjumea, A. (2020). Exposition to xenophobic content and support for rightwing populism: The asymmetric role of gender, Social Science Research, 92

### **Working Papers**

Alvarez-Benjumea, A., & Valentim, V. (2022). The enforcement of political norms

Alvarez-Benjumea, A., & Valentim, V. (2023). The enforcement of political norms: Theory and evidence from Spain

### **Work in Progress**

Álvarez-Benjumea, A., & Valentim, V. The enforcement of political norms: Theory and evidence from Spain (Revise and resubmit at *British Journal of Political Science*)

Álvarez-Benjumea, A. Punishing hate: An experiment on counterspeech

Álvarez-Benjumea, A., Winter, F., & Zhang, N. Updating social norms after the US 2020 election

Álvarez-Benjumea, A., Meiske, B., Andriguetto, G., & Polizzi, E. Social norms of misinformation

Álvarez-Benjumea, A., Ioana, S., & Winter, F. Temporal mappings of climate change across everyday and political behaviors

### **Grants / Prizes / Honors**

### 2022

Ramon y Cajal Fellowship, Government of Spain, (42,000 €)

### 2023

Talent attraction research grant. Spanish National Research Council (50,000 €)

# Lectures and Presentations (since 2020)

### 2020

Online Experiments
University of Maastricht (SICSS-Maastricht),
Summer Institute in Computational Social
Science, the Netherlands
22 June 2020

Uncovering Hidden Opinions
Network of Experimental Social Sciences
(RedEx), Opening Workshop, Spain
17 December 2020

### 2021

Uncovering Hidden Opinions: Social Norms and the Expression of Prejudice University of Tokyo The 13th Annual Conference of the International Network of Analytical Sociologists 30 May 2021

Experiments in Online Discourse Santa Fe Institute, New Mexico, USA Counter Balance Seminar 30 June 2021

Uncovering Hidden opinions: Social Norms and the expression of Prejudice
Ascona, Switzerland
Annual Conference of Experimental Sociology (ACES)
15 September 2021

Social Norms Governing Online Hate Cambridge University, Research in the Arts, Social Sciences and Humanities (CRASSH), United Kingdom Workshop on Understanding and Automating Counterspeech 29 September 2021

Uncovering Hidden opinions: Social Norms and the expression of Prejudice European University Institute Workshop on Social Norms 7 October 2021

### 2022

Updating Social Norms After the US 2020 Election University of Utrecht, The Netherlands Cooperative relations seminar February 2021

Uncovering Hidden Opinions: Social Norms and the Expression of Prejudice Laboratory of Agent Based Social Simulation (LABBS) at National Research Council of Italy Colloquium February 2021

Updating Social Norms After the US 2020 Election
European University Institute

The 14th Annual Conference of the International Network of Analytical Sociologists 27 May 2021

Updating Social Norms After the US 2020 Election
European University Institute
The 15th Annual Conference of the International Network of Analytical Sociologists

27 May 2021

### 2023

February 2023

Punishing Hate: Experiments on Counterspeech Nuffield College, University of Oxford, United Kingdom Interdisciplinary workshop on social norms

Uncovering Hidden Opinions: Social Norms and the Expression of Prejudice Laboratory of Agent Based Social Simulation (LABBS) at National Research Council of Italy Colloquium February 2023

Punishing Hate: Experiments on Counterspeech WZB, Germany MAD Colloquium March 2023

Punishing Hate: Experiments on Counterspeech Princeton University The 15th Annual Conference of the International Network of Analytical Sociologists 8 June 2023

### **Teaching**

February 2021
Pompeu Fabra University
RECSM Winter Methods School - PhD Workshop
Online and lab-in-the-field experiments

July 2021

National Research University Higher School of Economics (HSE University)
Summer School in Experimental Methods & Simulations in Social and Cognitive Sciences (EMS-SCS 2021) - PhD Workshop
Online Experiments with examples from sociology and political science

November 2021 Humboldt-Universität zu Berlin and Hertie School (DYNAMICS). PhD Workshop Online Experiments

Winter term 2022/2023 University of Mannheim MA & PhD Seminar Social Norms and mechanisms of normative change

Winter term 2022/2023 University of Mannheim BA Lecture Multivariate Analysis Course, Laboratory Exercises

### **Public service**

**Since 2023** 

Member of Selection Committees for the Agencia estatal de investigación (Spanish investigation Agency) of the Spanish Government.

### **Professional Activities**

Referee for

Journal of Economic Psychology, American Sociological Review, European Sociological Review, American Political Science Review, Rationality and Society, PLOSone, Journal of Politics, Philosophical Transactions B



Contact

basic@coll.mpg.de

https://www.coll.mpg.de/zvonimir-basic

### **Zvonimir Bašić**

### **General Overview**

As of September 2023, I am a Lecturer (Assistant Professor) at Adam Smith Business School, University of Glasgow. Prior to that, I was a Senior Research Fellow at the Max Planck Institute for Research on Collective Goods, which I joined in October 2017 as a PhD student. My research over the last few of years can best be organized into three fields: i) behavioral drivers of prosocial, cooperative, and moral behavior; ii) development of prosocial, cooperative, and moral behavior; and iii) effects of incentive schemes.

Behavioral Drivers of Prosocial, Cooperative, and Moral Behavior

I have several projects focusing on the behavioral drivers of prosocial, cooperative, and moral behavior. In Bašić and Verrina (2020), we study the relevance of personal norms in economic decision-making. Personal norms represent perceptions of appropriate behavior, but unlike social norms, they capture individual and not societal perceptions. We propose a simple utility framework in which people care about their monetary payoff, social norms, and personal norms, and design a novel two-part experiment to study our research question. We show that personal norms - together with social norms and monetary payoff - are highly predictive of individuals' behavior. Moreover, they are: i) distinct from social norms across a series of economic contexts: ii) robust to an exogenous increase in the salience of social norms; and iii) complementary to social norms in predicting behavior. Overall, we report a battery of evidence supporting personal norms as a key driver of economic behavior. In another project (Bašić and Quercia (2022)), we study how self-image and social-image concerns affect lying behavior across two experiments (n= 991). We show that people lie less when social image

is made salient, but we find no such effect when self-image is made salient. Our findings support social-image concerns as a motive with more potential to decrease lying behavior, and show that it affects lying even when lies are non-verifiable. This is informative for policies targeting cheating behavior. Verifying people's reports is often very costly, for example in a tax report, while increasing the feeling of observation and scrutiny of reports could be achieved in a more feasible and cost-effective manner. In an interdisciplinary project (Bašić, Geng, Romić, Shi, Akiyama, Perc, Wang, and Jusup; work in progress), we study how minimal information - one's gender - in an otherwise fully anonymous setup affects behavior in a repeated prisoner's dilemma game. By running an experiment across three countries (Japan, China, and Germany), we show that revealing such basic information increases cooperative behavior. Our findings thus show that minimal private information can have a substantial effect on the levels of cooperation. Finally, in Bašić, Falk, and Quercia (work in progress), we study i) whether self-image and social-image concerns are two distinct motives, and ii) which of the two is stronger to the extent that it affects behavior. By designing symmetric manipulations of self-image and social-image concerns, we show that both image dimensions causally affect prosocial behavior. Yet, we find a stronger effect of social-image concerns and observe that similar people act dissimilarly to the two manipulations. Our results suggest that the two motives are distinct, and that social-image concerns might be a stronger motive. The findings contribute to the theoretical and empirical understanding of image concerns.

Development of Prosocial, Cooperative, and Moral Behavior

In my second field of interest, I look at the developmental roots of prosocial,

cooperative, and moral behavior. Here, I have two large projects. In Bašić et al. (2021), we study the developmental roots of cooperative behavior with 929 children of three to six years of age. We design a unified experimental framework and investigate which of three fundamental pillars of cooperation - direct and indirect reciprocity, and third-party punishment - emerges earliest as a means of increasing cooperation. To do so, we develop a new way of presenting the repeated prisoner's dilemma game on tablets. Our key finding is that only third-party punishment successfully promotes cooperation by more than doubling it. Young children also directly and indirectly reciprocate others; yet, these mechanisms fail to facilitate higher levels of cooperation, as children do not seem to anticipate the benefits of building a positive reputation. Our findings reveal important patterns of children's strategic reasoning at a very young age, and suggest that peer punishment in contrast to reciprocity is a potent mechanism to foster cooperative behavior at a very young age. In the second study within this topic (Bašić et al.; 2020), by running an adapted version of the dictator game with a third-party punisher (n = 635), my co-authors and I examine how children and adolescents aged between nine and 18 enforce the egalitarian norm. Our main finding is that children's enforcement behavior roughly develops in the age span from eleven to 14 years of age. Importantly, we find that this period corresponds to the period when dictators become more prosocial. Our results suggest punishment as one of the core mechanisms that underpin children's development of prosocial behavior with increasing age.

In my last field of interest, I have one large-scale study (Bašić, Bortolotti, Salicath, Schmidt, Schneider, and Sutter; work in progress). Together with my co-authors, we conducted a study in German high schools to investigate the heterogeneous effects of incentive schemes across different types of individuals. We completed data collection with more than 1900 subjects. Our

results provide clues as to which traits, preferences, and socioeconomic and demographic variables are important for productivity across various incentive schemes, raising the question whether there are certain types of individuals who perform better or worse in a certain scheme. Moreover, they reveal insights into who self-selects into which scheme, and whether the option to self-select has an effect on performance.

### Research Agenda

My research agenda for the upcoming years consists of the following directions: First, I plan to pursue my research agenda on personal norms further. I plan to study whether we can exogenously change personal norms, and how such a change would affect the dynamics of personal and social norms in the long run. Such work will rely on a carefully designed field study that manipulates private information relevant to one's personal norm in a natural setting. The experiment would then rely on measuring both personal and social norms, as well as documenting behavior and allowing for variation when this is measured.

Second, I plan to study how social identity - a key factor in prosocial, moral, but also other economic decisions - shapes belief formation. Given the recent polarization within and across societies, this research direction bears strong importance. As an example of this direction, in an early ongoing project (Bašić, Schmidt, Verrina; work in progress), we focus on how selection bias, correlation neglect, and confirmation bias interact with social identity. The three biases commonly appear in information structures where social identity motives are present. Thus, we design a new paradigm to study how social identity and the three biases together affect belief formation.

### **Publications (since 2020)**

**Articles in Peer-Reviewed Journals** 

Bašić, Z. & Quercia, S. (2022). The influence of self and social image concerns on lying. *Games and Economic Behavior*, 133, 162–169

Bašić, Z., Falk, A., & Kosse, F. (2020). The development of egalitarian norm enforcement in childhood and adolescence. *Journal of Economic Behavior & Organization*, 179, 667–680

### **Working Papers**

Bašić, Z., Bindra, P. C., Glätzle-Rützler, D., Romano, A., Sutter, M., & Claudia, Z. (2021). The roots of cooperation. *MPI Discussion Paper* 2021/14

Bašić, Z. & Verrina, E. (2020). Personal Norms — and not only social norms — shape economic behavior. *MPI Discussion Paper* 2020/25. R&R at *Management Science* 

### Work in Progress

Bašić, Z., Bortolotti, S., Salicath, D., Schmidt, S., Schneider, S. O., & Sutter, M. (work in progress). Heterogeneity in effort provision: Evidence from a Lab-in-the-field experiment

Bašić, Z., Falk, A., & Quercia, S. (work in progress). Self-image, social image, and prosocial behavior

Bašić, Z., Schmidt, S., & Verrina, E., (work in progress). Social identity and systematic biases

Geng, Z., Romić, I., Shi, L., Bašić, Z., Akiyama, E., Perc, M., Wang, Z., & Jusup, M. (work in progress). Quantitative patterns of cooperation in social-dilemma experiments with minimum identifiability

# Lectures and Presentations (since 2020)

2020

The Roots of Cooperation University of Mainz, seminar talk Mainz, Germany

Personal Norms – and Not Only Social Norms – Shape Economic Behavior ESA Global-Online- Around-the-Clock Conference, virtual

### 2021

Personal Norms – and Not Only Social Norms – Shape Economic Behavior MPI Bonn, Workshop on Norms and Image Concerns, virtual

Personal Norms – and Not Only Social Norms – Shape Economic Behavior University of Würzburg, seminar talk Würzburg, Germany

### 2022

Personal Norms – and Not Only Social Norms – Shape Economic Behavior Newcastle University, Newcastle Experimental Economics Workshop Newcastle, UK

Personal Norms – and Not Only Social Norms – Shape Economic Behavior University of Cologne, C-SEB Workshop Cologne, Germany

Personal Norms – and Not Only Social Norms – Shape Economic Behavior Stockholm University and MPI Bonn, Stockholm University and MPI Bonn Workshop, virtual

### 2023

Personal Norms – and Not Only Social Norms – Shape Economic Behavior RIEB, Kobe University, CCSS International Symposium on Behavioral and Computational Social Science, virtual

### **Teaching**

Summer term 2022 University of Cologne Seminar in Behavioral Economics

### Summer term 2022

University of Split The Relevance of Norms and Image Concerns for Economic Behavior (lectures in the Summer School in Behavioral Economics)

Summer term 2023 University of Cologne Seminar in Behavioral Economics

# Summer term 2023 University of Split The Relevance of Norms and Image Concerns for Economic Behavior (lectures in the Summer School in Behavioral Economics)

### **Professional Activities**

### **Reviewer for Journals**

Management Science, The Economic Journal, The Review of Economics and Statistics, Experimental Economics, Journal of Economic Behavior and Organization, Journal of Behavioral and Experimental Economics, Journal of Behavioral and Experimental Finance, Journal of Economic Psychology, PLOS One, PNAS Nexus

# Reviewer for Grants European Research Council (ERC) Grants, Diligentia Foundation

### **Anna Baumert**

### **Summary Report**

In my research, I investigate how personality dispositions manifest themselves in social behavior through patterns of cognitive, affective, and motivational processes, and in interaction with characteristics of the social context, including group constellations. Specifically, I am fascinated by the psychological processes that, on the one hand, allow humans to disengage flexibly from their moral principles and construe their own wrongdoings as legitimate and just; and, on the other hand, predispose (some) individuals to stand up for their moral principles despite severe personal risks.

From 2017 to 2022, I was head of the Max Planck Research Group on Moral Courage, based at the Max Planck Institute for Research on Collective Goods. In 2021, I was appointed Professor for Social and Personality Psychology at the University of Wuppertal, and my Max Planck Research Group had a phase-out between 2021 and 2022.

Moral courage manifests itself when initially uninvolved witnesses stand up against moral violations of others despite the risk of personal costs. My group investigated the psychological processes, and their situational and personal boundary conditions, that shape the individual likelihood of intervening against perceived norm transgressions, despite the costs of intervening (Baumert, Sasse, & Li, 2020; Sasse, Li & Baumert, 2022). In studies employing behavioral observation and financial decision-making setups, we focused on emotional processes (Sasse, Halmburger, & Baumert, 2020; Sasse & Baumert, in preparation), the role of ambiguity (Toribio Flórez, Sasse, & Baumert, 2023), and costs (Toribio-Flórez, Cypris, Brüggemann, Şeker and Baumert, in preparation). We found evidence that ambiguity in the interpretation of a norm violation induces concerns about punishing unfairly, in particular among

participants who are sensitive to injustice (Toribio-Flórez et al., 2023). These concerns can add to the hindering effect of perceived costs, which can be either inherent in punishing or anticipated as potential counterpunishment from a perpetrator (Sasse & Baumert, in prep.; Toribio-Flórez et al., in preparation). As a "fuel" of intervention, experienced anger was found to correlate with the likelihood of intervention (Sasse et al., 2020), and we found systematic evidence for a causal role of anger in punishment of norm violators (Sasse & Baumert, in preparation). Based on this work, we are currently preparing a DFG proposal to understand through which psychological mechanisms this causal effect precisely occurs.

We complemented our highly controlled lab studies with surveys among political protesters in high-risk contexts (Li, Adra, ..., & Baumert, conditionally accepted), as well as with ambulatory assessment of everyday experiences and behavior (Baumert, Mentrup, Sasse, & Klümper, 2023). Regarding the latter, we found that situations affording everyday moral courage are encountered frequently. We identified personality predispositions for encountering and detecting such situations, namely extraversion and moral attentiveness. In next steps, I plan to investigate the affective, cognitive, and motivational reactions that follow after someone has intervened morally courageously, in particularly regarding whether the agent considers their acts as successful or not. I aim to explore whether such self-reflective reactions play a role in the formation of habitual moral courage.

As part of an interdisciplinary project funded through the Institute for Ethics in Artificial Intelligence at the Technical University Munich, we have investigated the psychological processes of intervening against online hate, as well as the effects of such acts on online perpetrators and bystanders (Cypris, Sasse,



Contact
baumert@coll.mpg.de
https://www.coll.mpg.de/anna-baumert

Engelmann, Grossklags, & Baumert, in preparation; Sasse, Cypris, & Baumert, 2023).

I have also continued my work on dispositional differences in justice sensitivity. I have published longitudinal findings on the role that experiences of injustice play in shaping these dispositions (Baumert, Maltese, & Lischetzke, 2023), and have proposed a theoretical framework for how justice sensitivity can play out in intergroup contexts (Baumert, Li, & Adra, 2022), which I am currently scrutinizing empirically.

Heading my Max Planck Research Group, it was particularly important to me to foster the academic careers of my group members. Therefore, I am proud to say that the two researchers who ioined my group as postdocs in 2017. Dr. Li and Dr. Sasse, are now in tenured academic positions as lecturer and professor, respectively. Furthermore, three PhD students successfully completed their PhDs: Dr. Toribio-Flórez, Dr. Adra. and Dr. tho Pesch, and all have moved on to postdoc positions in international research teams. A fourth PhD student who started in 2020, Niklas Cypris, will complete his PhD in 2024.

# Awards and Funding (since 2020)

2020-2023

"Personalized Al-based Interventions Against Online Norm Violations: Behavioral Effects and Ethical Implications", funded by the Institute for Ethics in Artificial Intelligence at Technical University Munich (500 000 €, in collaboration with Prof. Grossklags)

### Publications (since 2020)

**Articles in Peer-Reviewed Journals** 

McLamore, Q., Baumert, A., & Li, M. (forthcoming). The distinct associations of ingroup attachment and glorification with responses to the coronavirus pandemic: Evidence from a multilevel investigation in 21 countries. *British Journal of Social Psychology* 

Baumert, A., Mentrup, F. E., Klümper, L., & Sasse, J. (2023). Personality processes of everyday moral courage. *Journal of Personality* 

Baumert, A., Maltese, S., & Lischetzke, T. (2023). Linking the momentary processing of injustice to intraindividual change in dispositional victim sensitivity. European Journal of Personality

Li, M., Watkins, H. M., Hirschberger, G., Kretchner, M., Leidner, B., & Baumert, A. (2023). National glorification and attachment differentially predict support for intergroup conflict resolution: Scrutinizing cross-country generalizability. *European Journal of Social Psychology*, 53(1), 29–42

Baumert, A., Adra, A., & Li, M. (2022). Justice sensitivity in intergroup contexts: A theoretical framework. *Social Justice Research*, 35, 7–32

Sasse, J., Halmburger, A., & Baumert, A. (2022). The functions of anger in moral courage: Insights from a behavioral study. *Emotion*, 22(6), 1321–1335. Washington, DC: American Psychological Association

Sasse, J., Li, M., & Baumert, A. (2022). How prosocial is moral courage? *Current Opinion in Psychology*, 44, 146–150

McLamore, Q., Syropoulos, S., Leidner, B., Hirschberger, G., Young, K., Zein, R. A., ..., & Burrows, B. (2022). Trust in scientific information mediates associations between conservatism and coronavirus responses in the U.S., but few other nations. *Scientific Reports*, 12(1), 1–15

Sasse, J., Nazlic, T., Alrich, K., Frey, D., & Baumert, A. (2022). Mitigating intergroup conflict: Effectiveness of qualifying subjective justice views as an intervention technique in comparison to empathy induction. *Social Justice Research*, 35, 107–127

Toribio-Flórez, D., Sasse, J., & Baumert, A. (2022). "Proof under reasonable doubt": Ambiguity of the norm violation as boundary condition of third-party punishment. Personality and Social Psychology Bulletin

McCarthy, R. J., Gervais, W., Aczel, B., ... Baumert, A., Olsen, J., Toribio-Flórez, D., ... & Zogmaister, C. (2021). A multi-site collaborative study of the hostile priming effect. *Collabra: Psychology*, 7(1)

Dang, J., Barker, P., Baumert, A., Bentvelzen, M., Berkman, E., Buchholz, N., ... Zinkernagel, A. (2021). A multilab replication of the ego depletion effect. *Social Psychological and Personality Science*, 12(1), 14–24

Aya, A., Li, M., & Baumert, A. (2020). What they think of us: Meta-beliefs and solidarity-based collective action among the advantaged. European Journal of Social Psychology, 50(6), 1292–1305

Mõttus, R., Baumert, A., & et al. (2020). Descriptive, predictive and explanatory personality research: Different goals, different approaches, but a shared need to move beyond the big few traits. *European Journal of Psychology*, 34(6), 1175–1201

Baumert, A., Maltese, S., Reis, D., MacLeod, C., Tan-Mansukhani, R., Galang, A. J. R., ..., & Schmitt, M. (2020). A cross-cultural study of justice sensitivity and its consequences for cooperation. Social Psychological and Personality Science, 11(7), 899–907

Baumert, A., Li, M., Sasse, J., & Skitka, L. (2020). Standing up against moral violations: Psychological processes of moral courage. Journal of Experimental Social Psychology, 88

Aya, A., Harb, C., Li, M., & Baumert, A. (2020). Predicting collective action tendencies among Filipina domestic workers in Lebanon: Integrating the social identity model of collective action and the role of fear. *Group Processes & Intergroup Relations*, 23(7), 967–978

Baumert, A., Buchholz, N., Zinkernagel, A., Clarke, P., MacLeod, C., Osinsky, R., & Schmitt, M. (2020). Causal underpinnings of working memory and Stroop interference control: Testing the effects of anodal and cathodal tDCS over the left DLPFC. Cognitive, Affective, & Behavioral Neuroscience volume, 20, 34–48

### **Book Chapter**

Sasse, J., Cypris, N., & Baumert, A. (2023). Civic courage online. In C. Cohrs, N. Knab, & G. Sommer (Eds.), *Handbuch Friedenspsychologie* 

# Manuscripts under Review or in Preparation

Cypris, N., Engelmann, S., Sasse, J., Grossklags, J., & Baumert, A. (in preparation). Transgressor and bystander reactions to counterspeech on Twitter

Cypris, N., Engelmann, S., Sasse, J., Grossklags, J., & Baumert, A. (in preparation). Effects of longitutinal exposure to bystander counterspeech on own counterspeech

Li, M., Adra, A., Yuen, S., Salfate, S. V., Chan, K-M., & Baumert, A. (conditional acceptance). Understanding radical civil resistance under repression – evidence from Hong Kong and Chile. *Political Psychology* 

Sasse, J. & Baumert, A. (in preparation). The causal role of anger in moral courage

Toribio-Flórez, D., Cypris, N., Brüggemann, M., Şeker, F., & Baumert, A. (2022). A closer look at third-party punishment under the risk of counterpunishment: An effect of additional material (and not social) costs

### Teaching (since 2020)

TUM School of Education Lecture, Pädagogische und Sozialpsychologie (WS 2020/21), Master Berufliche Bildung Integriert (Master level; 2 SWS)

University of Wuppertal (each semester since 2021)

- Master and PhD level
- Research colloquia.
- Bachelor Level
- Lectures and Seminars in Basic Social Psychology
- Lectures and Seminars in Personality Psychology
- Lectures and Seminars in Advanced Social and Personality Psychology Seminar in Personality and Social Relationships

chology; PlosOne; Political Psychology; Psychological Science; Psychology of Violence; Social Justice Research; Social Psychology and Personality Science; Trends in Cognitive Sciences

Alexander von Humboldt Foundation

German Research Foundation DFG

John Templeton Foundation

German National Academic Foundation

### **Public Service**

2016-2022

Elected Member of the Executive Committee and Secretary of the European Association of Personality Psychology

### **Professional Activities**

### **Editorial Boards**

European Journal of Personality (Consultant Editor, Guest Editor)

Personality Science (Associate Editor)

### Memberships

International Society for Justice Research (ISJR)

German Psychology Association (DGPs)

European Association for Personality (EAPP)

### Ad-hoc Reviews

British Journal of Social Psychology; Diagnostica; European Journal of Psychological Assessment; European Journal of Social Psychology; Games; Human Performance; In-Mind: Journal of Cross-Cultural Psychology: Journal of Experimental Social Psychology; Journal of Individual Differences; Journal of Media Psychology; Journal of Personality; Journal of Personality and Social Psychology; Journal of Research in Personality; Journal of Social and Personal Relationships; Journal of Social Psychology; Nature Human Behavior; Organizational Psychology Review; Personality and Individual Differences; Personality and Social Psychology Bulletin; Personality and Social Psychology Review; Philosophical Psy-



Contact
breitkopf@coll.mpg.de

https://www.coll.mpg.de/laura-breitkopf

### **Laura Breitkopf**

### **Summary**

Following the completion of my doctoral studies at the Düsseldorf Institute for Competition Economics, which is part of Heinrich Heine University, I joined the institute in Matthias Sutter's Experimental Economics Group in late October 2022. My research centers around the elicitation and analysis of non-cognitive skills. I am interested in understanding the development of these skills, the returns associated with and caused by them, and how targeted policy interventions can influence the formation of skills to promote both personal and societal well-being. I combine incentivized experiments and validated psychological survey scales to measure these skills and use broad and explorative analyses of skill measures and associations, as well as explicit randomization to infer causality. This places my research well in the cosmos of evidence-based economic-policy advice.

I am interested in non-cognitive skills, as they are key predictors of central life outcomes such as educational attainment, job performance, earnings, and health. Evidence on the predictive power of preferences and personality traits is comprehensive for adults. However, much less is known about both their relevance and their formation in childhood and adolescence. In adulthood, preferences and personality traits are assumed to have a high degree of stability over time. But when and how are they formed? Can they be molded, and (how) can their development be promoted? How do they translate into behavior and well-being?

In my main project (joint with Shyamal Chowdhury, Daniel Kamhöfer, Hannah Schildberg-Hörisch, and Matthias Sutter), we have run a randomized controlled trial in 135 primary schools in Bangladesh to analyze the effect of a school-based social and emotional learning (SEL) intervention on self-con-

trol, patience, and prosociality. Specifically, we aim to learn about sensitive periods (when returns to investments are particularly high) for the acquisition of those skills and find that patience and self-control are more plastic in earlier than in later grades. Determining when skills are especially malleable helps policy-makers in designing more targeted and hence effective programs and using public funds more efficiently. We also study the intervention program's immediate impact on students' educational achievement and can show that academic performance is significantly improved when children participate in socio-emotional skills training.

Surrounding research (joint with Shyamal Chowdhury, Shambhavi Priyam, Hannah Schildberg-Hörisch, and Matthias Sutter) deals with the relation between children's preferences and how they feel and act. How robust are observed associations, and what exactly do they reflect? Our results demonstrate the importance of the close household environment. We also concentrate on the role of parenting style as a primary dimension of the family environment shaping children's advancement. Further early-stage projects comprise research on sophistication with respect to self-control problems (joint with Shyamal Chowdhury, Hannah Schildberg-Hörisch, and Matthias Sutter), as well as (higher-order) risk preferences (additionally joint with Sebastian O. Schneider).

### Research Agenda

I plan to continue this overall direction in my future work where I would like to deepen my understanding of non-cognitive skills in general and sensitive periods in particular, and further to investigate dynamics in skill development within families. From a policy perspective, I also consider it important

to test for inequality effects of investments: Which interventions help us level the playing field, and which interventions rather manifest existing inequalities, depending on intervention type and targeted skills? On a broader level, I would like to study the applicability of measuring skills through common surveys and experiments in different contexts, as well as the validity, substitutability, and complementarity of experimental and survey measures.

## **Work in Progress**

Breitkopf, L., Chowdhury, S., Kamhöfer, D., Schildberg-Hörisch, H., and Sutter, M. (ongoing). The right timing matters: Sensitive periods in the formation of socio-emotional skills

Breitkopf, L., Chowdhury, S., Kamhöfer, D., Schildberg-Hörisch, H., and Sutter, M. (ongoing). The effects of a large-scale social and emotional learning program on students' educational attainment

Breitkopf, L., Chowdhury, S., Priyam, S., Schildberg-Hörisch, H., and Sutter, M. (ongoing). Do economic preferences of children predict behavior? Earlier version published as DICE DP 342 (2020) Do economic preferences of children predict behavior? Evidence from sibling comparisons

Breitkopf, L., Chowdhury, S., Priyam, S., Schildberg-Hörisch, H., and Sutter, M. (ongoing). Positive parenting and skills of children

# Lectures and Presentations (since 2020)

2021

The Formation of Self-Control and Prosociality: The Role of Investments, Sensitive Periods, and Spillovers Among Family Members

Maastricht Behavioral and Experimental Economics Symposium (M-BEES), (virtual) conference, Maastricht University, Netherlands 7 June 2021

The Formation of Self-Control and Prosociality: The Role of Investments, Sensitive Periods, and Spillovers Among Family Members

IAREP/SABE 2021 Annual Conference, (virtual) conference, jointly organized by the

International Association for Research in Economic Psychology, UK, and the Society for the Advancement of Behavioral Economics, US 12 June 2021

2022

The Right Timing Matters: Identifying Sensitive Periods in the Formation of Socio-Emotional Skills NHH-MPI Workshop, (virtual) workshop, jointly organized by the Norwegian School of Economics and the MPI 9 May 2022

The Right Timing Matters: Identifying Sensitive Periods in the Formation of Socio-Emotional Skills Düsseldorf Institute for Competition Economics (DICE) Brown-bag, seminar talk, Heinrich Heine University Düsseldorf, Germany 22 June 2022

The Right Timing Matters: Sensitive Periods in the Formation of Socio-Emotional Skills IZA/ECONtribute Human Capital Meeting, workshop/meeting, University of Cologne, Germany 4 November 2022

2023

Lions Quest Skills for Growing in Bangladesch: Eine ökonomische Feldstudie zur Entwicklung sozio-emotionaler Fähigkeiten von Kindern Lions Club leaina, invited talk, Düsseldorf, Germany 1 February 2023

## **Teaching**

Winter term 2020/21 Heinrich Heine University Düsseldorf Teaching assistant for Bachelor module Empirical Public Economics

Summer term 2021 Heinrich Heine University Düsseldorf Teaching assistant for Master module Public Economics

Winter term 2021/2022 Heinrich Heine University Düsseldorf Teaching assistant for Bachelor module Empirical Public Economics

Summer term 2022 Heinrich Heine University Düsseldorf Teaching assistant for Master module Public Economics



Contact
brinker@coll.mpa.de

https://www.coll.mpg.de/tom-brinker

## **Tom Brinker**

## **Summary Report**

I joined the institute in October 2022. Before the PhD, I studied economics in Bonn and Cologne and began my doctoral studies one year before then, in the autumn of 2021, as a researcher at the Institute of Energy Economics at the University of Cologne. In addition to my position at the institute, I am a teaching assistant at the Centre for Macroeconomic Research at the University of Cologne.

My research interest lies at the nexus of public and environme ntal economic theory. In the coming years, I would like to contribute to the understanding of limitations and chances of public regulation and intervention, with a particular focus on external effects. Furthermore, I am also working on a project concerning empirical outcomes of overlapping climate-policy instruments.

## Research Agenda

Currently, I am working on two research projects, which are both in the early stages. The primary focus lies on a contribution to the ongoing theoretic debate over the choice and design of regulatory instruments to internalize external effects. A coauthor and I are asking the question whether and how regulators can efficiently revise policies based on observed outcomes under asymmetric information when firms act strategically. This is a novel game-theoretic approach to Pigouvian regulation of externalities, since we interpret the interaction between the regulator and firms as a signaling game in which the only channel of communication is the regulatory outcome, e.g., the observed emissions. We hope to contribute to two strands of literature. First, we add to the research on cap adjustments in emissions-trading systems. Second, our project is also closely related to research that addresses the question whether

price or quantity regulation is to be preferred under incomplete or asymmetric information.

Additionally, I am working on an empirical project that asks the question whether additional so-called demandpull instruments can complement carbon pricing in spurring environmental innovation. On the one hand, theory suggests that carbon pricing alone does not vield an efficient market outcome, since it does not address a potential knowledge-market failure in sustainable innovation. On the other hand, instruments that address general knowledge-market failures, such as patent protection, might already solve this issue. Therefore, it is unclear whether additional policies have a positive effect on innovation or might even undermine the effectiveness of a carbon price. I have gathered a data set that combines carbon prices, feed-in tariffs for renewable electricity, and patent data from different EU member countries.

## **Teaching**

Summer term 2023 University of Cologne Seminar Economics (Bachelor VWL)

## **Morten Broberg**

## **Summary Report**

I have been a visiting researcher in Professor Engel's Behavioral Law and Economics Group at the Max Planck Institute for Research on Collective Goods since July 2022. Besides being a visiting researcher, I hold the University of Copenhagen's Chair in International Development Law.

Like so many other lawyers, I am painfully aware that there is often a remarkable difference between how the law functions 'in the books' and how it functions 'in action'. During the last three decades. I have primarily worked in academia, but over the years I have also had some prolonged spells at the Court of Justice of the European Union, at the Court of Appeal for Eastern Denmark, in the European Commission, in the Danish Ministry of Justice and in private practice. Each time I have entered 'the real world', the difference between the law 'in the books' and the law 'in action' has stood out very clearly. In order to understand this difference better. I have turned towards behavioral law and economics. However, in Denmark (and Scandinavia) the field of behavioral law and economics remains uncharted territory - making it difficult to gain an in-depth understanding thereof. By contrast, the Max Planck Institute for Research on Collective Goods houses the leading research environment in the field of behavioral law and economics. It is against this background that I reached out to Professor Engel in 2021 to enquire about the possibility of joining his research group as a visiting researcher - and was warmly welcomed into the group.

Professor Engel's Behavioral Law and Economics Group offers a research environment of outstanding quality and thereby reflects the high quality of the researchers making up the group and the broad range they cover within the field of behavioral law and economics.

However, what has made my time as a visiting researcher particularly rewarding is the fact that Professor Engel and his researchers have created an accommodating and friendly environment where all members of the research group – from the most junior to the most senior – take an active and constructive part in the frequent meetings where new ideas and research are presented.

I am delighted to say that being a visiting researcher in Professor Engel's research group has proven to be an excellent way of acquiring a solid understanding of the complexities and peculiarities of behavioral law and economics.

## Research Agenda

During my time in Professor Engel's Behavioral Law and Economics Group at the Max Planck Institute for Research on Collective Goods, I have pursued two parallel tracks with respect to my research:

Firstly, I have applied a behavioral law and economics approach to the very design of new legislation. In this respect. I have chosen to focus on European Union law since EU directives offer fascinating empirical data. Thus, when the EU legislates through the adoption of a new directive, the EU Member States must implement (or 'transpose') this directive into their national legal orders. In so doing, it is in principle up to the individual Member State to choose the legislative design. For example, a number of directives require the Member States to introduce legislation whereby the citizens are asked to give their consent in specific situations. Some Member States may implement this in the form of an 'opt-in clause', whereas other Member States may go for an 'opt-out clause'. Thus, the implementations will provide two very different default situations. The consequence is that we may



### Contact

broberg@coll.mpg.de

https://www.coll.mpg.de/morten-broberg

expect one and the same directive provision to have very different impacts in the different Member States – merely due to the different Member States' choice of legislative design regarding the implementation. Of course, implementation of EU directives also allows for the study of much more subtle differences in legislative design than the just mentioned (and well-known) 'opt-in'/'opt-out' one. Ultimately, the objective is to establish how different legislative designs affect the actual impact of different pieces of legislation.

Secondly, I have been working on two articles introducing Danish lawyers to the field of behavioral law and economics. The objective is to make Danish lawyers aware of the importance of the behavioral-science aspects whenever considering how the law works 'in the real world'.

## **Publications (since 2020)**

#### 2023

Broberg, M., & Fenger, N. (2023). European court of justice versus member state courts: Who decide what? Preliminary rulings concerning the application of EU law in the main proceedings. Yearbook on Procedural Law of the Court of Justice of the European Union

Broberg, M. (2023). Hvordan bringes de danske domstole ind i det 21. århundrede? Nogle forslag til nye værktøjer og arbejdsformer ved danske domstole. *Ugeskrift for Retsvaesen* 

Broberg, M., & Fenger, N. (2023). Should the Court of Justice give preliminary rulings in cases where EU law does not apply? European Public Law

Broberg, M., & Fenger, N. (2023). Transformarea abordării Curții Europene de Justiție referitoare la trimiterile preliminare provenite de la organe administrative ale statelor membre. Revista Romana de Drept European, (2), 45-72

#### 2022

Broberg, M. (2022). Frihedshævd. *Ugeskrift* for Retsvaesen, 2022, 347-356. [U.2022B.347]

Broberg, M., & Fenger, N. (2022). If you love somebody set them free: On the Court of Justice's revision of the Acte Clair Doctrine. *Common Market Law Review*, *59*(3), 711-738. https://doi.org/10.54648/cola2022050

Broberg, M., & Arnt Nielsen, P. (2022). Krav om sikkerhedsstillelse, når udenlandske sagsøgere anlægger sag ved de danske domstole – cautio judicatum solvi. *Ugeskrift for Retsvaesen*, (16), 144-150. [U.2022B.144]

Broberg, M. (2022). Preliminary rulings to enforce EU values. In S. Garben, L. Gormley, & K. Purnhagen (Eds.), *OUP Online Encyclopedia* of EU Law, Oxford University Press

Broberg, M. (2022). Scope of EU Development Policy: India Cooperation Agreement. In G. Butler, & R. A. Wessel (Eds.), EU External Relations Law: The Cases in Context, Bloomsbury Academic

Broberg, M., & Fenger, N. (2022). The European Court of Justice's transformation of its approach towards preliminary references from member state administrative bodies. Cambridge Yearbook of European Legal Studies, 24, 169-200

Broberg, M., & Fenger, N. (2022). The law of arbitration and EU law – like oil and water? European Investment Law and Arbitration Review Online, 7(1), 87-112

Fenger, N., & Broberg, M. (2022). Præjudicielle forelæggelser fra administrative organer – fra en imødekommende til en restriktiv praksis. *Juristen*, (1), 13-24

#### 2021

Broberg, M. (2021). Book review: Preliminary references to the court of justice of the european union and effective judicial protection (Brussels: Larcier, 2020). Common Market Law Review, 58(4), 1289-1291

Broberg, M., & Fenger, N. (2021). Broberg and Fenger on Preliminary References to the European Court of Justice. 3rd ed., Oxford University Press

Broberg, M. (2021). Ejerlejlighedslovens § 12 og adgangen til udstykning af (allerede opdelte) ejerlejligheder. *Tidsskrift for Bolig- og Byggeret*, 821-825

Broberg, M., & Martinez Romera, B. (2021). Loss and damage after Paris: All talk and no action? In M. Broberg, & B. Martinez Romera (Eds.), The Third Pillar of International Climate Change Policy: On 'Loss and Damage' after the Paris Agreement, Routledge

Broberg, M. (2021). National EU Courts must seek advice in Luxembourg or face reproach in Strasbourg. *European Human Rights Law Review*, (2), 162-171

Broberg, M., & Fenger, N. (2021). Preliminary references to the European Court of Justice by arbitration tribunals. *Journal of International Arbitration*, 38(5), 629-644

Fenger, N., & Broberg, M. (2021). Præjudicielle forelæggelser i sager, hvor EU-retten ikke finder anvendelse. *Juristen*, (3), 107-118

#### 2020

Broberg, M. (2020). A critical appraisal of the World Health Organisation's international health regulations (2005) In times of pandemic – it is time for revision. *European Journal of Risk Regulation*, 11(2), 202-209

Broberg, M., Fenger, N., & Hansen, H. (2020). A structural model for explaining member state variations in preliminary references to the ECJ. *European Law Review*, 45(5), 599-618

Broberg, M., & Fenger, N. (2020). Arbitration cases and preliminary references to the European Court of Justice — an assessment of 'the Danish Solution'. *Arbitration International*, 36(1), 147-155

Broberg, M. (2020). EU development policy. In R. Wessel, & J. Larik (Eds.), EU External Relations Law: Text, Cases and Materials, 2nd ed., Bloomsbury Academic

Broberg, M. (2020). FN's Verdenssundhedsorganisations (WHO) retlige grundlag for bekæmpelse af grænseoverskridende epidemier. *Ugeskrift for Retsvaesen*, [U.2020B.109]

Broberg, M. (2020). Interpreting the UNFC-CC's provisions on 'mitigation' and 'adaptation' in light of the Paris Agreement's provision on 'loss and damage'. *Climate Policy*, 20(5), 527-533

Broberg, M., & Martinez Romera, B. (2020). Loss and damage after Paris: More bark than bite? Guest editorial. *Climate Policy*, 20(6), 520-528

Broberg, M. (2020). Parametric loss and damage insurance schemes as a means to enhance climate change resilience in developing countries. *Climate Policy*, 20(6), 693-703

Broberg, M. (2020). The third pillar of international climate change law: Explaining 'loss and damage' after the Paris agreement. *Climate Law*, 10(2), 211-223

Broberg, M. (2020). Une approche critique du Règlement sanitaire mondial (2005) de l'OMS en temps de pandémie: Une révision impérative. Revue européenne du droit, 28-31

Fenger, N., & Broberg, M. (2020). Danske domstoles forhold til EU-Domstolen. *Ugeskrift for Retsvaesen*, 177-. [U.2020B.177]

## Work in Progress

Broberg, M. (ongoing). Consequences of different modes of implementing EU directives – A behavioural law and economics analysis

Broberg, M. and Hansen H. (ongoing). Retlig regulering i spilteoretisk lys

Broberg, M. (ongoing). Retlig regulering i adfærdsvidenskabeligt lys

Broberg, M. (ongoing). Fastlæggelsen af gældende ret – en replik til Lars Henrik Gam Madsen

Broberg, M. and Hildebrant T.T. (ongoing). Digitalisering af arbejdet ved de danske domstole

#### **Grants / Prizes / Honors**

2021

Knight of the Order of the Dannebrog (Ridder af Dannebrogordenen)

2018

Grant from Independent Research Fund Denmark (project: 'Food Security and Increased Market Regulation in the Global South – FAIM')

# Lectures and Presentations (since 2020)

2020

EU og dansk forvaltningsret Djøf, presentation to civil servants, Copenhagen/Denmark 21-22 September 2020

2021

Præjudicielle forelæggelser Djøf, presentation to practising lawyers, Copenhagen/Denmark 9 Februrary 2021

2022

EU-ret

Dansk Institut for immaterialretsuddannelse (DIFI), presentation to patent agents, Copenhagen/Denmark

C-561/19 – Consorzio Italian Management MPI Luxembourg, Forum on the Procedural Law of the Court of Justice of the European Union, Luxembourg/Luxembourg 7 March 2022

EU og dansk forvaltningsret Djøf, presentation to civil servants, Copenhagen/Denmark 8-9 March 2022

EU og dansk forvaltningsret Djøf, presentation to civil servants, Copenhagen/Denmark 12-13 October 2022 Præjudicielle forelæggelser Djøf, presentation to practising lawyers, Copenhagen/Denmark 21 November 2022

Præjudicielle forelæggelser Domstolsakademiet (Academy for Danish judges), presentation to judges, Horsens/ Denmark 23 November 2022

2023

**EU og dansk forvaltningsret** Djøf, presentation to civil servants, Copenhagen/Denmark 26-27 April 2023

EU og dansk forvaltningsret Djøf, presentation to civil servants, Copenhagen/Denmark 20-21 June 2023

## **Teaching**

Winter term 2020/21 University of Copenhagen Supervisor – BA theses, MA theses, PhD theses

Summer term 2021 Leave (judge ad interim, Court of Appeal of Eastern Denmark) Supervisor – PhD theses

Winter term 2021/2022 Leave (judge ad interim, Court of Appeal of Eastern Denmark) Supervisor – PhD theses

Summer term 2022 University of Copenhagen BA-course: 'Ret, moral og politik' ('Law, Morality and Politics') Supervisor – BA theses, PhD theses

Winter term 2022/2023 University of Copenhagen Supervisor – BA theses, PhD theses

Summer term 2023 University of Copenhagen Supervisor – BA theses, PhD theses

## **Public service**

2021
Judge ad interim, Court of Appeal of Eastern
Denmark

#### **Professional Activities**

Referee for

European Law Review

Cambridge Review of International Affairs Journal of Common Market Studies Cambridge University Press Nature Communications Nature Climate Change European Journal of Risk Regulation Ugeskrift for Retsvæsen Förvaltningsrättslig tidskrift Perspectives on European Politics and Society Journal of Business Ethics Journal of Contingencies and Crisis Management Third World Quarterly British Food Journal Utrecht Journal of International and European Law

**Editorial boards** European Journal of Risk Regulation



#### Contact

m.coerts@vu.nl

https://research.vu.nl/en/persons/marin-coerts

## **Marin Coerts**

## **Summary Report**

I had the privilege of being affiliated with the Behavioral Law and Economics Research Group led by Prof. Engel at the esteemed Max Planck Institute for Research on Collective Goods, contributing from October to December 2022 in the capacity of a guest researcher. Currently, I am still pursuing my doctoral studies in the realm of Constitutional and Administrative Law at the Vrije Universiteit Amsterdam.

In my research I focus on performance obligations. These regulations are designed to safeguard the public interest, but there is a concern that excessive restrictions may hinder companies' ability to invest effectively. The impact of extensive regulations is a subject of study at the intersection of law and empirical research. It aims to determine whether such regulations have unintended consequences, such as inefficient investment, decreased innovation, barriers to market entry, and limited information-sharing. It focuses on three specific legal areas - telecommunications law, public transport law, and energy law - where government interference is driven by a clear public interest. Through 26 semi-structured interviews with government organizations and permit holders, the research investigates the preparation process, policy choices, and the extent to which stakeholders are involved in shaping regulations. Next to this, I conducted an auction experiment to investigate the effect of performance obligations in the context of market access auctions for a monopolistic or a duopolistic market in a 2×2 design. The empirical-research component provides valuable insights into the realities of these markets by highlighting policy choices and the influence of private and third-party actors on regulatory decisions. The study also identifies the consequences of performance obligations when private parties are being active in the market. By combining legal analysis

with empirical research, the study aims to shed new light on the relationship between government interference, market regulations, and safeguarding public interests.

## Research Agenda

Following my tenure in Bonn, my focus seamlessly transitioned to advancing my manuscript. I am diligently working towards the culmination of my research by May 2024. Concurrently, I am actively engaged with the Center for Public Law and Governance, a center dedicated to researching government contracts, tenders, allocation of scarcity, public-private legal relationships, semi-public institutions, and the intricate division of responsibilities within the market landscape. Within this context, I am excitedly preparing to deliver a presentation about the outcomes of my research at the center. Moreover, I am collaboratively crafting an article alongside a fellow member of this establishment (see Work in Progress).

My involvement extends further as I hold the position of secretary on the board of the Amsterdam Behavioral Economics and Law lab, reinforcing my commitment to the intersection of these disciplines. As I chart my trajectory beyond my doctoral research, my aspirations lead me towards deeper exploration at the nexus of behavioral economics and law. On the one hand, the application of behavioral economics in administrative law can be aimed at understanding the behavior and legal processes within a legal system by looking at the (legal) decision-making, policy considerations, and the advocacy of interests that play a role within various government actors. On the other hand, the impact of laws and regulations on the behavior of individuals and organizations can be studied. There is a great opportunity here by investigating in behavioral economics how specific forms of distortions

("biases", in Anglo-Saxon jargon) within the sphere of government – often incorrectly referred to as "irrationality" from the perspective of (behavioral) economists – increase the risk of government failure.

## **Publications (since 2020)**

#### Articles in Peer-Reviewed Journals

Coerts, M., Laarman, B., Rutgers, J., Sauter, W., & Witteloostuijn, A., van (forthcoming). Naar een gedragseconomie van het recht. *Law and Method* 

#### Journal Articles (not peer-reviewed)

Coerts, M. (2020). De 5G-multibandveiling: nieuwe maatregelen voor de verdeling van schaarse frequentievergunningen. *Mediaforum*, 6

Coerts, M. (2020). Uitvoeringsverplichtingen in vergunningstelsels: Een empirisch juridisch onderzoek naar overheidsingrijpen in markten. Nederlands Tijdschrift voor Bestuursrecht, 8/210, p. 522–529

## **Work in Progress**

#### Example:

Coerts, M., Heine, F.A., Ommeren, F.J., van & Witteloostuijn A., van (in preparation). Single and Multi-Winner Auctions with Performance Obligation

Coerts, M., & Ommeren, F.J., van (in preperation). De prijs van een schaarse vergunning

# Lectures and Presentations (since 2020)

#### 2021

Lecture Media & Communication Law Vrije Universiteit Amsterdam, Lecture, Amsterdam/The Netherlands October 2021

#### 2022

Presentation Empirical Legal Studies Conference Vrije Universiteit Amsterdam, Conference, Amsterdam/The Netherlands September 2022

#### 2022

Presentation Topics Workshop University of Magdeburg, Workshop, Magdeburg/Germany November 2022

## **Teaching**

Winter term 2020/21 Vrije Universiteit Amsterdam Law & Governance

Winter term 2021/2022 Vrije Universiteit Amsterdam Law & Governance



**Contact**cypris@uni-wuppertal.de

https://www.sp.uni-wuppertal.de/de/team/niklas-f/

## **Niklas Cypris**

## **Summary Report**

I was a Research Fellow in the research unit "Moral Courage" from March 2020 until April 2022. In October 2021, I also joined the Chair for Social and Personality Psychology at the University of Wuppertal, where I am currently working. Moreover, since March 2020, I have been part of the multi-disciplinary research project "Personalized A.I.-Based Interventions Against Online Norm Violations".

At the MPI, I investigated the psychological mechanisms that predict bystander interventions in the form of counterspeech against online hate speech. The concrete research projects are elaborated below.

## Research Agenda

Most of my research has been under the umbrella of the project "Personalized Al-based Interventions Against Online Norm Violations: Behavioral Effects and Ethical Implications", funded by the Institute for Ethics in Artificial Intelligence at the Technical University Munich. Our interdisciplinary research group combines psychologists, computer scientists, and philosophers to advance the understanding of effective tools against online norm violations.

A focus of my research is the role of social norms in bystanders' decisions to speak up against hate speech. Specifically, I investigated how prior counterspeech can affect further bystander behavior via its effect on perceptions of pro-counterspeech norms. I tested this question via cross-sectional and longitudinal designs, as well as in a field study. In the field study (Cypris et al., in preparation (a)), we used the now-defunct Twitter API to confront people who used racist slurs on the social media platform. We then measured how, depending on the intervener identity and

status, the behavior of the addressee was affected over the course of the following month. Moreover, in a longitudinal study (Cypris et al., in preparation (b)), we had participants interact with posts in a mock-social-media forum that we had set up for them. We measured how their behavior was affected by other forum members' reactions to norm violations. Finally, we investigated the role of ingroup norms for bystander counterspeech in a series of cross-sectional vignette studies (Cypris et al., in preparation (c)).

In addition to the empirical work, I have also been involved in conceptual work in the field of interventions against online norm violation. On the one hand, I wrote a book chapter on online moral courage for the *Handbook of Peace Psychology*, intended for use in research, teaching, and application with my supervisor Prof. Julia Sasse (Sasse et al., 2023). On the other hand, I am currently working on an ethical evaluation of counterspeech interventions in society and of ethical research practices to investigate their effectiveness (Engelmann et al., ongoing).

I also mentor Bachelor and Masters students. With one Bachelor student of mine, I investigate the role of moral frames in counterspeech motivation. With a Masters student, I look into the ethical evaluations of personalized interventions by their potential targets and investigate the psychological dispositions that either increase or decrease acceptance.

Finally, in another project, I investigated the role of social and material costs in third-party punishment and counterpunishment (Toribio-Flórez, Cypris, Brüggemann, Şeker and Baumert, in preparation).

#### **Publications**

Sasse, J., Cypris, N., & Baumert, A. (2023). Moral courage online. In: C. Cohrs, N. Knab, & G. Sommer (Eds.). *Handbuch Friedenspsychologie* 

## **Work in Progress**

Cypris, N., Engelmann, S., Sasse, J., Grossklags, J., & Baumert, A. (in preparation a). Transgressor and bystander reactions to counterspeech on Twitter

Cypris, N., Engelmann, S., Sasse, J., Grossklags, J., & Baumert, A. (in preparation b). Effects of longitutinal exposure to bystander counterspeech on own counterspeech

Cypris, N., Sasse, J., Grossklags, J., Baumert, A. (in preparation c). Ingroup norms predict counterspeech against online hate speech

Engelmann, S., Cypris, N.F., Sasse, J., Baumert, A., Grossklags, J. (ongoing). Mapping out the ethical implications of counterspeech measures against hate speech on social media

Toribio-Flórez, D., Cypris, N., Brüggemann, M., Şeker, F., & Baumert, A. (onging). A closer look at third-party punishment under the risk of counterpunishment: An effect of additional material (And not social) Costs

# Lectures and Presentations (since 2020)

2021

Fighting Hate Speech: Social Norms and Intervention Behavior ISPP 2021 Virtual Annual Meeting July 2021

Leveraging Group Identity to Counter Online Hate Speech 12th Media Psychology Conference September 2021

Identity and Automated Counterspeech: Reducing Hate Speech on Twitter The Responsible Al Forum 2021 December 2021

2022

Countering Hate Speech: Social Norms and Attitudes 64th Conference of Experimental Psychologists March 2022 **Group Identity and Hate Speech** The Aarhus '22 Conference on Online Hostility and Bystanders June 2022

Countering Hate Speech: Bystander Interventions and Ingroup Norms ISPP 2022 Annual Meeting July 2022

Biased News Consumption: The Role of Moral Fit and Trait Ambivalence 52nd Congress of the German Psychological Society September 2022

2023

Hate Speech and Counterspeech: The Impact of Social Norms on Moral Courage Online EASP General Meeting, Krakow/ Poland July 2023

### **Teaching**

Summer Term 2022 Social Psychology of the Internet Supervision of Bachelor's and Master's Theses Bergische Universität Wuppertal

Winter Term 2021/2022 Supervision of Bachelor's and Master's Theses Bergische Universität Wuppertal

Summer Term 2022 Social Psychology of the Internet Datenverarbeitung und Datenanalyse mit R Supervision of Bachelor's and Master's Theses Bergische Universität Wuppertal

Data Analysis in R: Advanced Applications Technical University of Munich

Winter Term 2021/2022 Introduction to Quantitative Methods Technical University of Munich

Summer Term 2021
Data Analysis in R: Advanced Applications
Technical University of Munich

Winter Term 2020/2021 Getting Started with R Technical University of Munich

#### **Professional Activities**

Referee for

European Journal of Social Psychology

Memberships

Since 2020 Member of the European Association of Social Psychology Member of the Deutsche Gesellschaft für Psychologie



Contact
egberts@coll.mpg.de

https://www.coll.mpg.de/alexander-egberts

# **Alexander Egberts**

## **Summary Report**

I am a third-year PhD student at the law faculty of the University of Bonn and a Research Fellow in the Behavioral Law and Economics Group. Before joining the institute in October 2021, I completed my academic and practical education as a lawyer in Germany and earned a postgraduate degree in Israel and Italy, specializing on the economic analysis of Law. As part of the International Max Planck Research School on Behaviorally Smart Institutions, I expanded my economic training with postgraduate economics courses at the University of Cologne. My research explores the boundaries of influencing consumer behavior in the digital space: from a legal perspective, I focus on the legality of practices that use deceptive or aggressive methods to steer user behavior online. This interacts with my empirical research, which intends to measure the extent to which users can be influenced to act against their preferences through digital choice architecture design.

## Research Agenda

My research is concerned with digital design practices that exert subliminal influence on consumers and lead to pre-reflective changes in their behavior. Such practices are commonly used in user interface and choice architecture design of digital decision contexts. The fact that decision environments can affect behavior has long been recognized in both behavioral economics and human-computer interaction research. These insights are being used by private companies to influence user behavior in a way that maximizes profit, e.g., by steering users to spend more money, share more data, or spend more time and attention on a digital platform. Such practices are well-known in the analog world, but the digital context comes with a set of special risks arising from the

scope of their employment, their detail of behavioral insight, and the possibility to personalize interfaces.

From a legal perspective, I aim to explore how insights from the interface with behavioral economics and human-computer interaction research can be made useful to respond legally to such practices. Previous legal research has been primarily concerned with identifying specific practices that are prohibited by specific provisions. I aim to expand these contributions by focusing on how broader general clauses can be utilized against manipulative and aggressive design practices. To do this, I draw from interdisciplinary insights that should be taken into account when assessing existent regulation on a material and on an enforcement level.

My empirical research focuses on the impact that subversive design techniques may have on users when interacting with digital systems. This is particularly relevant in a legal context, as the materiality of the behavioral influence is crucial both under current and under forthcoming legislation. I employ experimental methods to determine the extent to which user behavior can stray from their preferences, given that they are confronted with aggressive or deceptive interface designs. Beyond this, I use web-crawling techniques to investigate the market-wide evolution of deceptive and aggressive design techniques throughout Europe.

Generally, the objective of my research is to establish the foundation for a legal framework for design-based influence mechanisms in the digital context. This may help safeguard consumers from being exploited for their systematically irrational behavior, thus strengthening the preservation of autonomous decision-making. This, in turn, may facilitate preference realization, thus strengthening the functionality and resilience of digital markets.

#### **Publications**

Journal Articles (peer reviewed)

Di Porto, F., Egberts A. (forthcoming). The collective welfare dimension of dark patterns regulation, *European Law Journal* 

#### **Book chapter**

Egberts A. (forthcoming). Experimentelle Rechtstatsachenforschung im lauterkeitsrechtlichen Prozess: Beweismöglichkeiten jenseits der Demoskopie. In D. Bartlitz, et al. (Eds.), Jahrbuch Junge Zivilrechtswissenschaft 2023: Rechtstatsachenforschung im Zivilrecht

#### **Grants and Honors**

2021

EMLE Best Thesis Award: Enumerated award received for best thesis of the EMLE Program 2020/2021.

2022

Travel Grant for EMLE Graduation Ceremony in Rome/Italy; awarded to the valedictorian of the EMLE academic year of 2020/2021.

# Lectures and Presentations (since 2020)

2022

Manipulation through Design – A Law and Economics Analysis of Dark Pattern Regulation in the EU

EMLE Midterm Meeting, Hamburg, Germany (online)

18 February 2022

The Disparity between Privacy Behavior and Cookie "Choices"

IMPRS BeSmart Thesis Workshop, Magdeburg, Germany

22 November 2022

European Regulation of Dark Patterns Before and After the DSA

Journal of European Consumer and Market Law, 10-year anniversary conference, digital 16 December 2022

2023

Dark Patterns – Introduction, Legal & Empirical Research Approaches, Outlook
Max Planck Institute for Software Systems,
Guest Presentation, Saarbrücken, Germany
04 April 2023

European and U.S. American Regulatory Approaches to Dark Patterns Workshop on Mechanism Design for Social

Workshop on Mechanism Design for Social Good, Algorithms, Law, and Policy Working Group, Ithaca, United States (digital) 10 April 2023

The Collective Welfare Dimension of Dark Patterns Regulation

18th Conference of the Academic Society for Competition Law, Athens, Greece 30 June 2023

Experimentelle Rechtstatsachenforschung im lauterkeitsrechtlichen Prozess: Darlegungsmöglichkeiten jenseits der Demoskopie

33<sup>rd</sup> Annual Conference of the Gesellschaft Junge Zivilrechtswissenschaft e.V., Nuremberg, Germany

15 September 2023

Putting off the inevitable: An experiment on deferred public bads and privacy contexts 2nd Annual Conference of the European Society for Empirical Legal Studies (ESELS), Wasaw, Poland 26 September 2023

Digital Manipulation and Market Mechanisms - A Longitudinal Study of EU Dark Pattern Prevalence
IMPRS BeSmart Thesis Workshop with Pompeu Fabra University, Barcelona, Spain

## **Teaching**

Winter Term 2019

2 November 2023

National Law School of India University, Bangalore, India

Lecture "Blockchain and the Law", 3 units of 60 minutes each

Summer Term 2019-2021

EBS Law School, Wiesbaden, Germany Lecture "Rechtliche Handhabung von Blockchain Technologien", as part of the Focal Area "Recht der Digitalisierung", 3 ECTS

Winter Term 2021/2022

LUISS Guido Carli, Rome, Italy Guest Lecture "Manipulation through Design? Dark Patterns and their EU Regulation", as part of the Lecture Series "Innovation Law and Regulation"

Summer Term 2023

Rheinische Friedrich-Wilhelms-Universität, Bonn, Germany

Guest Lecture "Dark Patterns im Europäischen Verbraucherschutzrecht: Rechtliche und Empirische Regulierungsperspektiven", as part of the Lecture Series "Verbraucherschutz und Ökonomie"

#### **Professional Activities**

Referee for

Review of Law & Economics

Memberships

**Since 2023** 

Member of the Academic Society for Competition Law (ASCOLA)

Member of the European Society of Empirical Legal Studies (ESELS)



Contact
egidy@coll.mpg.de

https://www.coll.mpg.de/stefanie-egidy

## **Stefanie Egidy**

## **Summary Report**

Over the course of the last three years, I have completed my *habilitation* at the University of Bonn and recently accepted a position as full professor at the University of Mannheim.

In August 2022, I submitted the manuscript of my postdoctoral thesis (habilitation) titled "Strategic Litigation as a Challenge for the Judiciary" (translated from German) to the faculty of law at the University of Bonn. Christoph Engel supervised the thesis. In January 2023, I successfully completed the habilitation procedure and was awarded the venia legendi for public law, European law, legal theory, and comparative law. I left the institute in August 2023 for a W3 professorship for public law, economic analysis of law, and public economic law at the University of Mannheim, where I had already been teaching as an acting professor (Vertretungsprofessur) since September 2022.

My habilitation thesis engages with the phenomenon of "strategic litigation". Strategic litigants use the regular judicial-review system in order to achieve effects external to the judicial process. This activist use of courts poses new challenges to the traditional understanding of the role of the judicial system, which still largely emphasizes the courts' duty to find the right and truthful legal answer to each case. The phenomenon of strategic litigation has been at the center of legal, sociological, and political research conceptualizing the efforts and contributions of strategic litigants as well as the corresponding social movements. The other side of the equation consists of the legal system, which determines the framework in which strategic litigants act, and of the judges who decide how cases move through the judicial system. My thesis interconnects both sides and offers an empirically founded theoretical perspective on our concept of judicial review and independence within the separation-of-powers system and its response to strategic litigation. Building on these results, it undertakes a normative evaluation that emphasizes the constitutional limits of the judicial engagement with strategic litigation, namely the principles of equal treatment, democracy, and judicial independence.

Beyond this subject matter, my research is concerned with the question of how democratic states and their institutions react to and withstand pressure and change. In particular, it investigates how to safeguard the resilience of the constitutional and administrative order. Beyond a doctrinal and theoretical approach, I often take an empirical as well as a comparative legal perspective. A special focus lies on the concrete behavior of public actors before the requirements set by the principle of democracy. This theme joins the different core areas of my research.

Building on the insights of my dissertation on the democratic management of financial crises, I have widened the scope of inquiry to present a wider understanding of the interactions between financial markets, central banks, and constitutional rules. I have analyzed the upheaval of the balance of powers between the European Central Bank, the Court of Justice of the European Union, and the German Federal Constitutional Court due to the GFCC's 2020 judgment on the ECB's PSPP program. Currently, I am expanding this line of research into the highly debated area of central-bank independence.

Moreover, my habilitation thesis raises the question of how institutional actors can protect themselves against external threats, in particular the increasing democratic decline throughout the world. Healthy institutions are the essential pillars of a democracy. They form an intri-

cate support structure for safeguarding the provision of collective goods, such as social peace, physical well-being, the protection of human rights, but also financial stability. Despite their organizational structure, the responsibility to lead these institutions falls to human decision-makers who need to govern their citizens. This prompt has inspired my research on digital democracy and administrative resilience. Here, I am currently approaching the question from two perspectives. One addresses the digital challenges to democracy, while the other examines whether the concept of resilience can serve as a useful normative and positive benchmark. My contributions use insights from behavioral sciences with regard to both state actors and citizens to develop tools to solve specific problems in these areas. Central lines of inquiry are the formation of trust in institutions, the role of information, and mechanisms to induce both self-restraint and resilience.

## **Publications (since 2020)**

#### **Book chapters**

Egidy, S. (forthcoming). Besonderes Verwaltungsrecht. Öffentliches Wirtschaftsrecht, Öffentliches Baurecht, Kommunale Selbstverwaltung. In C. Engel, L. O'Hara, S. Egidy, Y. Hermstrüwer, L. Hoeft, & P. Langenbach (Eds.), Öffentliches Recht als Verhaltensordnung. Ein neues Paradigma

Egidy, S. (forthcoming). § 8 Kapitalverkehrsfreiheit. In E. Pache & M. Knauff (Eds.), Fallhandbuch Europäisches Wirtschaftsrecht, 3rd ed.

Egidy, S. (forthcoming). § 4 Warenverkehrsfreiheit. In E. Pache & M. Knauff (Eds.), Fallhandbuch Europäisches Wirtschaftsrecht, 3rd ed.

Egidy, S. (forthcoming). Energieversorgungssicherheit. In R. Müller-Terpitz & J.-H. Klement (Eds.), *Energierecht* 

Egidy, S. (forthcoming). Administrative resilience. In S. Rose-Ackerman (Ed.), Volume 1: Public Administration and Expertise in Democratic Governments: Comparative Public Law in the Twenty-First Century

Egidy, S., Hermstrüwer, Y., Hoeft, L., & Langenbach, P. (forthcoming). Behavioral public law. In C. Engel, L. O'Hara, S. Egidy, Y. Hermstrüwer, L. Hoeft, & P. Langenbach (Eds.),

Öffentliches Recht als Verhaltensordnung. Ein neues Paradigma

Egidy, S. (2022). Institutions 2030. In C. Bezemek (Ed.), *Constitutionalism 2030*, Oxford: Hart Publishing, 129–155

Egidy, S. (2021). Meinungsmanipulation in der digitalen Demokratie "Counterspeech 2.0" als Gegenstrategie? In J. Lüdemann, & Y. Hermstrüwer (Eds.), *Der Schutz der Meinungsbildung im digitalen Zeitalter*, Tübingen: Mohr Siebeck, 91–149

Teichman, D., Talley, E., Egidy, S., Engel, C., Gummadi, K. P., Hagel, K., ... Zamir, E. (2020). Institutions promoting or countering deliberate ignorance. In R. Hertwig & C. Engel (Eds.), *Deliberate ignorance: Choosing not to know*, Cambridge, MA: MIT Press, 275–298

Journal articles (not peer-reviewed)

Egidy, S. (forthcoming). Kollektiver Rechtsschutz und Strategische Prozessführung als Chance? Zeitschrift für Urheber- und Medienrecht

Egidy, S. (forthcoming). Designing administrative technology. *Georgia Law Review*, 58

Egidy, S. (2022). Strukturelle Defizite des Verwaltungsvertragsrechts aus verhaltenswissenschaftlicher Perspektive. *Deutsches Verwaltungsblatt*, 83–89

Egidy, S. (2022). Microtargeting politischer Werbung in der europäischen Demokratie: Regulierungsbedarf und Regulierungsansätze. Zeitschrift für Gesetzgebung, 334–373

Egidy, S. (2021). Proportionality and procedure of monetary policy-making. *International Journal of Constitutional Law*, 19(1), 285–308

#### Review

Egidy, S. (2020). Review of: Constitutions in times of financial crisis, Tom Ginsburg, Mark D. Rosen, & Georg Vanberg, eds., Cambridge University Press, 2019. *International Journal of Constitutional Law*, 18(3), 1044–1051

#### Books / Text books

Engel, C., O'Hara, L., Egidy, S., Hermstrüwer, Y., Hoeft, L., & Langenbach, P. (Eds.). (forthcoming). Öffentliches Recht als Verhaltensordnung. Ein neues Paradigma. Tübingen: Mohr Siebeck

Bretthauer, S., Collin, P., Egidy, S., & Spiecker gen. Döhmann, I. (2020). 40 Klausuren aus dem Verwaltungsrecht, 12th ed., 2020, Beck, 362 p.

Lewandowsky, S., Smillie, L., Garcia, D., Hertwig, R., Weatherall, J., Egidy, S., ..., & Joint Research Centre (European Commission). (2020). *Technology and democracy: Under-*

standing the influence of online technologies on political behaviour and decision-making. European Commission, Publications Office

## Manuscript

Egidy, S. (2023). Strategic litigation as a challenge for the judiciary, 580 p.

# Lectures and Seminar Presentations (since 2020)

#### **Invited Presentations**

#### 2020

Round-Table: Researchers Talk - Challenge Science Communication Körber Foundation, Berlin February 2020

Relational Contracts – A Legal Perspective.
Commenting Hendrik Hakenes
Seminar Law and Economics, University Bonn (virtual format)
June 2020

Organizing the Production of Law. Commenting Ruth Weber: The "legal laboratory of integration"

ICON-S Germany, Works-in-Progress Conference (virtual format) October 2020

Panelist, Tech + Democracy Seminar Series Centre for Cognition, Computation, & Modelling, Birkbeck, University of London, (virtual format) October 2020

Strategic Litigation Before Courts – A Theoretical, Doctrinal, and Empirical Study on Judicial Process

Global/Emile Noël Fellows Forum, New York University School of Law (virtual format) November 2020

#### 2021

Institutions, Constitutionalism 2030. A Prediction
University of Graz (virtual format)
April 2021

Strategic Litigation in a Democracy Academic Session of the Humanities Section North Rhine-Westphalian Academy of Sciences, Humanities, and the Arts (virtual format) April 2021 Monetary-Fiscal Policy Interactions and the Prohibition of Monetary Financing ECB Strategy Review. Legal Roundtable, European Central Bank (virtual format) February 2021

#### 2023

Strategic Litigation: The Case Beyond the Courtroom

Amsterdam Centre for European Studies, University of Amsterdam (virtual format) January 2023

Collective Redress and Strategic Litigation as Opportunities? Institute for Copyright and Media Law, Munich July 2023

## **Teaching**

#### Summer term 2020

Kolloquium Vertiefung Verwaltungsprozessrecht [Advanced Administrative Procedure] Goethe University Frankfurt

#### Summer term 2021

Kolloquium Besonderes Verwaltungsrecht [Special Administrative Law] Goethe University Frankfurt

#### Winter term 2022

Allgemeines Verwaltungsrecht und Verwaltungsprozessrecht [General Administrative and Administrative Procedure Law] University of Mannheim

Öffentliches Recht für VWLer [Public Law for Economists]
University of Mannheim

Quantitative Methods for Lawyers Examensklausurenkurs [Test Exams in Public Law] University of Mannheim

## Summer term 2023

Vertiefung Allgemeines Verwaltungsrecht und Verwaltungsprozessrecht [Advanced General Administrative and Administrative Procedure Law] University of Mannheim

Grundlagen des Wirtschaftsverwaltungsrechts [Administrative Economic Law] University of Mannheim Übung im Öffentlichen Recht für Fortgeschrittene [Advanced Practice in Public Law]

University of Mannheim

Examensklausurenkurs [Test Exams in Public Law]

University of Mannheim

#### Winter term 2023

Allgemeines Verwaltungsrecht und Verwaltungsprozessrecht [General Administrative and Administrative Procedure Law]
University of Mannheim

Öffentliches Recht für VWLer [Public Law for Economists] University of Mannheim

Übung im Öffentlichen Recht für Fortgeschrittene [Advanced Practice in Public Law] University of Mannheim

Examensklausurenkurs [Test Exams in Public Law] University of Mannheim

## Research Grants, Scholarships, Fellowships, and Elected Memberships

#### Since 2021

Post-Doctoral Scholarship "Strategische Prozessführung in der Demokratie", Daimler und Benz Stiftung

#### 2019-2022

Elected Member of the Young Academy of the North Rhine-Westphalian Academy of Sciences, Humanities, and the Arts

#### 2020-2021

Emile-Noël Post-Doctoral Global Fellowship, New York University School of Law, USA (virtual due to COVID-19)

#### 2020

Postdoctoral Scholarship, German Academic Exchange Service (DAAD) (declined due to COVID-19)

## Professional Service and Other Academic Activities

#### 2023

Member of the Appointment Committee for the W1-Professorship for Public Law at the University of Mannheim

#### 2023

Co-Organizer, Works-in-Progress Conference, ICON.S German Chapter (with Thomas Wischmeyer, Tim Wihl)

#### 2022 to present

Co-President, ICON.S German Chapter (with Philipp Dann)

#### 2019-2022

Advisory Board, ICON.S German Chapter

#### 2019-2022

North Rhine-Westphalian Academy of Sciences, Humanities, and the Arts: Co-Organizer of the Annual Research Day on "Democracy 2020"; Co-Founder and Co-Head of the Working Group: "Digital Democracy" (since 03/2021); (Deputy) Head of the Working Group "Science Communication" (03/2019-05/2022); Member of the Selection Committee for the Young Academy 2020 and for the Young Academy 2021

#### 2021

Strategy Review, Legal Roundtable, European Central Bank

#### 2015-2021

Member of the Works Council at the Max Planck Institute für Research on Collective Goods

#### Review for

Review of Law & Economics; Swiss Federal Institute of Technology Zurich (ETH), Branco Weiss Fellowship; Ernst-Strüngmann-Forum; Hart Publishing

## **Christoph Engel**

### **Research Portrait**

My own work is intimately tied to the work of my group. In the group report, all my personal publications are already reflected. I do not want repeat that in this research portrait. In the report three years ago, I reflected upon my intellectual journey, and how it has led to the present focus of my work. I do not want to repeat that either. When I turn emeritus in September 2025, I will be most grateful for all the Max Planck Society has allowed me and my permanently rejuvenated group to achieve over more than 25 years. I will be very pleased to observe how all the many law professors, and postdocs located in neighboring disciplines, who have come out of the group benefit from their time at the institute and find their independent interpretations of a behavioral approach to legal scholarship, and of the law as a social science. But even if the group draws to a close. I will not close my personal research file. I will remain active at the institute and look forward to collaborating with my co-directors. And I will become a long-term fellow of the law and economics center at ETH Zurich, getting the best of both worlds: the cutting edge of behavioral research at the institute, and the cutting edge of empirical legal studies in Zurich.

In this research portrait, I would like to cast light on open frontiers that have fascinated me during the last years, and to which I want to devote my energy in the years to come: while concluding my directorship, and thereafter. I see five.

A conversation between behavioral economics and criminology. In our own behavioral work, we have hugely benefited from the experimental-economics tradition, both on conceptual and on methodological grounds. For many years, I have been of the conviction that the social-science approach to crime and criminal law could benefit no less

than private or public law, on which we have mostly focused in our work. Yet, disciplines have their traditions. The tradition in criminology is grounded in sociology. The work is often very sophisticated, and not so rarely experimental. However, the discipline seems to have a culturally grounded reluctance to embrace features of the endeavor that have made behavioral economics strong: formal behavioral theory, experimental designs that focus on the identification of mechanism, safeguards for the credibility of the evidence. I have had a first success at an esteemed journal with such intellectual barter trade (Engel, 2023b). The experiment translates a design that I had originally developed to test legal theory (rule-following, to be specific (Desmet & Engel, 2021)) and to understand peer effects on the committing of crimes. The next step in this foray is a joint venture with the institute's fellow Dan Nagin, a very visible criminologist. We again adapt a standard paradigm of experimental economics (costly punishment by disinterested third parties) to cast new light on a long-standing topic in criminology: To which degree, and under which circumstances, does the presence of bystanders who have power to intervene discipline would-be criminals? We have now also joined forces for organizing the next yearly conference of the group, trying to intensify the conversation between the economics of crime community and criminology.

Heterogeneity of behavioral effects. Behavioral economics, no less than the neighboring field of social psychology, is wary of false positive results. Results have to be tested against the null hypothesis that the observed tendency is an artefact of the sample, rather than a reliable statement about the population effect. Such caution is obviously justified, even more so since the replication movement has cast doubt on so many seemingly well-established



Contact

engel@coll.mpg.de

https://www.coll.mpg.de/engel

findings. Yet, the legal interest in behavioral effects is chiefly motivated by the hope of designing more effective, and ideally less intrusive, interventions. For this endeavor, having a reliable estimate of the central (behavioral) tendency only leads so far. If the relevant population splits into distinct subgroups, with different behavioral tendencies, treating all of them in the same way can be problematic. Brushing interventions may not only be wasteful. They may even be counterproductive, for instance since they crowd out socially desirable behavioral tendencies. On the other hand, not targeting a socially particularly disruptive minority may leave a social ill unchecked, although the large majority of the population would have been willing to behave responsibly.

In his habilitation thesis, Pascal Langenbach addresses the resulting normative challenges: Is it acceptable to neglect the democratic principle of treating all citizens alike? How can the legislator avoid labelling individuals, typically only relying on (potentially false) signals? Which sources may government exploit for learning about individual behavioral tendencies? In my own work, I have, as a foundational contribution to this endeavor, focused on identifying heterogeneity in behavioral effects. Engel and Rockenbach (2023) use simulation to show that the characteristic downward trend in linear public goods results from the presence of free-riders in otherwise cooperative groups. In Engel, Hausladen, et al. (2023), we use machine-learning methods for classifying time-series data to show that the type space in linear public goods is much richer than reflected in extant behavioral theory. In a comparable approach, Andreas Glöckner and I show that triers of fact use characteristically different strategies to navigate a patently ambiguous criminal case. I have also developed a statistical procedure to isolate types in experimental data (Engel, 2020).

Mental mechanism of legal decisionmaking. Ever since studying law many decades ago, I have been puzzled, and later fascinated, by the open texture of most legal cases. Typically, the decision-maker knows full well that she does not know enough. Some facts that are potentially important for evaluating the case are simply not known, or they remain contested. There are usually multiple options for interpreting the evidence. One can legitimately discuss the applicable rules, and what they mean for the case. Still, judges are reasonably good at the task. In earlier work, we have used experiments to understand the mental mechanism, chiefly capitalizing on the psychological concept of parallel constraint satisfaction: In an iterative, non-linear process, partially reweighting the conflicting evidence, decision-makers construct a coherent representation of the case that fits the decision they take (Engel & Glöckner, 2013; Engel et al., 2020; Glöckner & Engel, 2013). In these studies, we had to infer mental mechanism from the fact that participants, arguably unbeknownst to themselves, have reevaluated the evidence such that it supports their decision. Engel and Rahal (2023) go one step further: With the help of eye-tracking, we observe the mental process in the making. To our surprise, eye-gaze data and the explicit (re)evaluations are completely uncorrelated. Apparently, the deformation of the evidence occurs in the context of representation, not yet in the context of discovery. In a next project, using the same method, we investigate how triers of fact handle inadmissible evidence. Our mid-term goal is to establish eye-tracking as a new tool for the behavioral analysis of the law.

German court decisions as data. Germany is a late-born child when it comes to the quantitative analysis of court data. At least for the Constitutional Court, the lag cannot be blamed on the court: For more than 20 years, it has been posting all decisions online. The quantitative analysis of these data is only just starting. In a first paper, I have

exploited that panel composition is not random (as, most prominently, in the US Court of Appeals). The very large majority of cases is decided by chambers of three (not the complete Senate of eight). Chambers stay together for an extended period, often several years. Yet, at larger time intervals, chambers are recomposed, in particular if a justice reaches the term limit and is replaced by a successor. These changes are as good as random, which makes it possible to identify quasi-random shocks in the degree of familiarity, measured by the degree of co-tenure. Familiarity turns out to favor the applicant (Engel, 2022).

In a new, completed project, I transpose a question that has been investigated time and again in the US to the German context: Does the political party that has selected the justice matter for the disposition of the case? This time I even have multiple opportunities for causal inference: (a) the political majority in the chamber flips, due to its recomposition; (b) a chamber has to decide with an irregular composition, as justices are temporarily unavailable, and this affects the political majority; (c) a senate is incomplete. It turns out that ideology has no measurable effect. However, justices nominated by the left-wing parties are more activist, even in subject areas that are ideologically a concern of the right-wing parties (Engel, 2023a).

Capitalizing on advances in computer science. In multiple dimensions, the collaboration with computer scientists is helping me to advance my research agenda. In the research on machine advice to judicial decision-makers, computer predictions are the object of investigation (Engel & Grgić-Hlača, 2021; Engel, Linhardt, et al., 2023; Grgić-Hlača et al., 2019). I am interested in the ways how this advice is perceived and processed by humans in the loop. In the research on the heterogeneity of behavioral effects, classification algorithms help me organize the type space (Engel, 2020; Engel, Hausladen, et al., 2023). In the research on the German Consti-

<sup>&</sup>lt;sup>1</sup> Provided they come with written reasons, which unfortunately is only a fraction.

tutional Court, natural language-processing helps me isolate the subject matter of the rulings (and to use it for inferring who has been justice referee). Finally, I just have started a large-scale collaboration with Moritz Hardt (MPI Tübingen), Krishna Gummadi (MPI Saarbrücken), Michael Livermore (U Virginia), Jens Frankenreiter (WashU), and Stefan Bechtold (ETH Zurich). We plan to train a large language model for the analysis of legal data. As a start, we are working on feature extraction, building on opensource data and labels from the US. We want to go beyond competitors like GPT by making the model fully replicable. Last, but not least, in collaboration with Axel Ockenfels I am working on establishing large language models as a technology for piloting lab experiments. This not only promises substantially to reduce the cost of experiment preparation. One would be able to pretest many more conditions than one would ever be able to afford with human subjects, and could focus the actual test on the conditions that appear to be critical.

Journal of Law and Empirical Analysis. Finally, with the intention to help the community thrive and expand, together with Lee Epstein, Daniel Klerman, and Eyal Zamir, I have founded the Journal of Law and Empirical Analysis. The journal wants to be open to all empirical methods, including the link to computer science, but also qualitative work. We want to attract publications that are at the highest methodological standard, while at the same time making a clear substantive contribution to the scientific legal discourse. The journal will be inauqurated by the end of 2023.

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the German Constitutional Court. *Journal of Empirical Legal Studies*, 19(4), 1179–1221

Engel, C. (2023a). The German Constitutional Court: Political, but not partisan?

Engel, C. (2023b). How little does it take to trigger a peer effect? An experiment on crime as conditional rule violation. *Journal of Research in Crime and Delinquency*, 60, 455–492

Engel, C., & Glöckner, A. (2013). Role induced bias in court. An experiment. *Journal of Behavioral Decision Making*, 26, 2720284

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Engel, C., Hausladen, C., & Schubert, M. (2023). Charting the type space. The case of linear public good games

Engel, C., Linhardt, L., & Schubert, C. (2023). Code is law. How COMPAS affects the way the judiciary handles the risk of recidivism

Engel, C., & Rahal, R.-M. (2023). What the judge argues is not what the judge thinks: Eye tracking as a window into judicial decision making. MPI Discussion Paper 2020/3

Engel, C., & Rockenbach, B. (2023). What makes cooperation precarious

Engel, C., Timme, S., & Glöckner, A. (2020). Coherence-based reasoning and order effects in legal judgments. *Psychology, Public Policy, and Law*, 26, 333–352

Glöckner, A., & Engel, C. (2013). Can we trust intuitive jurors? Standards of proof and the probative value of evidence in coherence based reasoning. *Journal of Empirical Legal Studies*, 10, 230–252

Grgić-Hlača, N., Engel, C., & Gummadi, K. P. (2019). Human decision making with machine assistance. An experiment on bailing and jailing. *Proceedings of the ACM on Human-Computer Interaction* 

## Publications (since 2020)

**Articles in Peer-Reviewed Journals** 

Engel, C., & Helland, E. (forthcoming). Does the fundamental transformation deter trade? An experiment. *American Law and Economics Review* 

Engel, C., Mittone, L., & Morreale, A. (forth-coming). Outcomes or participation? Experimentally testing competing sources of legitimacy for taxation. *Economic Inquiry* 

Engel, C. (2023). Do not draw a black ball from the justice lottery. *Journal of Institu*-

tional and Theoretical Economics (JITE), 179(1), 118–120

Engel, C. (2023). Hide and seek in the judiciary. *Journal of Institutional and Theoretical Economics (JITE)*, 179(1), 152–155

Engel, C. (2023). How little does it take to trigger a peer effect? An experiment on crime as conditional rule violation. *Journal of Research in Crime and Delinquency*, 60(4), 455–492

Engel, C., Goerg, S., & Traxler, C. (2022). Intensified support for juvenile offenders on probation: Evidence from Germany. *Journal* of Empirical Legal Studies, 19, 447–490

Engel, C., & Weinshall, K. (2022). Diffusion of legal innovations. *Annual Review of Law and Social Science*, 18, 139–152

Engel, C. (2021). Challenges in the interdisciplinary use of comparative law. *American Journal of Comparative Law*, 69, 777–797.

Engel, C. (2021). The impact of behavioral economics on the law: Introduction. *Review of Law & Economics*, 17(2), 241–251

Engel, C., & Grgić-Hlača, N. (2021). Machine advice with a warning about machine limitations: Experimentally testing the solution mandated by the Wisconsin supreme court. *Journal of Legal Analysis*, 13(1), 284–340

Engel, C., Kube, S., & Kurschilgen, M. (2021). Managing expectations: How selective information affects cooperation and punishment in social dilemma games. *Journal of Economic Behavior and Organization*, 187, 111–136

Engel, C., & Desmet, P. (2021). People are conditional rule followers. *Journal of Economic Psychology*, 85, 102384

Parisi, F., & Engel, C. (2021). A note on the article by Mark Ramseyer, published in RLE 2020. Review of Law & Economics, 17(1), 239–239

Zamir, E., & Engel, C. (2021). Sunlight is the best disinfectant – or is it? Anonymity as a means to enhance impartiality. *Arizona Law Review*, 63(4), 1063–1087

Engel, C., & Kurschilgen, M. (2020). The fragility of a nudge: The power of self-set norms to contain a social dilemma. *Journal of Economic Psychology*, 81

Engel, C., Mittone, L., & Morreale, A. (2020). Tax morale and fairness in conflict: An experiment. *Journal of Economic Psychology*, 81

Engel, C., & Weinshall, K. (2020). Manna from heaven for judges: Judges' reaction to a quasi-random reduction in caseload. *Journal of Empirical Legal Studies*, 17(4), 722–751

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Engel, C., Timme, S., & Glöckner, A. (2020). Coherence-based reasoning and order effects in legal judgments. *Psychology, Public Policy and the Law*, 26(3), 333–352

Engel, C. (2020). Uncertain judges. *Journal of Institutional and Theoretical Economics* (*JITE*), 176(1), 44–47

Engel, C., & Schweizer, U. (2020). Causality in the law and in the social science. *Journal of Institutional and Theoretical Economics* (*JITE*), 176(1), 1–3

#### **Books**

Engel, C., O'Hara, L., Egidy, S., Hermstrüwer, Y., Hoeft, L., & Langenbach, P. (Eds.). (forthcoming). Öffentliches Recht als Verhaltensordnung. Ein neues Paradigma. Tübingen: Mohr Siebeck

Hertwig, R., & Engel, C. (Eds.). (2020). Deliberate ignorance: Choosing not to know, Strüngman Forum Reports, 29, 378 p. Cambridge, MA: MIT Press

#### **Book Chapters**

Engel, C., & Rahal, R.-M. (forthcoming). Eye-tracking as a method for legal research. In *The Cambridge Handbook of Experimental Jurisprudence* 

Engel, C. (2023). Wettbewerb und Gemeinwohl. In U. Kischel, & H. Kube (Eds.), Handbuch des Staatsrechts I, 755–789

Engel, C. (2023). United, but not uniform: Experimental evidence about risk taking in the family. In P. Donati (Ed.), *The family as a relational good*, 329–352. Vatican: Pontifical Academy of Social Sciences

Engel, C. (2021). The proper scope of behavioural law and economics. In S. Grundmann & P. Hacker (Eds.), *Theories of Choice: The Social Science and the Law of Decision Making*, 19-C1.P122

Engel, C., & Ockenfels, A. (2020). Maverick: Experimentally testing a conjecture of the antitrust authorities. In V. Buskens, R. Corten, & C. Snijders (Eds.), Advances in the Sociology of Trust and Cooperation, 357–391. De Gruyter

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Engel, C., & Hertwig, R. (2020). Deliberate ignorance: Present and future. In R. Hertwig & C. Engel (Eds.), *Deliberate ignorance: Choosing not to know*, 317–332. Cambridge, MA: MIT Press

#### **Discussion Papers**

Engel, C. (2023). Treu und Glauben: Frag GPT. *MPI Discussion Paper* 2023/10

Engel, C. (2022). Judicial decision-making: A survey of the experimental evidence. *MPI Discussion Paper* 2022/6

Engel, C., Heine, K., & Naseer, S. (2021). Religion and tradition in conflict: Experimentally testing the power of social norms to invalidate religious law. *MPI Discussion Paper* 2021/13

Engel, C. (2021). Wettbewerb und Gemeinwohl. MPI Discussion Paper 2021/8

Engel, C. (2021). Lucky you: Your case is heard by a seasoned panel: Panel effects in the German constitutional court. *MPI Discus*sion Paper 2021/5

Engel, C. (2020). Rechtswissenschaft als Sozialwissenschaft. Spurensuche im Jahrgang 2019 der ZGR. *MPI Discussion Paper* 2020/6

Bar-Gill, O., & Engel, C. (2020). Property is dummy proof: An experiment. *MPI Discussion Paper* 2020/2

#### **Policy Reports**

Academic Advisory Council to the German Minister of Economics and Energy

Contributions to the following advisory opinions:

Öffentliche Infrastruktur in Deutschland: Probleme und Reformbedarf [Public infrastructure in Germany: Problems and need for reform] July 2020

Ein CO2-Grenzausgleich als Baustein eines Klimaclubs

[A carbon border adjustment mechanism as a building block for a climate club] March 2021

Digitalisierung in Deutschland – Lehren aus Corona-Krise [Digitisation in Germany– lessons learned from the COVID crisis] April 2021

Vorschläge für eine Reform der Gesetzlichen Rentenversicherung [Proposals for a reform of the statutory pension insurance system] June 2021 Die Zukunft der Arbeit in der digitalen Transformation [The future of work in times of digital transformation] April 2022

Menschenrechte und unternehmerische Sorgfaltspflichten [Human rights and corporate due diligence]

[Human rights and corporate due diligence] June 2022

Nachhaltige Finanzierungen von Pflegeleistungen

[Sustainable financing of care services] September 2022

Transformation zu einer klimaneutralen Industrie: Grüne Leitmärkte und Klimaschutzverträge

[Transition towards a climate-neutral industry: Green lead markets and climateprotection contracts] February 2023

Bundeswehr besser ausrüsten – aber richtig [Equipping the German Armed Forces (Bundeswehr) better – in the right way] July 2023

Rentenpolitik ist auch Wirtschaftspolitik [Pension policy is also economic policy] August 2023

# Lectures and Seminar Presentations (since 2020)

#### 2020

Judicial Tech
Kick-off Conference "The Roundabouts of
Digital Governance"
Erasmus School of Law, Rotterdam,
The Netherlands
28 January 2020

COVID 19 Triggers Disruptive Digitization (online)
Seminar on "Economic Growth Versus Integral Human Development. Post Covid-19

Economies", Rome, Italy 22–23 October 2020

#### 2021

Comment on "Measuring What Matters in Public Procurement Law" by Désirée U. Klingler Erasmus School of Law, Rotterdam, The Netherlands 24 March 2021 Law as an Empirical Discipline

Interdisciplinary Research: Unique windfalls, and Even More Pittfalls Erasmus School of Law, Rotterdam, The Netherlands 28 June 2021

Humanitarian Negotiators are Human (online)

Center of Competence on Humanitarian Negotiation, World Summit 2021, Caux 2 July 2021

Religion and Tradition in Conflict (online) (Joint with Klaus Heine and Shaheen Naseer) Erasmus School of Law, Rotterdam, The Netherlands

29 September 2021

What the Judge Argues is Not What the Judge Thinks: Eye Tracking Evidence about the Normative Weight of Conflicting Concerns in a Torts Case University of Vienna, Symposium Psychology and Law, Vienna, Austria 4 October 2021

Lab Experiments: An Overlooked Tool in the Box of Criminology University of Freiburg, Germany 10 November 2021

#### 2022

Lucky You: Your Case is Heard by a Seasoned Panel And

Comment on Alma Cohen, Zvika Neeman and Florian Auferoth, Judging under Public Pressure

Conference for Empirical Legal Studies 2022, Toronto, Canada (online) 18–19 March 2022

Comment on Aileen Nielsen, Can a Computer Invade Your Privacy? (online) Experimental Workshop, Bonn, Germany 1 April 2022

Squaring the Circle. Empirical Legal Scholarship that is Sound and Relevant at a Time (online)

University of Regensburg, Germany 5–6 April 2022

The Human in Human Rights Law (online) German-Israeli Minerva School, MPI for Comparative Public and International Law, Heidelberg, German 25 April 2022

United, but Not Uniform. Experimental Evidence About Risk Taking in the Family (online)

The Pontifical Academy of Social Sciences, Vatican City, Vatican 28 April 2022 What the Judge Says is Not What the Judge Thinks

(joint with Rima Rahal) (online) University of Zurich, Switzerland 10 May 2022

Privacy as a Public Good (online) European University Institute, Badia Fiesolana, Italy 10 May 2022

Das Bundesverfassungsgericht in Zahlen. Werkstattbericht.

Humboldt Universität zu Berlin, Germany (online)

12 May 2022

What the Judge Argues is Not What the Judge Thinks – Eye Tracking Evidence about the Disconnect Between Judicial Decision-Making and Judicial Reasoning (online) Conference "Mathematical Concepts in the Sciences and Humanities" in honor of Jürgen Jost

17 May 2022

Comment on Shawn D. Bushway: Don't Draw a Black Ball from the Justice Lottery Comment on Rachael K. Hinkle: Hide and Seek in the Court System Seminar on Judicial Decision-Making, JITE Conference, Stralsund, Germany 15–16 June 2022

Lucky You: Your Case is Heard by a Seasoned Panel – Panel Effects in the German Constitutional Court ALEA Annual Conference 2022, New York, USA

4-5 August 2022

#### 2023

Law and Economics of Justice: An Embarrassment of Riches? 10th Law and Economics Conference in Lucerne, Switzerland 17 – 18 March 2023

Das will ich gar nicht wissen Münchner Themenkonzerte 2023, Munich, Germany 31 March 2023

Comment on Meeyoung Cha: Exploring the Dark Side of Fake News, Hallucination, and the Health Implications of Al Chatbot's Responses

Seminar on Machine Learning and the Law, JITE Conference, Segovia, Spain 7–10 June 2023

Political, but not Partisan: The German Constitutional Court Conference on Empirical Legal Studies Chicago, uSA 13–14 October 2023 Treu und Glauben aus Sicht der Rechts- und Verhaltensökonomie
Studiengesellschaft für Wirtschaft und Recht,

Universität Salzburg, Austria 23–24 November 2023 Behavioral determinants not only of altruistic

help, but also of decision-making on behalf

of others
Pontifical Academy, Rome, Italy
4–6 December 2023

# Diploma Theses, Dissertations and Habilitations

#### **Dissertations**

#### October 2020

Yoan Hermstrüwer, Friedrich-Schiller University Jena (Economics)
Engineering Games in the Public Interest,
Essays in Experimental Law and Market
Design

#### October 2020

Carina Hausladen, University of Cologne (Economics) Behavioral Economics – Enhanced: Machine Learning and Decision-Making

#### June 2021

Michal Soltes, Charles University, CERGE-EI, Prague (Economics) Essays in Applied Economics (second reader)

#### July 2021

Deliah Sarah Bolesta, University of Jena (Psychology) Contextualizing Political Ideology on the Impact of Measurement, Domain, and Identity (second reader)

#### August 2021

Cornelius Schneider, University of Cologne (Economics) Three Essays on Experimental Public Economics

#### October 2021

Maj-Britt Sterba, University of Jena (Economics) Experimental Evidence on Fair and Unfair Inequalities

#### December 2021

Marcel Schubert, University of Cologne (Economics) Behavioral Economics & Machine Learning -Expanding the Field Through a New Lens

#### January 2022

Slieman Halabi, University of Jena (Psychology) Acculturation, Psycholinguistics and Intergroup Boundaries (second reader)

#### February 2022

Leonard Hoeft, University of Jena (Law) Legal Institutions in the Laboratory

#### September 2022

Martin Sternberg, University of Bonn (Law) Algorithmische Preissetzung und tacit collusion

#### January 2023

Stephan Tontrup, University of Bonn (Law) Behavioral-Self-Management – A Model Case For Fundamental Empirical Legal Research

#### May 2023

Roy Shubhangi, University of Münster (Law) Towards an Integrated Approach to Compliance. When Do People Obey Laws? (second reader)

#### December 2023

Johannes Rottmann, University of Bonn (Law) Preisgarantien im Wettbewerbsrecht

#### **Habilitations**

#### October 2022

Stefanie Jung, University of Gießen (Economics) Täuschungen in unternehmerischen Vertragsverhandlungen

[Deceptions in corporate contract negotiations] (second reader)

#### January 2023

Stefanie Egidy, University of Bonn (Law) Strategische Prozessführung als Herausforderung der Judikative [Strategic Litigation as a Judicial Challenge]

#### June 2023

Yoan Hermstrüwer, University of Bonn (Law) Das Design öffentlich-rechtlicher Matching-Märkte als Rechtsproblem und Aufgabe der öffentlichen Verteilungsverwaltung [Mechanical Justice. The Design of Public Matching Markets as a Legal Problem and Function of Public Administration]

#### **Professional Activities**

#### Editor

Journal of Law and Empirical Analysis Review of Law and Economics

#### Ad hoc reviewer

Journal of Legal Studies, Journal of Empirical Legal Studies, Journal of Law, Economics and Organization, American Law and Economics Review, International Review of Law and Economics, American Journal of Comparative Law, International Journal of Constitutional Law, European Journal of International Law, Econometrica, Management Science, Science Advances, Economic Journal, Journal of Public Economics, Games and Economic Behavior, Research Policy, Experimental Economics, Journal of Economic Behavior and Organization, International Journal of Industrial Organization, Labour Economics, Economics Letters, Journal of Economic Psychology, Journal of the Economic Science Association, Journal of Behavioral and Experimental Economics, Review of Behavioral Economics, Public Choice, Games, Economics Bulletin, Journal of Public Economic Theory, Journal of Institutional and Theoretical Economics, Journal of Institutional Economics, Metronomica

European Research Council, Alexander von Humboldt Foundation, Thyssen Foundation, Zentrum für Europäische Wirtschaftsforschung, Israeli Science Foundation, United States – Israel Binational Science Foundation, Israel Institute for Advanced Studies

**Chair:** International Max Planck Research School Behaviorally Smart Institutions

Chair: Max Planck Committee on a potential MPI for Geoanthropology

## Alina Fahrenwaldt

## **Summary Report**

During my time at the institute, my colleagues and I delved into the mechanisms of moral perception, moral judgments, and moral behavior. In projects investigating moral behavior, our aim was to gain a deeper understanding of how and why dishonesty develops over time, when and why inconsistency arises in this behavior, which situations particularly promote selfish behavior, and which individual characteristics make it more likely to exploit such situations. These projects were also based on the assumption that (perceived) social norms determine social behavior. However, social norms can sometimes change quite rapidly. Therefore, two additional projects focused on understanding the underlying conditions for these changes better, both within the context of the COVID-19 pandemic and through a controlled experiment. Lastly, individuals are not just recipients of moral signals; they also often express explicit moral judgments themselves. Therefore, we asked how moral judgments are influenced by the dominant cognitive mode during the judgment process and quantitively synthesized existing research on this topic in a multilevel, multivariate meta-analysis.

I presented these research projects to other scientists at various conferences and many smaller research seminars. Additionally, I co-organized and moderated several conferences and provided feedback to other researchers on their projects. Apart from these projects, I collaborated with Susann Fiedler and colleagues on a project examining the relevance of the victim affected by own lies, as well as on a review article exploring the extent to which belief systems influence cooperative behavior.

In addition to my research work, I have been actively involved in the PhDnet, the doctoral researchers' network of the Max Planck Society, as well as in N<sup>2</sup>, the network of doctoral researcher networks in non-university research organizations. I am very grateful for the consistent support I received as a doctoral researcher at the institute from our directors and local administration, as well as for the fruitful collaboration with the Max Planck leadership and general administration.

## Research Agenda

**Dishonesty Escalation Over Time** 

Large-scale fraud scandals have led researchers to wonder whether unethical behavior can be self-reinforcing and hence spiral out of control. This hypothesis has been supported by the finding that escalation of dishonest behavior is accompanied by a decrease in the amygdala's sensitivity to these immoral acts - a brain region associated with fear. Consequently, and fitting with self-concept maintenance theory, researchers assumed that the self-reinforcement of dishonesty works through habituation to the aversive feeling associated with it. However, the amygdala is also associated with processing reward signals. Together with studies showing that some people derive a positive thrill from being dishonest (the 'cheater's high'), this led Susann Fiedler and me to hypothesize an additional explanation for self-reinforcing dishonesty, namely habituation to the cheater's high. Specifically, we expected that the importance of each proposed mechanism would depend on interindividual differences in sensation-seeking. For individuals scoring low on sensation-seeking, we expected the habituation to negative arousal to be most relevant, while we expected tolerance to the cheater's high to be more prevalent in individuals scoring high on sensation-seeking. Moreover, since both mechanisms could drive behavior in individuals with average sensation-seeking scores, we also expected to find the highest dishonesty escalation



#### Contact

fahrenwaldt@coll.mpg.de

https://www.coll.mpg.de/alina-fahrenwaldt

scores for this group of people. We tested our predictions in an online study and aimed subsequently to investigate the underlying attentional patterns and arousal dynamics in an eye-tracking study. However, while our manipulation to induce dishonesty worked, we could not replicate the effect of dishonesty escalation over time even when controlling for possibly confounding variables. Recent developments have called into question some of the results published in this specific field of research. Therefore, it is possible that we did not find an effect of dishonesty escalation, because it simply does not exist.

#### **Justifications for Moral Inconsistency**

Following up on the topic of dishonesty escalation mentioned above, Susann Fiedler and I looked deeper into studies indicating that humans do not inherently exhibit a continuation or even escalation of once-commenced immoral behavior. Some researchers even observe the opposite: Very immoral behavior is followed by very moral behavior, and vice versa. This moral inconsistency is also referred to as "cleansing," "licensing," or "moral balancing". We set out to investigate under which circumstances moral inconsistency is demonstrated. Our assumption was that inconsistency itself already requires justification, and this justification is more readily available in certain situations - specifically when there are sufficient situational excuses for this inconsistency. We also assumed that there would be systematic differences between individuals. We tested our hypotheses in a carefully designed online study, but could not find any differences between the experimental conditions, nor a change in behavior over multiple rounds. It is possible that our study design did not sufficiently motivate participants to engage in immoral behavior (in our case, lying). Future studies testing this hypothesis could therefore try to increase the incentivization for dishonesty.

#### What's Moral Wiggle Room? A Theory Specification

A few years ago, a phenomenon started to gain more research interest: While participants in studies typically exhibited a high degree of prosociality, this pattern suddenly changed depending on the situation in which they had to make their decisions. Specifically, researchers observed more selfish decisions in situations that allowed for alternative explanations of these choices. They named this phenomenon "Moral Wiggle Room," referring to the moral leeway individuals have in their actions. Consequently, there was an overwhelming flood of research papers on this topic, and researchers experimented with new and diverse designs, leading to diverging results. Initially, Fiona tho Pesch, Susann Fiedler, Anna Baumert, and I planned to conduct a meta-analysis to synthesize the existing literature on this phenomenon quantitatively. However, during the planning phase of this meta-analysis, we quickly realized that there was a large amount of diversity in study settings and designs, making it more difficult to compare and aggregate the effects reported by these studies. Therefore, we decided to apply the method of verbal formal-theory specification to the assumption of moral wiggle room, as the construct and the predictions made by the original researchers appeared rather ambiguous to us. Thus, the project shifted from a meta-analysis to a theory specification. Initially, we formalized the original assumptions of moral wiggle room into verbal propositions, construct definitions, operationalizations, and necessary auxiliary assumptions. Then, we identified the inconsistencies and inadequacies in this original postulation of moral wiggle room. Finally, we transformed these insights into an actual "Theory of Moral Wiggle Room" and expanded upon it. We also provided lists of valid designs and operationalizations, as well as a clear empirical roadmap. We hope that our contribution will raise awareness in the research field for the importance of well-specified theories. Additionally, we aim for our specified

theory to provide a clearer and more testable description of the assumptions of moral wiggle room, leading to cleaner and more efficient experiments on this topic.

## When Do Norms Change? The Relevance of Echo Chambers

In the research projects described so far, changes in norms were considered a vital part of (changing) moral behavior. In another earlier research project (see the last institute report), we looked deeper into the determinants of such normative change (using a case study on governmental distancing measures during the COVID-19 pandemic). Back then, we focused on the relevance of institutional signals for normative change. In a follow-up project, we added the relevance of social bubbles for the perception of (altered) norms. Social bubbles are often referred to as "echo chambers" because like-minded individuals resonate with each other's ideas, paving the way for further polarization. Being in a social bubble may result in perceiving greater societal acceptance of own opinions, reinforcing own preferences, seeking fewer opposing viewpoints, and misestimating the likelihood of opinion diversity. In other words, individuals perceive less uncertainty regarding existing norms in such environments, and previous research indicates that normative change is less likely under such circumstances. Therefore, we hypothesized that the effectiveness of institutional signals depends on whether one is within an echo chamber or not. We wanted to examine this in more detail through a controlled experiment. To mimic real-world conditions outside of the experiment, we conducted an initial study where participants had to choose a representative, who then selected a message (the normative signal) to be "transmitted" to a subsequent group of participants in the main experiment. Before receiving this signal, participants in the main experiment were asked to list either pro or con arguments, only pro arguments, or only con arguments, regarding norms about

donating the experiment compensation to a charity organization. We assumed that participants who were instructed to find one-sided arguments would subsequently be more extreme in their personal opinions, perceived social acceptance, and donation decisions, and would be less influenced by the institutional signal. We also expected an influence of individual personality traits. Unfortunately, our manipulation to induce normative (un)certainty was not successful. Future work could improve the manipulation by making it even more realistic and engaging.

#### Intuitive Deontology? A Meta-Analysis

Human morality is not only characterized by moral behavior and norm perception, but people also contribute to normative systems in the form of moral judgments. Sometimes these judgments are not straightforward, but have to be formed in light of conflicting motives. A long-standing philosophical debate about which motives are morally superior in forming moral judgments has culminated in the question which ethical concept is more natural (but maybe less rational): deontology (guided by rules) or utilitarianism (guided by the principle of maximizing general well-being). Specifically, it has been claimed that moral judgments in line with deontology stem from intuitive responding, while utilitarian judgments are based on deliberation. By now, a wealth of studies investigating this effect has been published, often with inconsistent results. Therefore, Jerome Olsen, Rima-Maria Rahal, Susann Fiedler, and I employed the method of a multilevel, multivariate meta-analysis to synthesize quantitatively the effect of a cognitive processing mode (i.e., intuition vs. reflection) on moral judgments. We first compiled all literature matching our research question, deduplicated and screened it for relevance. This was followed by a detailed coding procedure and consistency checks. Our multilevel, multivariate analysis approach then considered (multiple) dependencies of effect sizes between and within studies, in the majority of cases calculated from raw data requested from the studies' authors, allowing for a more accurate estimation of the overall effect. Although the direction of this effect corresponds to the hypothesis of intuitive deontology, it is very small and therefore cannot be seen as confirming this hypothesis. Moreover, we observe large effect heterogeneity between studies that cannot be fully explained by one moderator alone. Together, these results suggest that intuitive deontology is not a stable and generalizable phenomenon.

#### **Publications**

Fiedler, S., Habibnia, H., Fahrenwaldt, A., & Rahal, R. M. (2023). Motivated cognition in cooperation. *Perspectives on Psychological Science*, 17456916231193990

#### **Submitted Publications**

Fahrenwaldt, A., tho Pesch, F., Fiedler, S., & Baumert, A. (submitted to *Judgment and Decision making*). What's moral wiggle room? A theory specification

## **Work in Progress**

Fahrenwaldt, A., Olsen, J., Rahal, R., & Fiedler, S. (in preparation). Intuitive deontology? A meta-analysis

Toribio-Florez, D., Fahrenwaldt, A., Sasse, J., & Baumert, A. (internal revision). Governmental distancing rules and normative change at the start of the COVID-19 pandemic in germany

Fahrenwaldt, A., & Fiedler, S. (ongoing). Determinants of dishonesty escalation

Fahrenwaldt, A. & Fiedler, S. (ongoing). Justifications for moral inconsistency

Fahrenwaldt, A. & Fiedler, S. (ongoing). When do norms change? The relevance of echochambers

Fiedler, S., Glöckner, A., & Fahrenwaldt, A. (ongoing). Fooling whom out of his money? Investigating arousal dynamics in the context of betraying a stranger or an institution

# Lectures and Presentations (since 2020)

2021

Fooling Whom Out of His Money? Investigating Arousal Dynamics in the Context of Betraying a Stranger or an Institution Presented at NeuroPsychoEconomics Conference, Online 10 June 2021

What Is the Most Important Mechanism that Needs to be Tackled to Avoid that People Perceive and Exploit (Real-Life) "Moral Wiggle Room"?

(Organized Group Discussion Session) Life Improvement Science Conference, Online 11 June 2021

Governmental Distancing Rules and Normative Change During the COVID-19 Pandemic in Germany

Presented at SPUDM (Subjective Probability, Utility and Decision-Making) conference, Online.

23 August 2021

The intuition of deontological judgments: A meta-analysis

Presented at SPUDM (Subjective Probability, Utility and Decision-Making) conference, Online.

24 August 2021

Mental Health in Doctoral Researchers – 2020 PhDnet Survey Report Max Planck PhDnet General Meeting, Online. 25 October 2021

Co-organization & Moderation

Perspectives on Open & Sustainable Research, N<sup>2</sup> Conference, Online. 13-15 October 2021

2022

Co-organization & Moderation

Virtual event on making reproducibility & open science training the norm, Online. 1-3 March 2022

Academic Power Abuse & Discrimination (Learnings from the PhDnet Survey Report) MPIDR Research Skills Event Series, Online. 4 March 2022

#### 2023

Invited Speech (internal information) Max Planck Scientific Council 16 February 2023

#### **Public Service**

2022-2023

Advisory Role for German Policy-Makers – amongst others with the following tasks: Representation of Doctoral Researcher Networks at the conference "Gute Arbeitsbedingungen in der Wissenschaft – Auf dem Weg zu einer Reform des WissZeitVG" Federal Ministry of Education and Research, Berlin, June 2022

Invitation to stakeholder group discussions regarding the reform of WissZeitVG Federal Ministry of Education and Research, Online, August 2022

Invitation as public expert ("Sachverständige") for the topic "Diversity in personnel structure, career paths, and academic excellence"

Deutscher Bundestag, Ausschuss für Bildung, Forschung und Technikfolgenabschätzung, hybrid, 16 February 2023

Representation of Doctoral Researchers in exchanges on WissZeitVG questions (with different German parties, online, 2022/2023)

#### 2022

Deputy Spokesperson, Max Planck PhDnet Board Member of N<sup>2</sup> – The Network of Doctoral Researcher Networks

**2023** (ongoing) Advisory Board Member of N<sup>2</sup> – The Network of Doctoral Researcher Networks

### **Professional Activities**

Memberships

Since 2021

Member of Association for NeuroPsychoEconomics

Since 2023

Member of Berufsverband Deutscher Psychologinnen und Psychologen e.V.

**Work Groups** 

2020-2021

Max Planck PhDnet Survey Working Group (in collaboration with Max Planck leadership and general administration)

2021-2023

Max Planck PhDnet TAC Taskforce (in collaboration with Max Planck leadership and general administration)
Roles/Positions

2020-2022

External PhD Representative

## **Ranveig Falch**

## **Summary Report**

I joined the EEG of the Max Planck Institute for Research on Collective Goods in August 2020 as a Senior Research Fellow and was employed at the MPI until the summer of 2021. I am currently a postdoctoral researcher at FAIR, Norwegian School of Economics.

During my time at the MPI, I focused on the research agenda described below.

### Research Agenda

My primary field of research is behavioral economics, where I focus on issues that relate to labor, education, public. and development economics, such as human capital investment, gender discrimination, and inequality acceptance. The overarching objective of my research is twofold: (i) to explore how to reduce inequalities and (ii) to examine what type of inequalities people are willing to tolerate and to understand the factors influencing these preferences. My work is primarily empirical, conducting experiments in controlled laboratory or field settings with large, nationally representative samples, and complementing these with administrative data.

#### **Reducing Inequality**

One of my exciting ongoing projects focuses on how to reduce inequality in education and couples experimental and administrative data to study the determinants of students' study time. Study time is a critical factor in students' educational success; yet, little is known about why some students study very little and underinvest in education. This project aims to investigate the influence of peers on students' study time, focusing specifically on the impact of beliefs about peer behavior. The coupling of a large-scale field experiment with rich registry data allows for incentivized elicitation of beliefs and short-term

outcomes; investigation of underlying mechanisms: rigorous analysis with a rich set of control variables; and objective longer-term educational outcomes. The study is conducted in collaboration with Fanny Landaud (previous postdoc at NHH). In the first round of data collection with almost 1,000 middle-schoolers in Norway, we provide evidence that middle-school students significantly underestimate the amount of time their classmates dedicate to schoolwork. We further explore the effects of recalibrating students' beliefs through an information treatment, which demonstrates a subsequent change in beliefs, and an increase in study time among the treated students. By leveraging the partial population design of our experiment, we also demonstrate positive spillover effects on non-treated students within classrooms. This study provides evidence of an important mechanism underlying peer influence and offers valuable implications for promoting productive study habits among students.

On 7 June 2023, we finalized the second round of data collection, including another 1,500 middle-school students from Norway, and we are excited to have the power to study subgroup effects, network effects, and longer-term outcomes such as grades and school choices.

#### **Inequality Acceptance**

Another exciting project, which aims to study both inequality acceptance and the factors shaping inequality acceptance, is the project 'Acceptance of Inequality between Children: Large-Scale Experimental Evidence from China and Norway.' It documents a large cross-societal difference in the acceptance of inequality between children, where adults in China implement twice as much inequality between children as do adults in Norway. The study shows that children in different societies are exposed to very different types of dis-



**Contact**Ranveig.Falch@nhh.no

https://www.coll.mpg.de/ranveig-falch

tributive behavior by adults, which may shape their views on inequality. The project is invited for a revise and resubmit at *Economic Journal*. The paper 'Solidarity and Fairness in Times of Crisis,' published in *JEBO* (2021), studies the same questions from a different angle and examines how important life events shape inequality acceptance. It reports from an experiment with more than 8,000 Americans on how the pandemic changes moral views and inequality acceptance.

In my single-authored paper, 'How Do People Trade Off Resources Between Quick and Slow Learners?', published in the European Economic Review (2022), I extend the literature on inequality acceptance to an entirely new domain: education. I study people's preferences for reducing inequality in education by implementing a novel field experiment to elicit people's preferences regarding how society should distribute educational resources between students with different learning abilities. I find that people assign a strong priority to slow learners in their choices and causally identify how cost efficiency and learner motivation shape the decision. Further, in a newly-revised version of 'Experimental Evidence on the Acceptance of Males Falling Behind,' my co-authors and I study whether inequality acceptance depends on the gender of the person falling behind. Through a set of largescale experimental studies involving over 30,000 Americans, we present compelling evidence of a significant gender disparity in attitudes to people who fall behind. Specifically, we find that individuals exhibit greater acceptance when males fall behind than when females fall behind, and less support for government policies aimed at addressing challenges faced by disadvantaged males. We provide evidence of the underlying mechanism being statistical fairness discrimination: People consider males falling behind to be less deserving of support than females falling behind because they are more likely to believe that males are falling behind due to lack of effort. The findings are important for

understanding how society perceives and responds to the growing number of disadvantaged males.

## **Publications (since 2020)**

**Articles in Peer-Reviewed Journals** 

Falch, R. (2022). How do people trade off resources between quick and slow learners? *European Economic Review*, 150, 104285

Cappelen, A. W., Falch, R., Sørensen, E. Ø. & Tungodden, B. (2021). Solidarity and fairness in times of crisis, *Journal of Economic Behavior & Organization*, 186, 1–11 Media coverage: Opinion, New York Times

#### **Revise & Resubmit**

Cappelen, A., Falch, R., & Tungodden, B. Acceptance of inequality between children: Large-scale experimental evidence from China and Norway, R&R: *Economic Journal* 

### **Work in Progress**

Falch, R., & Landaud, F. (in preparation). Peer perceptions and students' investments in schoolwork

Cappelen, A., Falch, R., & Tungodden, B. (submitted). Experimental evidence on the acceptance of males falling behind

Cappelen, A., Falch, R., Sørensen, E., & Tungodden, B. (in preparation). Is it morally acceptable to be selfish?

Cappelen, A., Falch, R., & Tungodden, B. (in preparation). The development of social preferences: Experimental evidence from China and Norway

Cappelen, A., Falch, R., Sørensen, E., & Tungodden, B. (in preparation). Experienced welfare under the COVID-19 pandemic

#### **Grants / Prizes / Honors**

2023

Paris School of Economics, Education Policy and Social Mobility (9,600 USD)

Professor Willhelm Keilhaus Minnefond (4,500 USD)

2022

Småforsk, Norwegian School of Economics (3,000 USD)

FAIR, Norwegian School of Economics (16,000 USD)

# Lectures and Presentations (since 2020)

2020

How Do People Trade Off Resources Between Quick and Slow Learners? EEA, Virtual 2020 26 August 2020

Experimental Evidence on the Acceptance of Males Falling Behind
Seminar, FAIR workshop, Fairness and the moral mind, Norway
4 November 2020

How Do People Trade Off Resources Between Quick and Slow Learners? Seminar, Universidad Carlos III de Madrid, Spain 13 November 2020

How Do People Trade Off Resources Between Quick and Slow Learners? Seminar, ifo Institute for Economic Research, University of Munich, Germany 19 November 2020

2021

How Do People Trade Off Resources Between Quick and Slow Learners? IZA/ECONtribute Human Capital Meeting 26 March 2021

Is it Morally Acceptable to be Selfish? Lyon/Gothenburg/Bonn workshop, Max Planck Institute for Research on Collective Goods, Germany 19 May 2021

Acceptance of Inequality between Children: Large-Scale Experimental Evidence from China and Norway EEA-ESEM Virtual 2021 24 August 2021

2022

Peer Perceptions and Students' Investments in Schoolwork European Economic Science Association Conference, Bologna 1 September 2022

Is it Morally Acceptable to be Selfish? Bergen-Berlin Behavioral Economics Workshop 28 March 2022

## **Teaching**

Winter term 2020/21 Norwegian School of Economics Norwegian Economy, History and Politics, invited guest lecturer Supervisor, two Masters theses

Summer term 2021 Norwegian School of Economics Empirical Strategies for Causal Analysis, invited guest lecturer

Summer term 2022 Norwegian School of Economics Leading two-day workshop in Behavioral and Experimental Economics for the Executive MBA program

## **Professional Activities**

#### Referee for

Management Science, Scandinavian Journal of Economics, Journal of Economic Behavior and Organization, Experimental Economics, European Economic Review



Contact
fiedler@coll.mpa.de

https://www.coll.mpg.de/susann-fiedler

## Susann Fiedler

## **Summary Report**

Social Aspects of Human Behavior and Decision-Making

The study of human behavior and decision-making, particularly with regard to prosociality, or behavior intended to benefit others, is a recurring theme in most of my projects. Several of my studies explore how our choices and interactions are influenced by social dynamics and affiliations.

The project "Partner Choice in Action" (joint work with Luke McEllin and Natalie Sebanz) provides in-depth insights into the interplay between the decision-making processes of a potential partner and the subsequent choice of interaction partners. Central to this investigation is the exploration of how decisions, specifically prosocial decisions, and their execution influence interpersonal relations. The project presents evidence for a causal effect of decisiveness in prosocial actions and likability, opening a window into our understanding of the nuances of social relations. In essence, this project found that individuals are more attracted to certainty than mere intention. Individuals lean more towards partners who not only express a preference for prosocial decisions, but also demonstrate certainty in implementing such choices. This is not to undermine the significance of prosociality, but to highlight the added value of decisiveness and assertiveness in its execution. The study therefore proposes a broader perspective on human relationships by illuminating the crucial role decision-making processes play in shaping social interactions.

Moving from the personal to the global level, in projects together with Marie Hellmann, Angela Dorrough, and Andreas Glöckner, we expand the inquiry into the factors influencing prosocial behavior in our increasingly globalized world. In several studies, we delve into

the intricate dynamics shaping prosocial actions across different cultures and nations. This emphasizes the role of shared social identities and outgroup characteristics in either promoting or impeding prosocial behavior. This work further brings to light the strong influence that cultural, societal, and political contexts have in shaping the manifestation of prosociality. It shows that cultural nuances, societal norms, and political climates all play significant roles in fostering or inhibiting prosocial behavior.

The big collaborative project "Social Mindfulness and Prosociality Vary across the Globe" serves as a compelling exploration into the extent to which nationality influences an individual's social mindfulness. As humans, we are innately social beings, but the extent to which we exhibit mindfulness towards others can significantly differ from person to person. This study poses a thought-provoking question: Is social mindfulness also determined by one's nationality? Social mindfulness generally pertains to small acts of attention or kindness extended towards others, often with little to no material cost. The study involves a comprehensive analysis of 31 samples from various industrialized countries and regions, encompassing a total of 8,354 participants. What emerged from this investigation was a significant variation in levels of social mindfulness across the countries studied. This suggests that one's nationality could indeed play a role in shaping their prosocial behavior. Moreover, the project discovered a compelling correlation between social mindfulness and environmental performance at country level. Specifically, countries demonstrating better general performance on environmental protection tended to have higher levels of social mindfulness. This intriguing correlation underlines a possible connection between the societal emphasis on environmental sustainability and the inclination of individuals

within that society towards social mindfulness.

The influence of diverse factors on moral judgments is a fascinating area of human-behavior research; an aspect that is explored in depth in two further large team science projects: "Situational Factors Shape Moral Judgments in the Trolley Dilemma in Eastern, Southern and Western Countries in a Culturally Diverse Sample" and "Perceptions of the Appropriate Response to Norm Violation in 57 Societies." The first project brings a fresh perspective to a classical moral paradox - the trolley dilemma. This dilemma, historically used to study moral judgments, involves a scenario where one must decide whether to intervene and cause one death to save five others. By analyzing responses across a culturally diverse sample spanning Eastern, Southern, and Western countries, this project sheds light on the influence of situational factors and cultural contexts on how individuals resolve this dilemma. The study effectively deconstructs the universality of moral judgments, underlining the role of culture and circumstance in shaping ethics. Further expanding this exploration, "Perceptions of the Appropriate Response to Norm Violation in 57 Societies" investigates global perceptions on norm violations and the responses to them that are deemed appropriate. This study is significant, as it brings forth the often-overlooked cultural variation in normative judgments. Societal norms and their violations are typically grounded in cultural contexts and moral frameworks and, as such, responses to these violations can significantly differ across societies. Collectively, these projects provide a nuanced understanding of the complexities and variations in moral judgments. They emphasize the significant impact of situational, societal, and cultural factors on our ethical evaluations, contributing to the broader body of knowledge on human decision-making and behavior.

## Rethinking Academic Systems and Research Practices

Our academic systems and research practices are in need of critical examination. Two notable projects, "Quality Research Needs Good Working Conditions" (joint work with Rima Rahal and others) and "Examining the Generalizability of Research Findings from Archival Data", take a deep dive into this sphere. "Quality Research Needs Good Working Conditions" speaks to an often-neglected aspect of academic life - the working conditions of researchers. The project proposes a crucial link between the quality of research output and the working environment of researchers. By collating experiences and data from diverse academic institutions, this study highlights the profound impact that factors such as funding, institutional support, work-life balance, mental health, and job security have on the overall productivity and quality of scientific research. The project calls for restructuring academic systems to ensure more sustainable and conducive working conditions for researchers, contributing to both individual well-being and the broader progress of scientific research.

"Examining the Generalizability of Research Findings from Archival Data" takes a closer look at the credibility of research outputs in the field of strategic management. It assesses the reproducibility and generalizability of findings from archival data, challenging the field to consider its practices and assumptions. The project emphasizes the need for robustness and transparency in data collection and analysis to ensure that findings are not only replicable, but also broadly applicable.

### **Unconditional Basic Income**

"The Influence of UBI on Individual Decision-Making & Labor Market Behavior" (joint work with Sandra Bohmann, Frederik Schwerter, Jürgen Schupp, and Max Kasy) is a randomized controlled trial (RCT) designed to explore the effects of Universal Basic Income (UBI) on various aspects of behavior and welfare. The underlying hypothesis posits that the financial stability provided by UBI could lead to improved decision-making competence by alleviating economic stress, allowing individuals to devote more cognitive resources to problem-solving, planning, and other cognitive tasks. In times of uncertainty, stress levels tend to rise, and research shows that this can negatively impact decision-making processes. By providing a steady, reliable income source, UBI could act as a buffer against this stress, potentially improving the quality of life. Furthermore, it could foster a sense of security that might motivate individuals to engage in long-term planning, take calculated risks, or invest in personal development, all of which could further enhance their competence. The study is designed as a blocked RCT with two groups: a treatment group, receiving a monthly UBI of €1,200 for three years, and a control group, not receiving UBI, but participating in research-related activities. With a total of 1,484 participants, this project aims to generate robust data on the impact of UBI on several dimensions such as labor-market outcomes, spending habits, time utilization, subjective well-being, and cognitive resources. By repeatedly measuring participants' behavior over time and under varying conditions, the study hopes to gain insights into the relationship between financial stability, cognitive resources, and decision-making skills. Finally, the study aims to contribute to the debate on UBI policy by providing empirical evidence on its effects. The project is the first in a line of multi-study projects. It sets the stage for subsequent, more nuanced investigations into the effects of UBI and offers a promising start in understanding the potential benefits of this policy approach.

## **Publications (since 2020)**

**Articles in Peer-Reviewed Journals** 

Fiedler, S., Habibnia, H., Fahrenwaldt, A., & Rahal, R. M. (2023). Motivated Cognition in Cooperation. *Perspectives on Psychological Science*, 17456916231193990

Huber, C., Dreber, A., Huber, J., Holzmeister, F., Fiedler, S., Rahal, R.-M., Saral, A. S. & et al. (2023). Competition and moral behavior: A meta-analysis of forty-five crowd-sourced experimental designs, *PNAS*, 120(23), e22155721

Rahal, R.-M., Fiedler, S., Adetula, A., Berntsson, R. P.-A., Dirnagl, U., Feld, G. B., ..., & Azevedo, F. (2023). Quality research needs good working conditions. *Nature Human Behaviour*, 7, 164–167

Doesum, N. J. V., Murphy, R. O., Gallucci, M., Aharonov-Majar, E., Athenstaedt, U., Au, W. T., ..., Lange, L. Z.-K., & P. A. M. V. (2022). Reply to Nielsen et al.: Social mindfulness is associated with countries' environmental performance and individual environmental concern. *PNAS*, 119(9), e2122077119

Doesum, N. J. V., Murphy, R. O., Gallucci, M., Aharonov-Majar, E., Athenstaedt, U., Au, W. T., ..., Lange, L. Z.-K., & P. A. M. V. (2022). Reply to Komatsu et al.: From local social mindfulness to global sustainability efforts? *PNAS*, 119(4), e2119303118

Rahal, R.-M., & Fiedler, S. (2021). Cognitive and affective processes of prosociality. *Current Opinion in Psychology* 

Doesum, N. J. V., Murphy, R. O., Gallucci, M., Aharonov-Majar, E., Athenstaedt, U., Au, W. T., ..., & Lange, P. A. M. V. (2021). Social mindfulness and prosociality vary across the globe. *PNAS*, 118(35), e2023846118

Hellmann, D. M., Fiedler, S., & Glöckner, A. (2021). Altruistic giving toward refugees: Identifying factors that increase citizens' willingness to help. *Frontiers in Psychology*, 12, 689184

Fedor, L., Fiedler, S., & Weber, B. (2021). Positivity effect and decision making in ageing. *Cognition and Emotion*, 35(4), 790–804

Eriksson, K., Strimling, P., Gelfand, M., Wu, J., Abernathy, J., Akotia, C. S., ..., Lange, L. Z.-K. & P. A. M. V. (2021). Author correction: Perceptions of the appropriate response to norm violation in 57 societies. *nature communications*, 12(1), 2483

Eriksson, K., Strimling, P., Gelfand, M., Wu, J., Abernathy, J., Akotia, C. S., ..., Lange, L. Z.-K., & P. A. M. V. (2021). Perceptions of the appropriate response to norm violation in 57 societies. *nature communications*, 12(1), 1481

Evans, A. M., Fiedler, S., & Kogler, C. (2020). Editorial: Process tracing methods in social psychology. *Journal of Experimental Social Psychology*, 90: 104007.

Hu, Y., Fiedler, S., & Weber, B. (2020). What drives the (un)empathic bystander to intervene? Insights from eye tracking. *British Journal of Social Psychology*, 59(3), 733–751

Rahal, R.-M., Fiedler, S., & De Dreu, C. K. W. (2020). Prosocial preferences condition decision effort and ingroup biased generosity in intergroup decision-making. *Scientific Reports*, 10132

Fiedler, S., & Hillenbrand, A. (2020). Gain-loss framing in interdependent choice. *Games and Economic Behavior*, 121, 232–251

# Lectures and Presentations (since 2020)

2021

What to Consider when Making Strategic Social Decisions? An Eye-Tracking Investigation

UCL, Affective Brain Lab Seminar, Online Presentation

25 March 2021

Interactions between Attention, Memory, and Value

Tinsburg Institute, Miniworkshop CREED, online presentation 6 May 2021

What to Consider when Making Strategic Social Decisions? An Eye-Tracking Investigation

Chicago Booth, market research workshop, online presentation 18 May 2021

Pilot Study Unconditional Basic Income Mein Grundeinkommen e.V., press conference, Berlin, Germany 1 June 2021

Increasing Reproducibility through Small Changes in Your Daily Research Routine Max Planck Digital Library, open science in practices talk series, online presentation 18 August 2021

What to Consider when Making Strategic Social Decisions? An Eye-Tracking Investigation

University of Innsbruck, SFB research seminar, online presentation 17 November 2021 2022

What to Consider when Making Strategic Social Decisions? An Eye-Tracking Investigation

Erasmus Research Institute of Management, research seminar, online presentation 31 January 2022

Underlying Mechanisms of Strategic Decision-Making

Society for Judgment and Decision Making, annual meeting, online presentation 17 February 2022

Underlying Mechanisms of Strategic Decision-Making

63<sup>rd</sup> meeting of experimental psychologists, online presentation 16 March 2022

What to Consider when Making Strategic Social Decisions? An Eye-Tracking Investigation

International Conference of Social Dilemmas, Copenhagen, Denmark 20 July 2022

2023

Understanding Interdependent and Strategic Choice Construction in Social-Dilemma Situations

University of Innsbruck, Winter Summit, Innsbruck, Austria 26 January 2020

## **Teaching**

Summer term 2021

Vienna University of Business and Economics

- Professional Development Workshop
- Psychological Methods & Theories of Business Analytics

Winter term 2021/2022

Vienna University of Business and Economics

- Pursuing Sustainability: Navigating and Managing Complex Social Systems
- Open and Reproducible Methods

Summer term 2022

Vienna University of Business and Economics

- Business Psychology I
- Business Psychology II
- Decision Sciences: Project Course
- Cognition & Behavior
- Professional Development Workshop
- Strategy and Data: Project Course

Winter term 2022/2023

Vienna University of Business and Economics

- Business Psychology I
- Business Psychology II
- Research Paper Development

Summer term 2023

Vienna University of Business and Economics

- Business Psychology I
- Business Psychology II
- Pursuing Sustainability: Navigating and Managing Complex Social Systems

## **Public service**

#### Since 2020

- Ombudsperson at the German Society for Psychological Research
- Founding Member of the German Reproducibility Network
- Open Science Ambassador
- Member of the Equal Opportunity Council Vienna University of Business and Economics
- Board of Directors of the Leibniz Institute for Psychology
- Board of the SPP Meta-Rep

#### **Professional Activities**

#### Referee for

Management Science, Games and Economic Behavior, Organizational Behavior and Human Decision Processes, European Economic Review, Experimental Economics, Proceedings of the National Academy of Sciences, Journal of Experimental Psychology: Learning, Memory and Cognition, Journal of Judgment and Decision Making, Cognition, Journal of Experimental Social Psychology, Journal of Personality and Social Psychology, Experimental Psychology, Sportpsychologie, Journal of Behavioral Research Methods, Journal of Experimental & Theoretical Artificial Intelligence, PloSone, etc.

### **Editorial Boards**

- APS Journal of Advances in Methods and Practices in Psychological Science (Editorial Board)
- Science Advances (Associate Editor)

## Memberships

Since 2020

#### Member of

- Austrian Society for Psychology
- European Association of Decision Making (EADM)
- Society of Judgment & Decision Making (SJDM)
- German Psychology Association (DGPs)



Contact
grgic-hlaca@coll.mpg.de

https://www.coll.mpg.de/grgic-hlaca

## Nina Grgić-Hlača

## **Summary Report**

I am a PhD student at the Max Planck Institute for Software Systems and the Max Planck Institute for Research on Collective Goods, co-advised by Krishna P. Gummadi and Christoph Engel. Prior to joining the Max Planck institutes, I obtained an MA in Information Science and Philosophy from the University of Zagreb, Croatia.

In my research, I study how people perceive and interact with machine-learning (ML)-based decision support systems. I am particularly interested in problems related to fairness and responsibility in machine-assisted decision-making.

## Research Agenda

ML-based decision aids are nowadays frequently used to assist human decision-makers in a variety of different domains. However, these machine decision aids, as the name suggests, are not the final decision-makers - they only assist human decision-makers. Hence, when designing machine-decision aids, it is crucial to go beyond focusing on the decision aid's accuracy and fairness, and to consider how human decision-makers take its advice. In my research, I focus on understanding how ML-based decision aids influence human decisions, and on identifying the factors that determine the magnitude of this influence, with the help of largescale human-subject experiments. This line of work has resulted in several publications at top-tier computer-science venues, including the Conference on **Human Factors in Computing Systems** (CHI), as well as a publication with an esteemed legal outlet - the Journal of Legal Analysis. These publications are summarized below.

In Engel and Grgić-Hlača (2021), Christoph Engel and I explore how receiving warnings about a decision

aid's properties affects its influence. This research was inspired by a recent ruling of the Supreme Court of the State of Wisconsin, which cleared the use of machine advice in sentencing only if judges are properly warned about the decision aid's limitations. Interestingly, we found that the warnings prescribed by the Wisconsin Supreme Court did not influence participants' decisions about granting or denying bail. The effect of the warnings became significant only after introducing a series of changes to the warnings' content and presentation, including switching from textual warnings to strong graphical warnings. Then, participants were less likely to follow the advice. But the effect was counterproductive: They followed the advice less, even when it was actually closer to the ground truth.

In Grgić-Hlača et al. (2022b), Claude Castelluccia, Krishna P. Gummmad, and I study how the type and distribution of a decision aid's errors impacts the taking of advice. Specifically, we study how the similarity of human and machine errors influences human perceptions of, and interactions with, algorithmic decision aids. We find that (i) people perceive more similar decision aids as more useful, accurate, and predictable, and that (ii) people are more likely to take opposing advice from more similar decision aids, while (iii) decision aids that are less similar to humans have more opportunities to provide opposing advice, resulting in a higher influence on people's decisions overall.

In Langer et al. (2022), my collaborators and I studied the effect of terminology on human perceptions and evaluations of algorithmic decision aids. We found that terminology does indeed affect laypeople's perceptions of system properties (e.g., their perceived complexity) and evaluations of systems (e.g., the trust people place in the decision aids). Our findings highlight the need

to be mindful when choosing terms to describe algorithmic decision aids, because terminology can have unintended consequences and may affect the robustness and replicability of HCI research. Additionally, our findings indicate that terminology can be used strategically (e.g., in communication about algorithmic decision-aid systems) to influence people's perceptions and evaluations of these systems.

My collaborators and I have also studied people's perceptions about fairness and responsibility in machine-assisted decision-making. In Grgić-Hlača et al. (2022a), we explore the relationship between people's individual characteristics and their perceptions of procedural fairness in algorithmic decision-making. This work has been recognized as pushing the frontiers of AI research, receiving the New Horizons Award at the EAAMO'22 conference. In a series of research papers, Gabriel Lima, Jin Keun Jeong, Meeyoung Cha, and I study laypeople's perceptions of responsibility for algorithmic and algorithm-assisted decisions (Lima et al., 2021, 2022, 2023a, 2023b).

In ongoing and future work, I am interested in exploring whether algorithmic decision aids can be used to moderate the degree of inconsistency in human decision-making. In Grgić-Hlača et al. (work in progress), we study how different forms of algorithmic assistance influence the way that people review and update their estimates of real-estate prices. In our preliminary results, we find that both (i) asking respondents to review their estimates in a series of algorithmically chosen pairwise comparisons and (ii) providing respondents with algorithmic advice are effective strategies for influencing human responses. Compared to simply reviewing initial estimates one by one, the aforementioned strategies lead to (i) a higher propensity to update initial estimates, (ii) a higher accuracy of post-review estimates, and (iii) a higher degree of agreement between the post-review estimates of different respondents.

## **Publications (since 2020)**

**Articles in Peer-Reviewed Journals** 

Engel, C., & Grgić-Hlača, N. (2021). Machine advice with a warning about machine limitations: Experimentally testing the solution mandated by the Wisconsin supreme court. *Journal of Legal Analysis*, 13(1), 284–340

#### **Conference Contributions**

Lima, G., Grgić-Hlača, N., Jeong, J. K., & Cha, M. (2023). Who should pay when machines cause harm? Laypeople's expectations of legal damages for machine-caused harm. In ACM FAccT Conference, 236–246, Chicago

Lima, G., Grgić-Hlača, N., & Cha, M. (2023). Blaming humans and machines: What shapes people's reactions to algorithmic harm. In Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems (CHI '23), no. 372, 1–26, New York: Association for Computing Machinery (ACM)

Grgić-Hlača, N., Lima, G., Weller, A., & Redmiles, E. M. (2022). Dimensions of diversity in human perceptions of algorithmic fairness. In Proceedings of 2022 ACM Conference on Equity and Access in Algorithms, Mechanisms, and Optimization, 1–12, New York: ACM

Langer, M., Hunsicker, T., Feldkamp, T., König, C. J., & Grgić-Hlača, N. (2022). "Look! It's a computer program! It's an algorithm! It's Al!": Does terminology affect human perceptions and evaluations of algorithmic decision-making systems? In *Proceedings of the 2022 CHI Conference on Human Factors in Computing Systems*, 1–28, New York: ACM

Grgić-Hlača, N., Castelluccia, C., & Gummadi, K. P. (2022). Taking advice from (dis)similar machines: The impact of human-machine similarity on machine-assisted decision-making. In J. Hsu & M. Yin (Eds.), *Proceedings of the AAAI Conference on Human Computation and Crowdsourcing*, 10, 74–88, Palo Alto

Lima, Gabriel, Grgić-Hlača, N., Jeong, J. K., & Cha, M. (2022). The conflict between explainable and accountable decision-making algorithms. In FAccT '22: 2022 ACM Conference on Fairness, Accountability, and Transparency, 2103–2113, Seoul, Republic of Korea

Lima, G., Grgić-Hlača, N., & Cha, M. (2021). Human perceptions on moral responsibility of AI: A case study in AI-assisted bail decision-making. In *Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems*, 1–17, Yokohama, Japan

## Work in Progress

Grgić-Hlača, N., Ali, J., Gummadi, K. P., & Wortman Vaughan, J. (in preparation). (De) Noise: Moderating the inconsistency between human decision-makers

#### **Grants / Prizes / Honors**

2021

Received recognition as a lecturer for the Seminar on Machine-Assisted Decision-Making, which was rated amongst the top 5 out of 117 online courses at the Faculty of Mathematics and Computer Science at Saarland University in Saarbrücken, Germany

#### 2022

New Horizons Award, which recognizes a paper that pushes the frontiers of AI research. Awarded at the EAAMO'22 Conference in Arlington, Virginia, USA for the paper "Dimensions of Diversity in Human Perceptions of Algorithmic Fairness"

#### 2022

Best Student Paper Award. Awarded at the Explainable AI: Between Ethics and Epistemology Workshop, TU Delft in Delft, Netherlands, for the paper "The Conflict between Explainable and Accountable Decision-Making Algorithms"

# Lectures and Presentations (since 2020)

2021

Machine Advice with a Warning about
Machine Limitations: Experimentally Testing
the Solution Mandated by the Wisconsin
Supreme Court
Max Planck Law, Max Planck Law | Tech |
Society Workshop, Online Virtual Workshop
24 September 2021

Human Perceptions of Procedural Fairness in Algorithmic Decision-Making CEPDISC centre, CEPDISC seminar on Algorithmic bias, discrimination and fairness, Aarhus/Denmark 14 June 2021

Human Perceptions of Fairness in Algorithmic Decision-Making LMU Munich and University of Mannheim, invited talk, online virtual talk 26 May 2021 Machine-Assisted Human Decision-Making Max Planck Institute for Demographic Research, invited talk, online virtual talk 2 February 2021

#### 2022

Taking Advice from (Dis)Similar Machines: The Impact of Human-Machine Similarity on Machine-Assisted Decision-Making Association for the Advancement of Artificial Intelligence, HCOMP Conference, Online Virtual Conference 7 November 2022

Dimensions of Diversity in Human Perceptions of Algorithmic Fairness
Association for Computing Machinery,
EAAMO Conference, Arlington, VA, USA
9 October 2022

Human Perceptions of Algorithmic Fairness Die Junge Akademie, Interdisciplinary Conversations on the Fairness, Explainability and Uncertainty of Al, Berlin/Germany 20 September 2022

#### **Opening Speech**

Max Planck Law, 1st Max Planck Law | Tech | Society Graduate Student Symposium, Online Virtual Symposium 13 May 2022

Discussant for the paper "Can a Computer Invade your Privacy? An Experimental Matchup of Algorithmic and Human Surveillance" by Aileen Nielsen Max Planck Institute for Research on Collective Goods, Experimental Workshop, Online Virtual Workshop 2 April 2022

#### 2023

Opening Speech
Max Planck Law, 2<sup>nd</sup> Max Planck Law | Tech |
Society Graduate Student Symposium, Online
Virtual Symposium
12 May 2023

## **Teaching**

Summer term 2021 Saarland University, Saarbrücken, Germany Seminar on Machine-Assisted Decision-Making

#### **Professional Activities**

#### Referee for

Big Data & Society Journal, Sociological Methods & Research Journal, Transactions on Computer-Human Interaction Journal, EAAMO 2023 Conference, FAccT 2023 and 2021 Conference, IJCAI 2022 Conference, CHI 2022 and 2021 Conference, NeurIPS 2022 and 2021 Conference (Ethical Reviewer), AAAI 2021 Conference, KDD 2021 Conference, DIS 2021 Conference, ISIT 2021 Conference, International Workshop on Algorithmic Bias in Search and Recommendation at the ECIR 2023, 2022 and 2021 Conference, European Workshop on Algorithmic Fairness 2023, Workshop on Measures and Best Practices for Responsible Al at the KDD 2021 Conference, Workshop on Responsible AI at the ICLR 2021 Conference, Max Planck Law | Tech | Society Graduate Student Symposium 2023 and 2022.

#### Memberships

Since 2021
Member and co-organizer of the Max Planck
Law | Tech | Society Initiative.

## **Werner Güth**

## **Summary Report**

Since 2021, I am no longer officially employed. However, till the end of 2023, the costs of my research visits to Rome and London are covered by the host institutions. My own emeritus funding by the Max Planck Society expired at the end of 2021. I am extremely thankful for the further support by the Max Planck Institute.

## Research Agenda

My research topics are game theory, experimental economics, and microeconomics. Additionally, I am interested in psychology, philosophy, (evolutionary) biology, and the political sciences. Recent research topics are bounded rationality theory in the light of empirical, in my case, experimental choice data, especially stated aspirations and self-generated (non-Bayesian) beliefs.

## Publications (since 2020)

**Articles in Peer-Reviewed Journals** 

Di Cagno, D., Güth, W., Panaccione, L., & Scarafile, M. (forthcoming). Proposer and responder conceding in impunity bargaining. *Metroeconomica* 

Ackfeld, V., & Güth, W. (2023). Personal information disclosure under competition for benefits: Is sharing caring? *Games and Economic Behavior*, 140, 1–32

Alberti, F., Güth, W., & Tsutsui, K. (2023). Experimental effects of institutionalizing co-determination by a procedurally fair bidding rule. *Journal of Business Ethics*, 184, 445–458

Conte, A., Güth, W., & Pezanis-Christou, P. (2023). Strategic ambiguity and risk in alternating pie-sharing experiments. *Journal of Risk and Uncertainty*, 66(3), 233–260

Di Cagno, D., Güth, W., & Sillari, G. (2023). The better toolbox: Experimental methodology in economics and psychology. *Mind & Society* 

Güth, W., Marazzi, F., & Panaccione, L. (2023). Exploiting ultimatum power when responders are better informed: Theoretical and experi-

mental analysis of conflict resolution. *Journal of Conflict Resolution*, 00220027231167846.

Güth, W., & Otsubo, H. (2023). When efficiency requires arbitrary discrimination: Theoretical and experimental analysis of equilibrium selection. *Games*, 14(5), 65

Avrahami, J., Güth, W., Kareev, Y., & Ploner, M. (2022). Impulse balancing versus equilibrium learning an experimental study of competitive portfolio selection. *Evolutionary and Institutional Economics Review*, 19, 587–610

Güth, W., & Napel, S. (2022). Hiding or revealing: Their indirect evolution in the acquiring-a-company game. *Evolutionary and Institutional Economics Review*, 19, 569–585

Bruttel, L. V., Güth, W., Nithammer, J., & Orland, A. (2022). Inefficient cooperation under stochastic and strategic uncertainty. *The Journal of Conflict Resolution*, 66(4), 595–951

Crosetto, P., & Güth, W. (2021). What are you calling intuitive? Subject heterogeneity as a driver of response times in an impunity game. *Journal of Economic Psychology*, 87

Güth, W. (2021). (Un)bounded rationality of decision deliberation. *Journal of Economic Behavior & Organization*, 186, 364–372

Güth, W., & Pezanis-Christou, P. (2021). An indirect evolutionary justification of risk neutral bidding in fair division games. *International Journal of Game Theory*, 50, 63–74

Güth, W., & Kirchkamp, O. (2021). Believing in corporate social responsibility: An indirect evolutionary analysis. *Journal of Institutional and Theoretical Economics (JITE)*, 177(2), 167–177

Güth, W., & Otsubo, H. (2021). Trust in generosity: An experiment of the repeated yes-no game. *Evolutionary and Institutional Economics Review*, 18, 63–77

Di Cagno, D., Güth, W., & Pace, N. (2021). Experimental evidence of behavioral improvement by learning and intermediate advice. *Theory and Decision*, 91, 173–187

Fischer, S., Güth, W., Kaplan, T. R., & Zultan, R. (2021). Auctions with leaks about early birds: Analysis and experimental behavior. *Economic Inquiry*, 59(2), 722–739

Angelovski, A., & Güth, W. (2020). When to stop — A cardinal secretary search experiment. *Journal of Mathematical Psychology*, 98

Avrahami, J., Ezer, A., Güth, W., Kardosh, N., Kareev, Y., & Zak, U. (2020). To be at the tail of the lions or the head of the foxes? *Journal of Behavioral Decision Making*, 33(2), 121–138



## Contact

gueth@coll.mpg.de

https://www.coll.mpg.de/werner-gueth

Angelovski, A., Di Cagno, D., Güth, W., & Marazzi, F. (2020). Telling the other what one knows? Strategic lying in a modified acquiring-a-company experiment with two-sided private information. *Theory and Decision*, 88(1), 97–119

Güth, W., Stadler, M., & Zaby, A. (2020). Capacity precommitment, communication, and collusive pricing: Theoretical benchmark and experimental evidence. *International Journal of Game Theory*, 49, 495–524

#### **Book Chapters**

Alberti, F., Güth, W., Kliemt, H., & Tsutsui, K. (2023). Egalitarian collective decisions as 'good' corporate governance? In S. Kurz, N. Maaser, & A. Mayer (Eds.), Advances in Collective Decision Making. Interdisciplinary Perspectives for the 21st Century, 173–188

Güth, W., Käser, J., & Schulze, M. (forthcoming). Multiple selves instead of intra-personal payoff aggregation. In Edward Elgar Encyclopedia of Behavioural and Experimental Economics, Edward Elgar Publishing

Güth, W., Käser, J., & Schulze, M. (forthcoming). Ultimatum (-like) Games: Their rules and experimental findings. In *Elgar Encyclopedia of Experimental Social Science*, Edward Elgar Publishing

Güth, W., & Kliemt, H. (2022). L'abstraction: The example of equity in the laboratory. In R. Dujmovits, E. Fehr, C. Gehrke, & H. D. Kurz (Eds.), Markt, Staat, Gesellschaft – Eine Festschrift für Richard Sturn, metropolis, 59–78

Güth, W., & Tietz, R. (2022). Experimentelle Verhaltensforschung. In M. Lehmann-Waffenschmidt (Ed.), M. Peneder, *Evolutorische Ökonomik*, Wiesbaden: Springer Gabler, 375–383

### **Working Papers**

Angelova, A., Gueth, W., Kocher, & M. Leadership in a public goods experiment with permanent and temporary members. Submitted to *Journal of Economic Behavior and Organization* 

Angelovski, A., Brandts, J., & Gueth, W. Bidding for better jobs: An experiment on gender differences in competitiveness without a real-effort task. Submitted to *Economic Inquiry* 

Buso, I., Di Cagno, D., Güth, W., & Spadoni, L. Voluntary formation of cost sharing partnerships

Buso, I., Ferrari, L., Güth, W., Lorè, L., & Spadoni, L. Testing isomorphic invariance across social dilemma games. Submitted to *Journal of Economic Behavior and Organization* 

Di Cagno, D., Güth, W., Lohse, T., Marazzi, F., & Spadoni, L. (2023). Who cares when value (mis)reporting may be found out? An acquiring-a-company experiment with value messages and information leaks. (CES-Ifo)

Di Cagno, D., Güth, W., Puca, M., & Sbriglia, P., Intention-based social influence in (non-strategic) sharing experiments. Submitted to *Journal of the Economic Science Association* 

Di Cagno, D. T., Ferrari, L., Güth, W., & Larocca, V. (2021). Experimental analysis of endogenous institutional choice: Constantly revealing versus ad-hoc contracting

Di Cagno, D., Güth, W., Marazzi, F., & Panaccione, L. Going beyond suffering – an experiment whose rewards increase with contributions

Güth, W. & Otsubo, H. When efficiency requires arbitrary discrimination – theoretical and experimental analysis of equilibrium selection, submitted to *Games* 

#### **Grants / Prizes / Honors**

#### 2021

Honorary Professor / LUISS University of Rome

## 2021-2023

Research Professor / Middlesex University London

# **Hanjo Hamann**

# **Summary Report**

I was a member of the institute for nine vears, first as a Research Fellow (PhD candidate) from 2010 to 2013, then as a Senior Research Fellow (postdoc) from 2016 to 2022. During the latter period, I obtained international research experience as a fellow of the Stanford Program in International Legal Studies (SPILS) at Stanford Law School, and as a visiting fellow at the Law Department of the European University Institute (EUI) in Florence, Italy. In 2022, I left the institute to take up a teaching position at the Wiesbaden University of Business and Law (EBS Law School) where I now hold a tenure-track professorship for Civil, Commercial, and IP Law, I remain affiliated with the institute as a guest researcher in order to complete my habilitation project on the contractual remedy of price reduction in German law (Minderung).

#### Research Agenda

In addition to my *habilitation* project, my research has recently focused on three main areas:

Intellectual Property Law: The law of intellectual property becomes increasingly important in a digitally connected world. New phenomena such as ChatGPT challenge the established rules on how (and whether) to protect creative human output legally. Conversely, the low-threshold potential of the internet to disseminate works of art, literature, and science raises challenges of ethically integrating these new affordances into the processes of creation. These developments spur two strands of research:

1. Open Access, Open Data, and Open Educational Resources. These are becoming the norm in many academic fields, and reflect the fact that science is publicly funded and should be held

publicly accountable. In the field of legal studies, however, most knowledge is still published in closed fora and in exchange for additional financial benefits. I therefore study the (ethical) desirability, (empirical) prevalence, and (legal) permissibility of standards of Openness in legal studies.

2. Artificial Intelligence through Text and Data Mining. These tools rely on open science to some extent, but they may also help to produce it because the outputs of artificial intelligence are copyright-free under German law. While the downstream output is therefore free to use and reuse, the upstream inputs that are used to train machine-learning algorithms are often not. This raises the question of the copyright compliance of Al training, which I address in my research as well.

Business Law: In two major projects, I have recently studied overlooked issues in German business law. One of these is the liability of the German postal service for loss of sent goods - a topic that has never been studied exhaustively, accruing various misconceptions and logical non-sequiturs over a period of legal development of 170 years. The other topic is the prevalence of business associations under Sec. 22 of the German Civil Code, for which I conducted the first empirical study in almost forty years, and the first-ever comprehensive review of the distribution and scope of such legal entities.

Law and Psychology: In a study published in PNAS, I investigated influential psychological research on human numerical literacy to show how flawed research methods may have adversely influenced policy debates, including those surrounding COVID-19. In another study combining cultural psychology with law and legal history, I investigated the US conception of rental agreements (lease-law covenants) which has traditionally differed strongly from the



#### Contact

hamann@coll.mpg.de

https://www.coll.mpg.de/hanjo-hamann

European continent, to provide an interdisciplinarily informed understanding of a field of law which in England (and later the US) came to be dominated by the medieval ideals of aristocratic landowners, which no longer fit the conditions of modern urban life.

# **Publications (since 2020)**

#### Articles in Peer-Reviewed Journals

Nishikawa-Pacher, A., & Hamann, H. (2023). Is every law for everyone? Assessing access to national legislation through official legal databases around the world. *Oxford Journal of Legal Studies*, 43(2), 298–321

Hamann, H. (2022). K is for contract: Why is it, though? A K's study on the origins, persistence and propagation of legal konventions. *Minnesota Law Review Headnotes*, 106, 362–390

Hamann, H. (2022). On getting it right by being wrong: A case study of how flawed research may become self-fulfilling at last. Proceedings of the National Academy of Sciences of the United States of America, 119(15)

Rahal, R.-M., Hamann, H., Brohmer, H., & Pethig, F. (2022). Sharing the recipe: Reproducibility and replicability in research across disciplines. Research Ideas and Outcomes, 8, e89980

#### Journal Articles (not peer-reviewed)

Hamann, H. (2021). Deutsche Zivilrechtslehre: Eine rechtstatsächliche Untersuchung ihrer Demographie, Institutionalisierung und Lehrstuhldenominationen. *Archiv für die civilistische Praxis*, 221(3), 287-316.

Hamann, H. (2020). Verbesserung der Gesetzgebung. Tagung der Bayer-Stiftung für deutsches und internationales Arbeits- und Wirtschaftsrecht am 17. Mai 2019 in Leverkusen. *Juristenzeitung*, 75, 84–86

Hamann, H. (2020). Ironie im Rechtswesen. Neue Juristische Wochenschrift (NJW), 73, 713–718

Hamann, H. (2020). Drei Desiderate zur Wissenschaft von der Gesetzestechnik – www. LegistiK.de. Reflexionen nach dem dritten Jahrestreffen des länderübergreifenden "Netzwerks Normprüfung". ZG, 35, 65–83

### **Grants / Prizes / Honors**

#### 2023

Global Young Academy, Nationale Akademie der Wissenschaften Leopoldina

#### 2022

Heinz-Maier-Leibnitz-Preis, Deutsche Forschungsgemeinschaft (DFG)

#### 2021

Nachwuchswissenschaftler des Jahres, Deutscher Hochschulverband & academics

# Lectures and Presentations (since 2020)

#### 2020

Rent, Reduction, and Reason: An Incentivized Vignette Survey on the Economic Value of Lease Law Remedies Law and Society Association: LSA Annual

Conference #44, online 29 May 2020

Property & Psyche. Tracing the Trajectory of Tenancy through the Lens of Cultural Psychology

Legal Research in Progress (LRIP) Seminar, Stanford Law School

#### 2021

Datafying the Law? On Appropriate Ambitions for Legal Techies

Max Planck Law Network, Law – Tech –
Society Initiative
15 January 2021

Unerhörte Justiz: Das in den toten Winkel der Digitalisierung gesprochene Recht Arbeitskreis Rechtslinguistik (AKJL), University of Heidelberg 29 January 2021

Angleichung und Ausdifferenzierung im Recht der Leistungsstörungen Habilitandenforum, Juristische Fakultät der Ruhr-Universität, Bochum 12 May 2021

**Die Minderung als Menetekel?**Colloquium Grundlagen des Zivilrechts, Free University of Berlin
20 May 2021

Logiken der Minderung: Zwischen Äquivalenz und Kompensation Aktuelle Stunde, MPI für ausländisches und internationales Privatrecht, Hamburg 15 July 2021 The Litmus Test of Legal Artificial Intelligence

Summer Academy of the Academy of International Affairs NRW (AIA), Königswinter 25 August 2021

Zivilrechtslehrer und Zivilrechtslehre: Ein Intermezzo in Zoom dur Zivilrechtslehrervereinigung (ZLV), online 27 September 2021

Unsichtbare Hermeneutiken: Die schwierige Wahlverwandtschaft von Rechts- und Wirtschaftswissenschaften Nationale Akademie der Wissenschaften Leopoldina, Halle

4 November 2021

#### 2022

Rechtslinguistik – Eine Grundlagendisziplin im Werden?

Forschungsstelle Statistik vor Gericht, Bremen University 25 May 2022

Sampling Judicial Decision-Texts? Publishing Praxis as a Challenge to Empirical Legal Studies

EUI Workshop "How do we know what is true in the field of law?", Florence 14 June 2022

Breaking Ground – and into Harvard Law Review: David Graeber's Impact on Legal Academia

Conference "Building Bridges", University of Lyon 8 July 2022

Diving the Judicial Deep Seas: Selection Biases in Court Decision Coverage Netherlands Academy for Empirical Legal Studies – ELS Conference, Amsterdam 2 September 2022

Im Namen des Volkes, aber der Öffentlichkeit nicht würdig? Leipziger Juristische Gesellschaft 29 November 2022

#### 2023

Urheberrecht als Ermöglichungsinfrastruktur für Open Access-Publikationen? IUM-Symposion, Munich 10 February 2023

Die Minderung MPI-Habilitandenkolloquium, Hamburg 3 May 2023

Quantitative Rechtswissenschaft Kolloquium Digitalisierung des Rechts, Konstanz

11 May 2023

Legal Data Science, Rechtstatsachenforschung und empirische Rechtswissenschaft Universität Bremen 24 May 2023

Iudex non calculat? On European Lawyers' Aversion to Quantification Harvard Kennedy School – Just Computation Workshop 8–9 September 2023

Empirical Explorations of Administrative
Practice: A Case Study of German State-Licensed Associations
European Society for Empirical Legal Studies
- ESELS Conference Warsaw
25-26 September 2023

## **Professional Activities**

#### **Editorial Boards**

Editor-in-chief, International Journal of Language and Law (JLL) www.languageandlaw.de

Founding co-editor, Law's Empirics: Legal Empirics in Europe (L|E) www.legalempirics.com

Lead Editor 2019/20, Stanford Technology Law Review (STLR) stlr.stanford.edu

#### **Fellowships**

Fellowship from the Weizenbaum Institute for the Networked Society, Berlin

ICA Fellowship from the University-Based Institutes for Advanced Study, Singapore/ Birmingham

Fellowship at the Young ZiF, Center for Interdisciplinary Research, Bielefeld

Elected Spokesperson of Junior Fellows at the Heidelberg Academy of Sciences (HAdW)

#### **Public Service**

#### Since 2018

Editor-in-Chief, International Journal of Language & Law (JLL)

#### Since 2019

Founding Editor, Law's Empirics in Europe (R|E) Blog



Contact
hellwig@coll.mpg.de

https://www.coll.mpg.de/martin-hellwig

# Martin F. Hellwig

In addition to revisions of previous work, work in the period 2021-2023 involved two distinct sets of projects, one concerning the occurrence of dynamic inefficiency in overlapping-generations models and one concerning a new edition of the book *The Bankers' New Clothes*, co-authored with Anat Admati and originally published in 2013.

# Dynamic Inefficiency in Overlapping-Generations Models

As is well known, in overlapping-generations models with infinite time horizons, competitive-equilibrium allocations need not be Pareto-efficient, i.e., the First Welfare Theorem need not hold. Such allocations are said to be dynamically inefficient. In the absence of uncertainty, in a model with stationary exogenous data, dynamic efficiency prevails if and only if the relative price of later consumption versus earlier consumption is greater than the size of the population in the later period relative to the earlier period. In models with real assets, this condition is satisfied if the real rate of return on assets is lower than the population growth rate. The experience of the 2010s has given rise to a discussion whether we might be in a situation involving dynamic inefficiency. In this discussion, Blanchard's AEA Presidential Address (AER 2019) was particularly prominent.

Over the past few years, I have investigated three sets of issues concerning dynamic inefficiency. First, I have studied the scope for dynamic inefficiency in an economy with land. Second, I have considered the proper modelling of dynamic inefficiency in an economy under uncertainty with technology shocks that affect wage rates as well as rates of return. Third, I have studied the role of asset multiplicity in assessing dynamic inefficiency under uncertainty.

First, according to an old result, dynamic inefficiency cannot arise in an economy with land because, regardless how much demand there may be for a store of value, any demand for a store of value can be satisfied by land if the price of land is sufficiently high. In this analysis, the equilibrium real rate of interest can never be smaller than the population growth rate because otherwise the value of the available land would be infinite. In Hellwig (2022b), I show that this argument is not robust to the introduction of an ad valorem transaction cost if the marginal cost is bounded away from zero. With such a transaction cost, the cost of one transaction for one unit of land goes out of bounds as the price of land goes out of bounds. For land prices above some level, therefore, the transaction cost exceeds the return on this one unit of land, and the net real rate of return to holding land becomes negative. Equilibria with land prices in this region are dynamically inefficient. This analysis is somewhat esoteric because it involves limiting cases of economies with very large demands for storing value, with very high ("infinite") equilibrium prices for land and very high ("infinite") transaction costs. However, this analysis forestalls the use of the land argument to preempt the ongoing policy discussion with the claim that the presence of land in the economy precludes the very possibility of dynamic inefficiency.

For policy discussion, the land argument is a red herring anyway because, in overlapping-generations models, dynamic inefficiency cannot arise if there is a paper asset such as fiat money that has positive value and that can serve the same purpose as land in the Homburg model. The real question is what the low interest rates of the past decade tell us about the functioning of economies with such paper assets.

Second, correspondence with Olivier Blanchard about the relation between Hellwig (2022) and Blanchard (2019) made me aware that Blanchard's welfare analysis focuses on the potential for a Pareto-improving reallocation along a single realization of the stochastic return process. Moreover, his analysis is limited to Pareto improvements obtained by imposing lump-sum taxes on the young and giving lump-sum subsidies to the old, leaving the participants free to adjust their plans, possibly with changes in new market-clearing prices. The first feature violates the principle that a planner cannot be presumed to know the realizations of return processes that the participants do not know. The second feature makes Blanchard's analysis a piece of second-best, rather than first-best, welfare economics, as it restricts the planner to a restricted set of policy instruments.

In Hellwig (2021c), I develop a fully specified overlapping-generations model under uncertainty with productivity shocks occurring in each period. The productivity shocks in a given period determine the actual returns to the previous period's risky investments and the real wage rates in current markets. Under suitable assumptions, an equilibrium is shown to exist and the joint probability distributions of productivity shocks and equilibrium wage rates are shown to converge to a unique invariant distribution. The welfare analysis relies on a concept of constrained interim Pareto efficiency. The word constrained reflects a requirement that policy interventions must not condition on current or past events, while the word interim reflects the fact that the effects of an intervention on a person's expected utility, or not, are assessed from the perspective of that person's information, which includes the history of productivity shocks, up to and including the current period.

The main result shows that the equilibrium allocation is constrained interim Pareto-efficient if and only if, with prob-

ability one, in each period the young generation's marginal rate of substitution between non-contingent changes in consumption in the current period and the subsequent period is smaller than the population growth rate. If a riskless asset is held in positive amounts, this condition is equivalent to the condition that the real rate of return on this riskless asset be smaller than the population growth rate. A further result shows that, under the specified condition, an interim Pareto improvement can always be implemented by an appropriate combination of a lump-sum tax on first-period consumption, a lump-sum subsidy to second-period consumption, and specific taxes and subsidies that neutralize the incentive effects of the intervention. Blanchard's concerns about the effects of behavior changes on equilibrium prices are moot because (i) the mere assessment of a Pareto improvement need not allow for behavior changes and (ii) the behavior changes can be avoided by allowing for a wider set of fiscal instruments than the ones considered by Blanchard.

Third, Hellwig (2023a) considers the assessment of dynamic inefficiency under uncertainty when there are multiple assets. According to an influential paper by Abel, Mankiw, Summers, and Zeckhauser (RES 1989), with multiple assets, the assessment of dynamic inefficiency under uncertainty must take account of returns on all assets, not just the riskless asset. However, the argument Abel et al. (1989) give for their claim is flawed because it involves an infinitely-lived representative consumer, rather than a sequence of overlapping generations. Hellwig (2023a) exploits the fact that, with multiple assets, by standard portfolio choice considerations, and for any participant, the certainty equivalents of the marginal rates of return on all assets held must be the same. For economies in which these certainty equivalents are non-stochastic, the main result shows that dynamic inefficiency prevails if the common value of the certainty equivalent of the

marginal rates of return on assets held is smaller than the population growth rate; (unconstrained) interim dynamic efficiency prevails if this common value exceeds the population growth rate. If a riskless asset is held in positive amount, it suffices to compare the rate of return on this riskless asset to the population growth rate. If the population growth rate itself is the realization of an i.i.d. random variable, the relevant standard of comparison is the certainty equivalent of the population growth rate when interpreted as a marginal rate of return on an asset. Under appropriate stationarity assumptions, the sufficient conditions for dynamic efficiency in Abel et al. (1989) are special cases of the conditions in Hellwig (2023a).

# New Edition of The Bankers' New Clothes

In the late summer of 2022, Anat Admati and I decided to go for a new and enlarged edition of our 2013 Princeton UP book The Bankers' New Clothes. This project took up most of my time since then. Originally, the manuscript was due on 15 March 2023. At that point, we already had a discussion of Credit Suisse, but subsequent events called for a substantial revision of that discussion, as well as additional material on Silicon Valley Bank and, more generally, US commercial banks altogether. The manuscript was eventually submitted on 6 April 2023, but ongoing events and new information required further changes during the copy-editing stage, before the corrected pdf was submitted on 12 July 2023. The new edition has been announced for January 2014.

The new edition is about 50% longer than the first edition. It has four new chapters, entitled *Too Fragile Still, Bailouts and Central Banks, Bailouts Forever,* and *Above the Law?* The first new chapter, *Too Fragile Still,* discusses overall developments since 2013, in banking and in bank regulation, including the 2013 crisis, the COVID crisis, and the

fragility of institutions like Deutsche Bank, Credit Suisse, and money-market funds. Bailouts and Central Banks discusses the propensity of governments and central banks to bail out banks and their creditors, by providing guarantees and liquidity support. The chapter also explains the scope and limits of bailouts by central banks. Bailouts Forever discusses the past decade's reforms of bank-resolution rules and procedures that have come with promises to end the need for bailouts. The chapter explains in detail why governments and central banks are unwilling to use these procedures and instead prefer to rely on bailouts. Some of the procedures are predictably unworkable. In some cases, no workable procedures may be available at all. The last new chapter, Above the Law?, suggests that the inability or unwillingness of authorities to interfere with banks has created an environment in which breaches of the law are treated as ordinary ways of doing business. The chapter gives examples of such breaches, as well as the passivity of bank boards, supervisors, auditors, rating agencies, and the media, towards such breaches when they occur, and suggests that such behavior poses a danger for our polities, including the rule of law.

#### Miscellaneous

I also continued work on mechanism design for public-good provision. Hellwig (2021d) completes the work, mentioned in the previous report, on the equivalence of group strategy-proofness and voting in large populations deciding over a linearly ordered set of alternatives. Hellwig (2021e) considers public-good provision when individual valuations are given by exchangeable random variables. In this case, first-best implementation with individual rationality turns out to be feasible if utility functions are quasi-linear.

In a completely different area, related more closely to the last chapter of the edition of the book with Admati, Hellwig (2021b), a contribution to an Oxford symposium on failures of "capitalism", discusses the reasons for discontent with the market economy that have arisen in many countries over the past two decades. The analysis points not so much to a failure of "capitalism" as to political developments allowing new mechanisms of personal enrichment through power in corporations and through alliances between people in governments/parliaments and in corporations.

# Publications (since 2020)

#### Articles in Peer-Reviewed Journals

Hellwig, M. F. (2022a), Dynamic inefficiency and fiscal interventions in an economy with land and transaction costs, *German Economic Review*, 23(1), 21–60

Hellwig, M. F. (2022b), Incomplete-information games in large populations with Anonymity, *Theoretical Economics*, 17, 461–506

Hellwig, M. F. (2021a), Twelve years after the financial crisis—Too-big-to-fail is still with us. Journal of Financial Regulation, 7, 175–187

Hellwig, M. F. (2021b), 'Capitalism: What has gone wrong?': Who went wrong? Capitalism? The market economy? Governments? 'Neoliberal' economics?, Oxford Review of Economic Policy, 37(4), 664–677

#### Journal Articles (not peer-reviewed)

Hellwig, M. F. (2023), Bankbuch und Marktwertbilanzierung – Silicon Valley Bank als Menetekel, *Audit Committee Quarterly* II/2023, 58–50

Hellwig, M. F. (2022), Gasknappheit und Wirtschaftspolitik in Deutschland, *Zeitschrift* für Wirtschaftspolitik, 71(2), 148–158

Hellwig, M. F. (2022), Geldpolitik und Nachhaltigkeit, Wirtschaftsdienst, 102(5), 341-343

Hellwig, M. F. (2021), Der Zinssatz ist kein Preis, Wirtschaftsdienst, 101(11), 862–869

Hellwig, M. F. (2021), Deutschland braucht ein Investitionskompetenzprogramm, Wirtschaftsdienst, 101(3), 176-179

Hellwig, M. F., Priesemann, V. & Wolff, G. (2021), Reducing the mobility of SARS-CoV-2 variants to safeguard containments, *Intereconomics: Review of European Economic Policy*, 56(4), 234-236

Hellwig, M. F. & Schick, G. (2021), Krise und Reformbedarf der BaFin, *Wirtschaftsdienst*, 101(7), 505-508

#### **Book**

Hellwig, M. F. & Admati, A. R. (forthcoming), The bankers' new clothes: What's wrong with banking and what to do about it – new and expanded edition, Princeton University Press

#### **Revise and Resubmit**

Hellwig, M. F. (2021c), Safe assets, risky assets, and dynamic inefficiency in overlapping-generations economies, MPI Discussion Paper 2021/10, R&R, *American Economic Review* 

Hellwig, M. F. (2021d), Public-good provision with macro uncertainty about preferences: Efficiency, budget balance, and robustness, MPI Discussion Paper 2021/19, R&R AEJ Micro

#### **Working Papers**

Hellwig, M. F. (2021e), Social choice in large populations with single-peaked preferences, MPI Discussion Paper 2021/18

Hellwig, M. F., and G. Schick (2022), Versagen und Reformbedarf der deutschen Finanzaufsicht, Forum New Economy DP 2022/02

Hellwig, M. F. (2023), Overlapping-generations economies under uncertainty: Dynamic inefficiency/efficiency with multiple assets and no labour, MPI Discussion Paper 2023/4

# VoxEU Columns, Newspaper Articles, Interviews

Hellwig, M. F. (2023). Die Credit Suisse als Menetekel, *Schweizer Monat*, 1111, 29–32

Admati, A. R., Hellwig, M. F. & Portes, R. (2023), Credit Suisse: Too big to manage, too big to resolve, or simply too big?, VoxEU Column, 8 May 2023

Admati, A. R., Hellwig, M. F. & Portes, R. (2023), When will they ever learn? The US banking crisis of 2023, VoxEU Column, 18 May 2023

Hellwig, M. F. (2023), Da könnte noch Sprengstoff drin liegen, Interview, *Stern*, 21 March 2023

Hellwig, M. F. (2023), Nur mit viel mehr Eigenkapital lässt sich das Grossbankenproblem lösen, Interview, *Handelszeitung*, 19 May 2023

Hellwig, M. F. (2023), Schon lange ein Falle für die Intensivstation, Interview, *Süddeutsche Zeitung*, 20 March 2023 Hellwig, M. F. (2023), Schon wieder Bankenrettungen!, *Frankfurter Allgemeine Zeitung*, 12 May 2023

Hellwig, M. F. (2023), Wir können Banken nicht schonend abwickeln, Interview, Wirtschaftswoche, 24 March 2023

Bayer, C., Felbermayr, G., Hellwig, M. F., & Wambach A. (2022), Abhängigkeit von russischem Gas reduzieren – jetzt!, *Frankfurter Allgemeine Zeitung*, 21 April 2022

Hellwig, M. F. (2022), Gazprom, ein Sündenfall und die Folgen, *Frankfurter Allgemeine Zeitung*, 29 April 2022

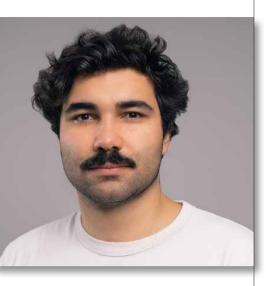
Hellwig, M. F. (2021), Enteignung der Sparer durch die EZB: Eine deutsche Legende, *Frank-furter Allgemeine Zeitung*, 3 September 2021

Hellwig, M. F., Priesemann, V., & Wolff, G. (2021), Die Mobilität ist das Problem, Frankfurter Allgemeine Zeitung, 3 May 2021

## **Outside Activities**

October 2021 Wirtschaftskammer Guest Professor, University of Vienna Course on Systemic Risk, Financial Regulation, and Monetary Policy

January/February 2022 New Economic School, Moscow Course on Systemic Risk, Financial Regulation, and Monetary Policy



Contact

henning@coll.mpg.de

https://www.coll.mpg.de/arian-henning

# **Arian Henning**

# **Summary Report**

Since October 2021. I have been at the institute as a Junior Research Fellow and participant in the IMPRS on Behaviorally Smart Institutions. Before starting my dissertation project at the MPI, I studied law at the Bucerius Law School and Istanbul Bilgi University (LL.B. in law), majoring in the fundamentals of law. In August 2021, I passed the first state examination in law before the Hanseatic Higher Regional Court. During my studies, I provided research assistance at the Center for Legal Learning, developing and executing methodical training strategies for prospective lawyers and legal scholars. As a researcher, I am interested in the evidence-based design of public-administration policies and public institutions. Methodologically, I work at the intersection of public law, Explainable AI (XAI) and organizational/ social psychology.

# Research Agenda

My research is motivated by the idea that reasoning and justifiability of legal decisions are crucial steps towards legal compliance and (automated) administrative practice, specifically in the state-citizen relationship. I am particularly interested in the explainability of machine-learning decisions in public administration. Currently, I am conducting a vignette study to test causal and counterfactual reasoning in high-stakes decision scenarios with regard to their perceived fairness. As a follow-up project, I am working on a project outline for a corresponding field experiment. However, I am not only interested in the perception of machine-learning decisions in legal practice, but also in the application of machine-learning techniques for the analysis and evaluation of judicial decisions, for example by text analysis based on machine-learning. Due to the numerous opportunities for interdisciplinary work at the institute, I would like

to focus more closely on the theory and practice of technology-based decisions in law. This requires a differentiated legal and technological analysis for a realistic assessment of the potential of legal automation.

## **Work in Progress**

Henning A. & Langenbach P. (in preparation). Explainability of automated decision-making in administrative law

# Lectures and Presentations (since 2020)

2022

The Inclusive Exclusion: A Critical Reflection on Giorgio Agamben's State of Exception Arctic Univeristy of Tromsø, Critical Legal Conference, Tromsø/Norway 1 September 2022

2023

Causal and Counterfactual Reasoning: Explainability of Automated Decision-Making in Administrative Law University of Cologne, C-SEB: Early Ideas Workshop, Cologne/Germany 23 June 2023

# **Teaching**

Summer term 2022

**University of Cologne** 

- Judging and Deciding Chair of Economic and Social Psychology
- Guest Lecture: Judicial Biases in Jurisprudence

### Memberships

Since 2019

Member of the Gesellschaft für Freiheitsrechte

# Yoan Hermstrüwer

## **Summary Report**

How does algorithmic thinking inform our understanding of the law? How can and should algorithms be designed when pursuing public-policy objectives? And how can legal scholars use algorithms as an analytical tool in legal research and legal interpretation? These are the broader questions I am fascinated with.

I dealt with these questions by drawing on theoretical and quantitative methods from mechanism design, experimental economics, and empirical legal studies, during my time as a postdoc at the institute until January 2023. In February 2023, I was appointed as an Assistant Professor at the University of Zurich. My new position not only enables me to pursue my previous line of research; it also allows me to embark on a new research agenda and combine the methods I learned during my time at the institute with methods from legal data science, specifically machine-learning and natural language-processing.

The capstone project of my postdoc was my habilitation thesis (Hermstrüwer, 2023). This project addresses the following conundrum: Is it possible to achieve fundamental principles of procedural and distributive justice by applying rigid matching mechanisms in public-admissions procedures such as school admissions? The main result of my thesis is: It is - to a certain extent possible to achieve mechanical justice. To corroborate this argument, I build on a rather technical body of research on matching markets. These markets are subject to two severe constraints: (i) money is not allowed to solve the assignment problem (students are not allowed to buy a slot at a public school), and (ii) applicants cannot just choose the public resource they want (a slot at a public school); they also have to be chosen.

Drawing on recent theoretical and empirical insights, I explore a large variety of matching algorithms underpinning public-admissions procedures, such as university-admissions procedures, the assignment to childcare institutions, and the distribution of refugees in the EU. I show that essentially no single matching algorithm applied under German and EU law adequately reflects the values enshrined in the law. While the entire legal order is based on the idea that admissions procedures are mainly determined by the admissions criteria, I show that this intuition falls short. For a given set of admissions criteria, completely different outcomes are obtained, depending on the matching algorithm implemented. My analysis ends with a reconstruction of general doctrinal principles enshrined in administrative and constitutional law.

A fundamental problem that emerged when I was working on my habilitation is that, without empirical or experimental support, market designers and lawyers run the risk of applying rules that foster the very effects they intend to curb. An illustration of this problem can be found in public-procurement law. When bidders collude in the submission of bids, the legal response can be severe: Bidders can be excluded from public tenders in the future. At first sight, such debarments should deter collusion. However, by reducing the market size, debarments also decrease the level of competition and may thus facilitate collusion. In a lab experiment (Cerrone, Hermstrüwer, and Robalo, 2021), we find that debarments do indeed deter collusion. provided the debarment is sufficiently long. However, we also observe that shorter debarments reduce efficiency and increase the bids of non-debarred bidders. Debarments that are too lenient may thus trigger tacit collusion among the bidders who remain in the market, thereby facilitating the very behavior they are intended to deter.



#### Contact

hermstruewer@coll.mpg.de

https://www.coll.mpg.de/ yoan-hermstruewer Many behavioral assumptions underlying market design and public law are based on uncorroborated intuitions or excessively rational models of human behavior. In a recent experimental proiect, we explore two such intuitions, the first related to the power of incentives. and the second to the power of nudges (Cerrone, Hermstrüwer, and Kesten, 2022). Simulating a school-choice procedure based on different versions of the deferred acceptance algorithm, we find that applicants are almost completely unresponsive to a nudge designed to foster the withdrawal of applications that do not benefit applicants, but hurt their peers. Even more surprisingly, we find that applicants fail to respond to the incentives of the matching algorithm: While applicants are inclined to game the admissions procedure when this will hurt them. they are more likely to refrain from such manipulation attempts when they could actually improve their assignment by misrepresenting their true preferences for schools.

One of the problems I have been particularly interested in lately is the procedural fairness of algorithms used in the courtroom and by public authorities (Hermstrüwer, 2020b). Arguably, the procedural fairness of algorithmic decision-making procedures depends on the degree of human involvement. In a series of vignette studies designed to test this hypothesis, we find that perceived procedural fairness is highest in situations where an AI is subject to frequent human control (Hermstrüwer and Langenbach, 2023). Interestingly, however, it makes no difference whether the decision is always made by a human or whether it is made by an AI subject to occasional human control. In a series of follow-up projects, we plan to extend this line of research in a context where the AI makes mistakes (Hermstrüwer and Langenbach, work in progress) and where a judge assisted by an AI is expected to decide by equity standards (Hermstrüwer and Stremitzer, work in progress).

Further exploring the distributive fairness of matching algorithms, I am currently working on an experiment designed to test a new fairness concept called order symmetry (Freeman, Hermstrüwer, and Wilson, work in progress). The basic idea behind this fairness concept is to devise a matching algorithm that - on average - offers all applicants exactly the same probability of being assigned the objects in their preference list. To test this fairness concept, we offer applicants or an impartial spectator the option to pick their preferred algorithm: top-trading cycles (which guarantees order symmetry) or random serial dictatorship (which does not).

In addition to conceptual work on new technologies (Hermstrüwer, 2020a, 2021b, 2021c) and behavioral public law (Engel et al., 2023), I am currently working on two projects expanding on new topics and methods.

In a first project, we explore how people behave when facing two conflicting norms – "Do not steal" and "Take what you deserve" – in a stealing game, and how a vote about the socially appropriate norm affects behavior (Khesali and Hermstrüwer, work in progress). Our preliminary analysis suggests that participants tend to exploit the "Take what you deserve" norm, taking more than half of the victim's endowment. Enabling participants to vote and see the outcome of the vote, however, mitigates selfish behavior.

In a second project, we plan on exploiting the power of natural language-processing (Frankenreiter and Hermstrüwer, work in progress). In our preparatory work, we have conducted a simple event-study designed to explore the impact of the GDPR on privacy laws in eight jurisdictions, including Germany and the US. Our sample consists of more than 700 privacy policies that we have been collecting on a weekly basis since 2017. Exploiting the entry into force of the GDPR as an exogenous shock, we find that the spillover effects of the GDPR on US law are much weaker

than proponents of the "Brussels effect" suggest. The next step is to analyze the vast body of text in our dataset, using computational methods, and to trace the legal evolution engendered by the GDPR in the US.

# **Publications (since 2020)**

**Articles in Peer-Reviewed Journals** 

Hermstrüwer, Y., & Langenbach, P. (2023). Fair governance with humans and machines, Psychology, Public Policy, and Law

Cerrone, C., Hermstrüwer, Y., & Robalo, P. (2021a). Debarment and collusion in procurement auctions, *Games and Economic Behavior*, 129, 114–143

Hermstrüwer, Y. (2020a). The limits of block-chain democracy, New York University Journal of Law & Liberty, 14, 402–492

Hermstrüwer, Y. (2020b). Fairnessprinzipien der algorithmischen Verwaltung: Diskriminierungsprävention beim staatlichen Einsatz von Machine Learning, *Archiv des öffentlichen Rechts (AöR)*, 145(3), 479–521

#### **Books**

Engel, C., O'Hara, L., Egidy, S., Hermstrüwer, Y., Hoeft, L., & Langenbach, P. (Eds.). (forthcoming). Öffentliches Recht als Verhaltensordnung. Ein neues Paradigma. Mohr Siebeck

Hermstrüwer, Y. (2023). Mechanische Gerechtigkeit. Das Design öffentlich-rechtlicher Matching-Märkte als Rechtsproblem und Aufgabe der öffentlichen Verteilungsverwaltung. *Habilitation Thesis*.

Hermstrüwer, Y., & Lüdemann, J. (Eds.). (2021). Der Schutz der Meinungsbildung im digitalen Zeitalter: Instrumente und Instrumentenvergleich, 205 p., Tübingen: Mohr Siebeck

# **Book Chapters**

Egidy, S., Hermstrüwer, Y., Hoeft, L., & Langenbach, P. (forthcoming). Behavioral public law. In C. Engel, L. O'Hara, S. Egidy, Y. Hermstrüwer, L. Hoeft, & P. Langenbach (Eds.), Öffentliches Recht als Verhaltensordnung. Ein neues Paradigma

Hermstrüwer, Y. (forthcoming). Staatsorganisationsrecht. In C. Engel, L. O'Hara, S. Egidy, Y. Hermstrüwer, L. Hoeft, & P. Langenbach (Eds.), Öffentliches Recht als Verhaltensordnung. Ein neues Paradigma

Hermstrüwer, Y. (2021b). Blockchain and public administration. In O. Pollicino & G. De

Gregorio (Eds.), Blockchain and Public Law: Global Challenges in the Era of Decentralisation, 104–121

Hermstrüwer, Y. (2021c). Wahrheit als Regelungsproblem. Instrumente zum Umgang mit Fake News. In Y. Hermstrüwer & J. Lüdemann (Eds.), Der Schutz der Meinungsbildung im digitalen Zeitalter: Instrumente und Instrumentenvergleich, 149–188, Tübingen: Mohr Siebeck

Lüdemann, J., & Hermstrüwer, Y. (2021). Internationales Kommunikationswirtschaftsrecht (Telekommunikationsrecht und Postrecht). In C. Tietje & K. Nowrot (Eds.), *Internationales Wirtschaftsrecht*, 3rd ed., 572–603, Berlin: De Gruyter

Hermstrüwer, Y. (2020c). Artificial intelligence and administrative decisions under uncertainty. In T. Rademacher & T. Wischmeyer (Eds.), Regulating Artificial Intelligence, in: Law, Governance and Technology Series, 199–223, Cham: Springer

#### **Conditionally Accepted**

Cerrone, C., Hermstrüwer, Y., & Kesten, O. (conditionally accepted). School choice with consent: An experiment, *The Economic* 

#### **Working Papers**

Hermstrüwer, Y. A market design approach to refugee law (2023), 29 pp.

Hermstrüwer, Y. & Langenbach, P. (2022). Fair governance with humans and machines. *MPI Discussion Paper* 2022/4

Hermstrüwer, Y. (2020). The limits of blockchain democracy: A transatlantic perspective on blockchain voting systems. Stanford: Stanford-Vienna Transatlantic Technology Law Forum, TTLF Working Papers No. 49, Stanford-Vienna Transatlantic Technology Law Forum 1–65 (2020)

# Work in Progress

Hermstrüwer, Y. & Stremitzer, A., Equity in robot courts

Hermstrüwer, Y., Freeman, R., & Wilson, M. C., Fairness through order symmetry

Hermstrüwer, Y. & Langenbach, P., Fair errors

Hermstrüwer, Y. & Khesali, M., Normative conflicts, expressive voting, and the law

Hermstrüwer, Y. & Frankenreiter, J., Privacy's great shock

#### **Prizes**

#### 2021

Doctoral Dissertation Award of the Faculty of Economics and Business Administration, University of Jena

# Lectures and Presentations (since 2020)

#### 2023

Workshop & Lecture Series in Law & Economics, ETH Zurich, University of Lucerne, University of St. Gallen, and University of Zurich

Law, Economics and Regulation Conference, HEC Paris & Université Paris-Panthéon-Assas

#### 2022

2022 Easter Workshop on School Choice, Queen's University Belfast

2022 World Economic Science Association Conference (2022 World ESA), Massachusetts Institute of Technology

#### 2021

Meeting of the MD4SG Working Group on Algorithms, Law, and Policy

ICON•S Mundo Conference – The Future of Public Law (2021 ICON•S)

Forum Junge Rechtswissenschaft, University of Tübingen; ACM Conference on Equity and Access in Algorithms, Mechanisms, and Optimization (EAAMO '21)

Workshop of the Max Planck Law – Tech – Society Initiative, Max Planck Law Network

#### 2020

Arbeitskreis Grundlagen, 60. Assistententagung im Öffentlichen Recht "Der digitalisierte Staat" (ATÖR 2020), University of Trier

37th Annual Conference of the European Association of Law and Economics (EALE 2020), Université Panthéon-Assas (Paris 2)

International Junior Scholars Forum in Law and Social Science, University of Chicago, ETH Zurich and Tsinghua University

## **Teaching**

Fall Term 2021

University of Michigan Law School
Designing a New Global Refugee Protection
System

(with James C. Hathaway)

July 2021

Max Planck Law Curriculum Behavioral Public Law (with Christoph Engel, Pascal Langenbach, Laurence O'Hara, and Frederike Zufall)

Spring Term 2021

Karlsruhe Institute of Technology (KIT) Telecommunications Law

Spring Term 2020 Karlsruhe Institute of Technology (KIT) Telecommunications Law

#### **Public Service**

#### Science Management

Co-Organizer of the ECONtribute Law and Econ Workshop, University of Bonn & Max Planck Institute for Research on Collective Goods (04/2020 – 01/2023)

Co-Organizer of the Law – Tech – Society Initiative, Max Planck Law Network (10/2020 – 06/2022)

Liaison Officer of the Max Planck Law Network (05/2019 – 05/2021)

#### Area Chair

Third ACM Conference on Equity and Access in Algorithms, Mechanisms, and Optimization (EAAMO '23), Boston University, Boston, MA (10/2023)

40th Annual Conference of the European Association of Law and Economics (EALE 2023), Freie Universität Berlin & Humboldt Universität Berlin (09/2023), Area Organizer (Privacy, Big Data, Al, Cyber)

#### **Program Committee**

Second ACM Conference on Equity and Access in Algorithms, Mechanisms, and Optimization (EAAMO '22), George Mason University, Arlington, VA (10/2022)

Inaugural ACM Conference on Equity and Access in Algorithms, Mechanisms, and Optimization (EAAMO '21), Virtual (10/2021)

4th Workshop on Mechanism Design for Social Good (MD4SG '20), Virtual (08/2020)

# D. Research Portraits

# **Professional Activities**

#### Reviewer for

ETH Zurich Research Commission; European Journal of Law and Economics; Journal of Economic Methodology; Journal of Gender Studies; Review of Law and Economics; Swiss National Science Foundation; Technology and Regulation

## Memberships

Ethics Commission, ETH Zurich; Ethics Commission, UZH Zurich; Executive Board, UZH Center for Legal Data Science; Faculty Members, UZH Blockchain Center

# **Adrian Hillenbrand**

## **Summary Report**

I joined the institute in October 2012 as a PhD student of the Bonn Graduate School of Economics (BGSE). In 2016, I joined the MPRG group of Fabian Winter, "Mechanisms of Normative Change", as a postdoc.

The last years have been pretty exciting. Together with Fabian Winter, we developed our DFG project "Volunteering under Population Uncertainty". In the experimental literature on cooperation and coordination, common knowledge about a certain group size is often a standard assumption. In the project, we study how uncertainty about the group size influences volunteering behavior. Our first paper in this line of research, Volunteering under Population Uncertainty (Hillenbrand, Winter, 2018), has already been published in Games and Economic Behavior. In a further paper (Hillenbrand, Werner, and Winter, 2020), we study volunteering at the workplace. In a large-scale experiment with 2,800 workers on an online platform, we show that group size - and, consequently, group-size uncertainty - has no influence on volunteering in a work setting. This result is in stark contrast to theoretical predictions. In a setting where only one volunteer is needed, the same proportion of workers volunteers, regardless of whether the team consists of 3, 30, or even 300 workers. We are currently working on a follow-up study to understand the underlying motives that drive the results. In the third project in this research area, we study how different volunteering norms emerge under population uncertainty in repeated interactions. Our theoretical predictions are corroborated by the experimental results. The DFG project has now ended, and I am happy that our three papers now provide a strong contribution to the literature on volunteering and cooperation.

Together with Susann Fiedler, we published our work on *Gain-Loss Framing in Interdependent Choice* (Fiedler & Hillenbrand, 2020) in *Games and Economic Behavior*, where we use eye-tracking as a complementary measure to study how gain-loss framing influences choice in a dictator game. We show that, under loss framing, subjects are less altruistic and also focus their attention more on their own payoffs. This suggests that losses to the own outcome are weighted more than losses to the receiver.

In parallel to the above work, I have ventured into a new field together with Svenja Hippel. Rapid technological developments in online markets fundamentally change the relationship between consumers and sellers. The rise of online platforms increases the transparency for consumers in many markets because a multitude of products can now easily be accessed and browsed through on a single web page. At first sight, this is beneficial for consumers, since they can find more relevant and better-fitting product offers. But online platforms can also more easily gather data about consumers, in particular about those with a more intense search behavior on the particular site. In Strategic Inattention in Product Search (Hillenbrand & Hippel 2020), which is now at the "revise and resubmit" stage at Management Science, we study the resulting trade-off for consumers theoretically, as well as in a laboratory experiment. Consumers can search intensively, receiving a well-fitting product, albeit at a very high price; or else they can search less, being strategically inattentive - and receive a worse fit, but potentially for a better price overall. While consumers do restrict their search in the experiment, we find that it is the sellers and not the buyers who profit from higher filter choices. We will extend this project in the future by analyzing the impact of competition, as well as



Contact
Adrian.Hillenbrand@zew.de
https://www.zew.de/team/ahb

# D. Research Portraits

the reaction of consumers to different forms of price discrimination, e.g., personalized discounts.

In 2020 I took over an acting professorship at the University of Mannheim, staying at the institute as a Research Associate, and finally left the institute in July 2021 to join a joint W2 professorship for Experimental Market Design at the Karls-ruhe Institute of Technology and ZEW.

# **Publications (since 2020)**

**Articles in Peer-Reviewed Journals** 

Hillenbrand, A. & Verrina, E. (2022). The asymmetric effect of narratives on prosocial behavior, *Games and Economic Behavior* 135, 241–270

Fiedler, S. & Hillenbrand, A. (2020). Gain-loss framing in interdependent choice. *Games and Economic Behavior*, 121, 232–251

#### **Submissions**

Hillenbrand, A., Werner, T., & Winter, F. (2020) Volunteering at the workplace under incomplete information: Teamsize does not matter. MPI Discussion Paper 2020/4

Hillenbrand, A. & Hippel, S. (2020). Strategic inattention in product search

# **Work in Progress**

Hillenbrand, A. & Winter, F. How the stability of social relations shapes the emergence of latent norms

# **Thomas Holzhausen**

## **Summary Report**

I became a Research Fellow in Prof. Engel's Behavioral Law and Economics Research Group in April 2022 after having finished my law studies the month before. Before that, I first was exposed to behavioral legal studies through completing the Law & Economics Bachelor program at the University of Bonn. In my first year of PhD studies, I focused mainly on completing the course work required within the International Max Planck Research School for Behaviorally Smart Institutions (IMPRS BeSmart), which revolved mostly around developing knowledge on economic methodology. My work now aims at further enriching the theory of law with empirical findings. In that, I aim to utilize controlled laboratory experiments to delve deeper into the reasons why individuals adhere to the law and adapt to its dynamic changes. Moreover, I am interested in the interactions between public opinion and the law, the former being an expression of the sovereign of the state, who both legitimizes and is bound by the latter. Furthermore, I analyze the legal implications of the aforementioned empirical findings.

## Research Agenda

Currently, my research agenda is twopronged. To start with, together with Christoph Engel and Dorothee Mischkowski, I investigate how citizens adapt to changes in the law. Prima facie, people seem to have a general understanding of what they are legally obliged as well as allowed to do and (mostly) act accordingly. At the same time, they have never read the specific laws governing these obligations or permissions. Drawing on the example of the evolution of waste separation in Germany, this even holds for constantly changing laws. We want to explore how people learn of legal changes and whether they adapt,

leveraging a laboratory experimental approach. More precisely, we investigate the informational channels of learning about legal change, while additionally modifying the underlying policy problems a law tackles. Through this application, we are potentially able to offer advisory results in how informational campaigns regarding legislative change could or should be structured.

Secondly, my PhD thesis focuses on strategic regulatory change. While traditional law and economics has focused on a holistic analysis of all potential regulatory options of which the best fit is to be picked for legislation, this approach leaves out the pitfalls of the legislative process and its preceding public discourse. Some laws are desirable, but cannot be put in place because of public backlash. Motivated by Karl Popper's distinction of Utopian and piecemeal social engineering from his 1945 work "The Open Society and Its Enemies", I investigate whether an incrementally adaptive regulatory process can be leveraged strategically to facilitate the attainment of the desirable regulatory status, effectively combining Popper's Utopian blueprint and his piecemeal methodology. Building on the vast research field of behavioral economics. I try not only to answer the aforementioned binary question, but also to delve deeper into the psychological processes involved, allowing for answering not only the "if" but also the "why". On the legal side, this strategic approach to regulation might not be without harm. Depending on the cognitive channels potentially facilitating a decreased public opposition, the legal implications might be ambiguous. Accordingly, mitigated backlash because of updated preferences based on new evidence of previously introduced regulation and its implications is unproblematic and desirable. The same cannot be said if support for regulation is based on cognitive biases, especially if they were consciously lever-



holzhausen@coll.mpg.de https://www.coll.mpg.de/

thomas-holzhausen

aged. In that, my research leans on the literature regarding manipulation in law.

# **Work in Progress**

Engel, C., Holzhausen, T., & Mischkowski, D. (ongoing). The legislator speaks and nobody listens: How does legislative change translate into a change in behavior if legal rules are followed by routine?

# **Professional Activities**

Memberships

Since 2023 Member of the European Society for Empirical Legal Studies

# **Sophia Hornberger**

# **Summary Report**

I joined the institute as a visiting researcher in October 2022. At the same time, I started my PhD at the University of Cologne within the Cologne Graduate School in Management, Economics, and Social Sciences.

Prior to my PhD, I completed my Bachelor's degree in Economics and Politics and my Master's degree in Economics at the University of Cologne. Additionally, I spent time abroad at Trinity College Dublin and Université Paris 1 Panthéon-Sorbonne.

During my time as a PhD student, I aim to work in the field of applied micro-economic theory. My research interests further include information economics, economics of privacy, behavioral economics as well as health care economics.

# Research Agenda

My plans for upcoming research projects include working with theoretical models, administrative and election data, and lab experiments. Current projects include research on consumer attitudes on price discrimination in online markets and voter attitudes on compliance with fiscal rules.

As the frequency of the use of online services and online purchases increases, so does the amount of consumer data that is available online. Consequently, the usage of this data is a much-discussed topic. More precise information about consumers could be used to try to influence them by adjusting personalized advertisements, the order in which products are displayed, or the price. Naturally, there is a lot of discussion about legislation protecting the privacy of consumer data. However, it is important to examine closely consumer attitudes on the usage of their disclosed

data and their choice of how much information to disclose. I aim to add to existing research by conducting financially incentivized lab experiments, in order to take a closer look at what drives consumers' choices of information disclosure and their evaluation of fairness of personalized pricing and possible welfare implications.

Additionally, I intend to look at the link between fiscal-rule compliance and voting results in the European Union. With increasing public deficits and high government debt being a concern for countries worldwide, fiscal rules aim to counteract this trend and ensure sustainability in public finance and macroeconomic stability. The EU fiscal framework is rooted in the Stability and Growth Pact and currently includes four fiscal rules. Average compliance across the EU Member States was around 60% between 1998 and 2020. However. empirically significant effects were shown on fiscal aggregates after the introduction of fiscal rules. A "benchmark effect" was observed where, even when fiscal rules are not complied with, the deviations from the limit set by the rule converged to zero over time. This indicates that there may be a cost for incumbent governments from deviating largely from the fiscal-rule threshold. Thus, there may be political costs for the incumbent government from non-compliance. The project aims to analyze the link between complying with fiscal rules and the change in vote shares of incumbent government parties at the next election, as well as reelection probabilities.

#### **Grants / Prizes / Honors**

2022

Doctoral Scholarship, Cologne Graduate School/IMPRS



Contact hornberger@coll.mpg.de

https://www.coll.mpg.de/sophia-hornberger

# Lectures and Presentations (since 2020)

2023

Consumer Attitudes Towards Personalized Prices and Information Disclosure in Online Markets MPI, IMPRS BeSmart Thesis Workshop, Schloss Raesfeld 28 March 2022

# **Teaching**

Summer Term 2022 University of Cologne Supervision of Bachelor Thesis

Winter Term 2023/2024 University of Cologne Imperfect Information in Healthcare Markets – Exercise Session

# **Professional Activities**

Memberships

Since 2022 Member of the Center for Social and Economic Behavior (C-SEB)

# Fabian Jäkel

### **Summary Report**

I joined the institute as a doctoral student in law in October 2021. Within the framework of the institute's International Max Planck Research School, I have taken a variety of classes, for instance in quantitative methods and in psychology, which have prepared me for my interdisciplinary dissertation project.

My research focuses on the relationship between law and mental health. A multitude of factors can influence people's mental health and their mental-health-related behavior. Legal rules and their application can be among these factors. Some rules may be specifically intended to regulate aspects that are relevant for mental health. But sometimes legal rules can also have unintended consequences for mental health. It is important to study these effects so that they can be taken into account when designing and applying legal rules.

My dissertation is concerned with a requirement that applicants have to fulfill to be able to be appointed as civil servants under German law, and specifically with the potential effect of this requirement on whether students seek professional help for mental-health problems. In the German public service. a distinction is made between "civil servants" and "public employees". The civil-servant status comes with many benefits, such as special protection against dismissal. However, one of the requirements for receiving the civilservant status is that the applicant's health is "suitable". The public employer has to decide whether the applicant's health is "suitable", based on a medical opinion.

This "health requirement" might have serious unintended consequences. It has been reported that some students refrain from seeking professional help for mental-health problems because

they are worried about the consequences of seeking help for receiving the civil-servant status in the future. They seem to worry that having been diagnosed with a mental disorder or having received treatment for a mental disorder would be an obstacle to being appointed as a civil servant.

However, a thorough theoretical analysis of this problem as well as quantitative evidence seem to be lacking in the literature. I therefore wish to address this issue both from a theoretical and from an empirical perspective. For this purpose, I draw on insights from an extensive body of literature in the social sciences that investigates, albeit not specifically with regard to the German health requirement, why many people do not seek professional help for mental-health problems. Moreover, I am planning to conduct a survey that investigates possible reasons why German students do not seek professional help and, in particular, whether being concerned about not receiving the civil-servant status might be one such reason.

Furthermore, I am researching how the health requirement is applied by courts and public authorities. There are indications that many students have incorrect beliefs with regard to this requirement and its application in practice, which might increase their concerns about not receiving the civil-servant status and could contribute to their decision not to seek professional help. Obtaining reliable information about the application of the health requirement by courts and public authorities would allow me to assess the accuracy of students' beliefs. This is important for considering the normative implications of my findings, in particular whether changes to the law might be necessary or whether interventions such as providing better information to students might be appropriate.



Contact
jaekel@coll.mpg.de
https://www.coll.mpg.de/fabian-jaekel

# D. Research Portraits

# Lectures and Presentations (since 2020)

2022

The Medical Examination Requirement for Applicants for Civil Service: Is it a Barrier to Mental Health Help-Seeking? 6th Annual Max Planck Law PhD Workshop, Berlin, Germany November 2022

# Mustafa Kaba

#### Overview

I joined the Experimental Economics Group in January 2021 as a Senior Research Fellow after receiving my PhD in economics from the European University Institute. I also hold an MA in economics and a BSc in industrial engineering from Bogazici University, Istanbul. I am an applied microeconomist working primarily on and at the intersection of political economy and behavioral economics, using microeconometrics and experimental methods. Below, I describe my research projects in each of these areas.

#### **Political Economy**

In my recent paper (co-authored with Serkant Adiguzel and Murat Koyuncu), I explore the impact of central government takeovers of local jurisdictions on the rule of law and economic efficiency at the local level. Using the universe of state contracts granted in Turkey within a staggered DiD setting, I reveal how appointing central representatives over locally elected officials alters incentives within local governments, leading to a decline in the rule of law and economic efficiency in public procurement and service delivery.

This paper contributes to the literature on electoral accountability and corruption by providing causal evidence of central takeovers of local jurisdictions leading to a decline in the rule of law and economic efficiency. It also contributes to the literature on public procurement by introducing a new measure of law abuse and hence expending the analytical toolkit of scholars in this area.

Another project in this area is "Who buys vote-buying? How, how much, and at what cost?" (published in the *Journal* of *Economic Behavior and Organization* in 2022). In this paper, I estimate the causal effect of a local food-subsidy

program on electoral outcomes. Using voters' walking distances from the program stores as an instrument, I find that a distributive spending of c. 5% of GDP per capita buys an additional vote for the incumbent. I also find that voters of different partisan affiliations respond differently to the program. In line with the reciprocity rule, opposition voters are more likely to abstain, and incumbent supporters are more likely to turn out.

This paper contributes to the literature on vote-buying by providing causal evidence of its effectiveness and heterogeneity across voters. It also contributes to the literature on voter behavior by showing how preferences, beliefs, and biases affect voting decisions.

#### **Behavioral/Experimental Economics**

My main project in this area is a lab-inthe-field experiment with large corporations in Turkey: "Leadership, social networks and workplace climate through a gender lens" (with Sule Alan, Gozde Corekcioglu, and Matthias Sutter). For this project, we made several visits to 24 large corporations in several cities in Turkey and ran long, detailed experimental sessions with the white-collar employees of these companies. Our experimental sessions measure the economic & social preferences of the employees, their cognitive empathy, creativity, fluid cognitive ability, social networks within the company, their perceived corporate climate, and the sociodemographic and socioeconomic characteristics. Using these unique data, we investigate how female leaders shape the workplace climate in the corporate world. We show that female leaders do not possess "male-like" characteristics, but rather they preserve their female qualities. In terms of gender segregation at the workplace, we document that female leadership breaks male homophily. In terms of corporate culture, on the other hand, we find that supportiveness



### Contact

kaba@coll.mpg.de

https://www.coll.mpg.de/mustafa-kaba

of the leader is the most important factor, but also that the female leaders are more likely to establish support links with female employees. Finally, we document that female employees who work under female leaders are less likely to guit and more likely to get promoted.

Another experimental project of mine is "Vaccination as social contract in politically polarized settings: Evidence from a randomized survey experiment in Turkey" (with Murat Koyuncu, Sebastian Schneider, and Matthias Sutter). In this paper, using a large-scale representative survey experiment, we first identify the characteristics of "pro- and anti-vaxxers" and reveal that political affiliation shapes vaccination attitudes even in the face of a global pandemic. We then use standard economic games to measure the extent of outgroup bias between the two groups, and how it is exacerbated by political cues. We find that "pro- and anti-vaxxers" discriminate more against each other when they perceive a political difference between them. We also show that promotion of a broadly shared social identity might mitigate this outgroup discrimination.

This paper contributes to the literature on political polarization and social cohesion by providing evidence of how political identity affects vaccination behavior and social preferences. It also contributes to the literature on public-health policies by showing how informational interventions can influence vaccination uptake and social cooperation.

I have several other side projects in the pipeline that are either under review or close to submission. In one project, together with Nicole Stoelinga, I carry out an empirical test of my PhD supervisor's reputation trap theory (Levine, 2021, *Econometrica*) using Olympic Games as an empirical setting. This paper shows that the Olympic Games were an effective signalling device to increase reputation and exports for the host and bidding countries, especially for earlier games when the information was not as easily available as today. In

another project that focuses on voting behavior, I develop a novel measure that distinguishes different social classes from each other in terms of their economic preferences using predictive modelling. I then use this measure to explain the variation in class-based voting, over time and across space.

### Research Agenda

My future research will continue to explore the topics of political economy and behavioral economics, using a combination of microeconometrics and experimental methods. I am particularly interested in studying how social norms, identity, and culture affect political and economic outcomes, such as corruption, trust, cooperation, and discrimination. I am also interested in studying how digital technologies, such as social media and artificial intelligence, affect individual behavior and market outcomes, such as participation, polarization, and innovation.

My paper on central takeovers and public procurement is part of a wider research agenda focusing on public service delivery. Our team investigates the factors influencing economic efficiency in public procurement and service delivery, the role of bureaucratic quality, and the response of public services to external shocks such as migration. We have compiled a comprehensive database of public procurement contracts in Turkey dating back to 2010. We are currently enriching this data with firm-level information regarding the contractors.

# **Publications (since 2020)**

Kaba, M. (2022). Who buys vote-buying? How, how much, and at what cost? *Journal of Economic Behavior & Organization*, 193, 98–124

#### **Working Papers**

Kaba, M., Adiguzel, S., & Koyuncu, M. Unforeseen events or unscrupulous officials? Electoral accountability and law abuse in public procurement Kaba, M., Sule, A., Corekcioglu, G., & Sutter, M. Female leadership and workplace climate

Kaba, M. & Stoelinga, N. Class voting and economic policy preferences: A predictive modelling approach

Kaba, M., The Olympic effect: Fact or fiction? (Under Review)

#### R&R

Kaba, M., Koyuncu, M., Schneider, S. O., & Sutter, M. (2023). Social norms, political polarization, and vaccination attitudes: Evidence from a survey experiment in Turkey. Revision requested at the *European Economic Review* 

## **Work in Progress**

Kaba, M. & Sutter, M. Social identity and policy preferences: Evidence from a large-scale survey experiment in the U.S.

Kaba, M. & Stoelinga, N. Reputation signalling and exports in contract-intensive industries

Kaba, M., Adiguzel, S., & Koyuncu, M. From elected to appointed: Economic consequences of local authoritarian takeovers

Kaba, M., Sule, A., Corekcioglu, G., & Sutter, M. Female leadership and workplace climate

#### **Teaching**

Econometrics for Behavioral Economics (graduate level), Lecturer, Economics Department, University of Cologne

# Mahdi Khesali

#### Overview

I joined Christoph Engel's group as a PhD candidate in October 2020, after completing my master's degree in Public Economics, Law, and Politics at Leuphana University. I also worked for the Institute of Law and Economics (ILE) at the University of Hamburg, where I continue to conduct research. My work encompasses four main fields: contract theory, regulation of AI, political economy and public choice, and cultural economics. The common thread connecting these fields is the application of new methods and data.

#### **Contract Theory**

In my research on contract theory, I aim to use established frameworks to understand puzzling phenomena in contract law and theory. Currently, my focus lies on two specific areas: protecting an image through contract terms; and the recently emerged phenomenon of "quiet quitting".

There has long been a debate regarding the most appropriate compensation method for contract breaches. While some legal systems default to monetary compensation, others prioritize specific performance. To shed light on individual preferences for these approaches, my co-authors and I plan to apply an image-related economic framework. We are currently in the process of designing an experiment to test our hypothesis.

A recent Gallup report reveals that over half of the employees in the US exhibit minimal engagement with their work environment, potentially leading to decreased productivity for firms. This phenomenon is referred to as "quiet quitting". One proposed solution to this problem is the implementation of more rigid contracts. Drawing on the contract as a reference point, we aim to investigate potential contract forms that can address this issue. We are currently in

the process of designing an experiment to test our hypothesis.

### Regulation of Misinformation Produced by AI

The exponential growth in the production of materials using AI, coupled with the personal experiences of individuals interacting with generative AI, highlights the problem of false information produced by AI. Generative AI is substantially changing the field of misinformation by producing false information that is consistent in terms of content (making it difficult to detect), cost-effective, and can be disseminated on a large scale. This downside of using AI, in contrast to other disadvantages, has already been realized, necessitating regulation.

My research, which forms the core of my dissertation, focuses on how we should regulate generative AI to combat misinformation. I first discuss the mechanisms through which misinformation can harm individuals and society. Drawing on existing literature, I then outline my regulatory suggestions for both the supply and demand sides of the market, namely firms using generative AI and individuals consuming material produced by AI.

#### **Political Economy and Public Choice**

Nine out of ten modern constitutions contain explicit emergency provisions that outline the conditions under which a state of emergency can be declared, in addition to the powers a government can exercise during such periods. My co-authors and I analyze the deviations from constitutional provisions that occur when governments respond to a state of emergency, leading to a de jure/ de facto gap.

It has been argued that easily comprehensible constitutions can empower citizens to act collectively and challenge their governments if these exceed



#### Contact

khesali@coll.mpg.de

https://www.coll.mpg.de/mahdi-khesali

constitutional limits. This argument is mainly attributed to the political scientist Barry Weingast. To test this hypothesis, my co-authors and I have developed constitutional comprehensibility indices and conducted tests.

Referenda are costly, and winning them is often unlikely. Nevertheless, the number of referenda has steadily increased in recent years. Why do citizens invest resources to hold referenda despite the low probability of success? Is this behavior irrational? In our study, my co-author and I have developed an experimental design to explore the impact of voting on individual behavior when the outcome is not enforced or unknown. The experiment is designed to induce normative conflicts among participants; it examines whether expressive voting can influence adherence to a norm. We are currently collecting data for this project.

#### **Cultural Economics**

It is often argued that values, norms, and moral systems are largely time-invariant, but empirical evidence supporting this claim has been scarce. The most suitable data for testing this hypothesis is the collective body of texts produced by a nation to transmit these norms and values from one generation to the next. Together with colleagues from the Institute of Law and Economics at the University of Hamburg, we have collected over 20,000 folk tales from 142 countries. By employing Natural Language Processing techniques, we aim to identify norms and values within these texts and to test the hypothesis of time-invariant norms and values.

## **Publications (since 2020)**

Articles in Peer-Reviewed Journals

Bjørnskov, C., Voigt, S., & Khesali, M. (2023). Unconstitutional states of emergency, *The Journal of Legal Studies*, 52(2), 455-481

Journal Articles (not peer-reviewed)

Gutmann, J., Khesali, M., & Voigt, S. (2021). Constitutional comprehensibility and the coordination of Citizens: A test of the Weingast Hypothesis, *The University of Chicago Law Review Online* 

### Work in Progress

Hermstrüwer, Y. & Khesali, M., (ongoing): Effect of expressive voting on behavior

Khesali, M., Leszczynska, M., & Friedrichsen, J. (ongoing): Contract as mirror of your image

Khesali, M., Voigt, S., & von Jacobi, N. (ongoing): Historical moral foundations cast a long shadow: Insights form a novel folktale dataset

# **Teaching**

Winter term 2023
Brunel Univeristy London
Contract law and Public Law (Level 1)

Summer term 2021 Hamburg University Public choice (tutorial)

# **Lukas Kiessling**

#### Overview

Since August 2021, I am a data-science consultant in the private sector. Prior to that, I was part the Experimental Economics Group (EEG) led by Matthias Sutter since 2018. I joined the group first as a Research Fellow, after finishing my PhD at the University of Bonn in February 2020 as a Senior Research Fellow. During my time at the MPI, I worked on topics in applied microeconomics and behavioral economics, with a focus on peer effects and human-capital formation. Specifically, I used field experiments, large-scale surveys, and secondary analysis of observational datasets to answer research questions focusing on three themes: (i) how peers affect the well-being and behavior of adolescents; (ii) how parents raise their children with the corresponding consequences for the development of children's preferences; and (iii) determinants of gender disparities in educational and labor-market outcomes.

#### **Peer Effects**

It is widely accepted that peers influence consumption behavior, general well-being, and performance. Yet, we do not know much about how individuals choose these peers in the first place, nor about the consequences of systematic peer selection. In the context of a framed field experiment, Jonas Radbruch, Sebastian Schaube, and I try to fill this gap. First, we study the causal effect of being able to self-select peers on performance, and decompose differences into their possible causes (Kiessling et al., 2022). We find that self-selection of peers improves performance; we also find evidence for peer effects in several dimensions; and we note that the peer composition changes under self-selection. Yet, these changes cannot account for the performance improvements that we observe. Rather, we show that self-selection allows for autonomy over the peer assignment,

which in turn has a direct effect on performance through increased motivation. In a second paper, Kiessling et al. (2020), we describe which factors – productivity, personality, and friendship ties – drive peer-selection processes. We show that, even conditional on friendship ties, strong homophily exists in productivity and personality. In light of these results, we discuss how this provides a micro-foundation for non-linear and/or heterogeneous peer effects commonly found in the literature.

Together with Jonathan Norris (Kiessling and Norris, 2023), we study how students' relative ranks in their school cohort affect their well-being, both in the short term and in the long run. We show that having a higher rank in school improves not only the students' immediate mental health, but these effects last for at least 14 years and carry over to economic outcomes in adulthood. The findings of this study thus provide evidence how the school environment can have long-lasting consequences for the well-being of individuals.

Parental Decision-Making and Its Implications for the Development of Preferences

Not only peers shape an individual's preferences, skills, and well-being. Even more important for the development of children and adolescents is their families. In ongoing work with Shyamal Chowdhury, Hannah Schildberg-Hörisch, and Matthias Sutter (Kiessling et al., 2023), we investigate how parents shape the development of time preferences in children in rural Bangladesh. We show that parents anticipate children's present bias and try to mitigate this by acting paternalistically. Moreover, we find the intergenerational transmission of time preferences to be more pronounced for non-paternalistic parents than for their paternalistic counterparts. These results thus contribute to the liter-



Contact
lukas.kiessling@gmail.com
https://www.coll.mpq.de/lukas-kiessling

ature by showing how different forms of parenting shape children's preferences. Given that different parenting styles are related to different transmission patterns, this raises the question how parents perceive the returns to different parenting styles. In Kiessling (2021), I study parents' beliefs about the returns to two factors affecting the development and long-term outcomes of children: (i) parenting styles defined by the extent of warmth and control parents employ in raising their children, and (ii) neighborhood quality. Based on a representative sample of over 2,000 parents in the United States, I show that parents hold well-formed beliefs: They expect large returns to the warmth dimension of parenting, as well as to living in a good neighborhood, and perceive parenting as being able to compensate partly for adverse environments. Yet, there is no socioeconomic gradient in perceived returns, but they are predictive for actual parenting styles. This suggests that parental beliefs are an important determinant of parental decision-making that cannot be proxied by other sociodemographic variables.

# Gender Differences in Educational and Labor-Market Outcomes

In a third strand of research, I aim at understanding gender disparities in tertiary education and labor markets. In joint work with Pia Pinger, Philipp Seegers, and Jan Bergerhoff (Kiessling et al., 2023), we present evidence from a large-scale study on gender differences in wage expectations. Based on a sample of over 15,000 students in Germany, we document a large gender gap in wage expectations, amounting to approximately 500,000 EUR over the life cycle and resembling actual wage differences. In addition, we explore potential determinants of this gap and show that males and females follow different negotiation strategies.

#### **Publications**

Kiessling, L., & Norris, J. (2023). The long-run effects of peers on mental health. *The Economic Journal*, 133(649), 281–322

Kiessling, L., Radbruch, J., & Schaube, S. (2022). Self-selection of peers and performance. *Management Science*, 68(11), 7793–8514, iii–iv

Kiessling, L. (2021). How do parents perceive the returns to parenting styles and neighborhoods? *European Economic Review*, 139

#### **Working Paper**

Kiessling, L., Chowdhury, S., Schildberg-Hörisch, H., & Sutter, M. (2021). Parental paternalism and patience. *MPI Discussion Paper* 2021/3

#### Revise & Resubmit

Kiessling, L., Pinger, P., Seegers, P., & Bergerhoff, J. (2023). Gender differences in wage expectations: Sorting, children, and negotiation styles, R&R at *Labour Economics* 

#### **Honors**

Best Thesis Award 2019/2020 by the Economics of Education Committee (Bildungsökonomischer Ausschuss) of the Verein für Socialpolitik

## Refereeing

American Economic Review, Economic Journal, Educational Researcher, Journal of Economic Behavior and Organization, Labour Economics, LABOUR: Review of Labour Economics and Industrial Relations, Management Science, PLOS ONE, Diligentia Foundation

# Pascal Langenbach

# **Summary Report**

Since July 2018, I have been a Senior Research Fellow in the Behavioral Law and Economics Group. Throughout my previous education in Law (PhD in 2016, second state examination in 2018) and Economics (PhD in 2017), I have been actively employed by the MPI in various (part-time) positions since 2010. My research primarily revolves around the analysis of Public Law from a behavioral perspective. By adopting this approach, I seek to enhance the understanding of how behavioral factors influence the implementation and effectiveness of legal frameworks. In addition, I am actively involved in the field of Empirical Legal Studies by conducting original legal experiments.

### Research Agenda

I.

My research mainly contributes to two subfields of legal research: Public Law covering both administrative and constitutional-law topics and the international field of Empirical Legal Studies. In my empirical work, I use the experimental law and economics methodology as well as vignette-based experiments.

While during the first years of my post-doc I tried to establish a track record in the empirical disciplines and started a line of experimental work, I now focus more on contributing to the German Public Law discourse, particularly through my habilitation thesis in Public Law. Of course, the work in both fields is intertwined: Legal research informs my empirical work, as I conduct experiments inspired by legal questions, and I also use empirical insights in my legal research. An explicit goal of my contributions to the research in Public Law is to feed some of the topics debated

empirically into the debate in German Public Law.

Apart from the methodological angle, my research can also be ordered around research topics: A large part of my research deals with questions of administrative law (II.). I write on constitutional law and the behavioral effects of democratic institutions (III.). Finally, I conduct foundational research on the use of sanctions for behavioral regulation (which is, of course, also of interest for administrative law) (IV.).

II.

Within the framework of my habilitation thesis, which will lead to a legal monograph, I address the challenges that administrative law encounters when regulating the behavior of heterogeneous populations. Individuals not only contribute differently to social issues, but may also respond differently to, and be differently affected by, legal regulatory measures. I aim at developing standards for the personalized differentiation within administrative law. Additionally, I will examine the development and implementation of heterogenous rules. This investigation will also involve addressing legal and technical questions related to the analysis of administrative data.

Therefore, the digitalization of the administration is another focus of my work. A recent article (Hermstrüwer and Langenbach 2023) examines the acceptability of algorithmically supported administrative decisions, such as admission procedures or predictive policing. Currently, we are planning to extend this line of research to study systematically how human control over algorithms and errors in automated legal decision-making impact fairness. In Hermstrüwer and Langenbach (nd), we aim to introduce the current empirical studies into the German legal discourse. Moreover,



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#### Contact

langenbach@coll.mpg.de

https://www.coll.mpg.de/pascal-langenbach

in Henning and Langenbach (nd), we explore the evaluation of counterfactual explanations in administrative-law procedures. In addition to my work at the MPI, I address these digitalization topics as the co-speaker of the interdisciplinary working group on Artificial Intelligence at *Die Junge Akademie*.

In Langenbach (2022), I presented an assessment of the empirical research concerning the impact of procedural participation on the acceptance of power-grid expansion. This piece underlines the potential of public-participation procedures in fostering acceptance of energy infrastructure projects.

III.

Another area of research in which I am involved is the analysis of democratic institutions. Building upon earlier work on direct democracy, Langenbach and Verrina (nd) investigate whether representative democratic institutions can yield similar compliance effects than direct-democratic institutions. Using a laboratory public-goods experiment, this study does not find any behavioral effect on the compliance with policy choices of democratically elected representatives. Additionally, in the field of election procedures, Haffert, Langenbach, and Rommel (nd) examine the preferences of German voters regarding electoral law reform and explore how framing the reform as trilemmatic impacts support for reform proposals. Studying the interaction of parliamentary decisions with court decisions, in Langenbach and Schneider (nd) we conduct an online vignette experiment in which we study how rulings of the German Federal Constitutional Court and the European Court on Human Rights affect public opinion about policies.

Conceptually, the behavioral analysis of public law is presented in a recent book project that adopts a behavioral perspective on the core areas of constitutional and administrative law (Engel, O'Hara, Egidy, Hermstrüwer, Hoeft, Lan-

genbach, nd). I authored the chapter on behavioral economics and fundamental rights (Langenbach, nd1) and co-lead the group, alongside Yoan Hermstrüwer, for the introductory chapter on Behavioral Public Law (Egidy, Hermstrüwer, Hoeft, Langenbach, and O'Hara, nd).

IV.

Part of my experimental work does not directly address questions of Public Law, but can be classified as legal foundational research. A significant aspect of this research focuses on understanding how sanctions, particularly their severity, influence human behavior. The findings so far indicate that people react to the irrelevant information of the magnitude of the sanction when updating their beliefs about detection probabilities based on enforcement experience (Friehe, Langenbach, and Mungan 2023). In a recent project, we study how the strength of social norms interacts with the purpose of sanctions. Specifically, we investigate whether social norms affect punishment behavior differently when the purpose of punishment is retribution rather than deterrence and retribution (Baumann, Friehe, & Langenbach, nd1). Adding to this line of research, we elicited data for an experiment aimed at understanding whether and how people infer the detection probabilities from the communicated severity of a sanction (Friehe and Langenbach, nd).

Related to this, Baumann, Friehe, & Langenbach (nd2) report that, under certain circumstances, the threats of damage payments or fines have varying effects on investments in accident prevention. While important for the use of administrative regulation (through fines), this research is closely connected to the behavioral study of tort law. In Langenbach (nd2), I provide an overview of the behavioral and experimental economics literature on tort law for the German law-and-economics debate.

## **Publications (since 2020)**

**Articles in Peer-Reviewed Journals** 

Baumann, F., Friehe, T., & Langenbach, P. (forthcoming). Fines versus damages: Experimental evidence on care investments. *The Journal of Legal Studies* 

Hermstrüwer, Y., & Langenbach, P. (2023). Fair governance with humans and machines. *Psychology, Public Policy, and Law* 

Langenbach, P., & Friehe, T. (2023). The willingness to pay for voice in dictator games. Journal of Behavioral and Experimental Economics, 107: 102117

Friehe, T., Langenbach, P., & Mungan, M. (2023). Does the severity of sanctions influence learning about enforcement policy? Experimental evidence. *The Journal of Legal Studies*, 52(1), 83–106

Journal Articles (not peer-reviewed)

Langenbach, P. (2022). Zur Rezeption empirischer Forschung und psychologischer Verfahrenstheorie in der verwaltungsrechtlichen Debatte zur Akzeptanz des Stromnetzausbaus. *Die Verwaltung*, 55(2), 191–218

Book

Engel, C., O'Hara, L., Egidy, S., Hermstrüwer, Y., Hoeft, L., & Langenbach, P. (Eds.). (forthcoming). Öffentliches Recht als Verhaltensordnung. Ein neues Paradigma. Mohr Siebeck

#### **Book Chapters**

Egidy, S., Hermstrüwer, Y., Hoeft, L., & Langenbach, P. (forthcoming). Behavioral public law. In C. Engel, L. O'Hara, S. Egidy, Y. Hermstrüwer, L. Hoeft, & P. Langenbach (Eds.), Öffentliches Recht als Verhaltensordnung. Ein neues Paradigma

Langenbach, P. (forthcoming). Deliktische Haftung im Licht der Verhaltensforschung. In F. Faust & H.-B. Schäfer (Eds.), Deutsches Deliktsrecht aus ökonomischer Perspektive, 16. Travemünder Symposium zur ökonomischen Analyse des Rechts

Langenbach, P. (forthcoming). Grundrechte und Verhaltensökonomie. In C. Engel, L. O'Hara, S. Egidy, Y. Hermstrüwer, L. Hoeft, & P. Langenbach (Eds.), Öffentliches Recht als Verhaltensordnung. Ein neues Paradigma

## **Work in Progress**

Baumann, F., Friehe, T., & Langenbach, P. (ongoing). The Demand for costly punishment of norm violators

Friehe, T. & Langenbach, P. (ongoing). Can You read the signs? People infer the level of the conviction probability from the sanction magnitude

Henning, A. & Langenbach, P. (ongoing). Explainability of automated decision-making in administrative law

Hermstrüwer, Y. & Langenbach, P. (in preparation). Mensch als Fairnessfaktor

Haffert, L., Langenbach, P., & Rommel, T. (ongoing). Even in the best of both worlds, you can't have it all: How German voters navigate the trilemma of mixed-member proportionality. MPI Discussion Paper 2023/7

Langenbach, P. & Schneider, C. (ongoing). Courts and public opinion in international multi-level court systems

Langenbach, P. & Verrina, E. (ongoing) Social dilemmas and elections: No premium for democratic representation

Langenbach, P. Die Verwaltung von Heterogenität (habilitation project)

## **Grants / Prizes / Honors**

2020-2025

Member of *Die Junge Akademie* at the Berlin-Brandenburg Academy of Sciences and Humanities and the German National Academy of Sciences Leopoldina

2022

7th Lindau Meeting on Economic Sciences

# Lectures and Presentations (since 2020)

2020

Sanction Severity Influences Learning About Enforcement Policy: Experimental Evidence Kolloquium Recht & Ökonomie, Universität Bonn

May 2020

Sanction Severity and Perceived Punishment Probability

30th Annual Meeting of the American Law and Economics Association (ALEA) Accepted for presentation, conference cancelled due to COVID-19 pandemic

2021

Fines vs. Damages: Experimental Evidence on Care Investments Seminar, Law Faculty, University of Maastricht March 2021 Fair Governance with Humans and Machines 18th Annual Meeting of the German Law and Economics Association (GLEA), Freie Universität Berlin July 2021

Fair Governance with Humans and Machines 38th Annual Conference on the European Association of Law and Economics (EALE), University Pompeu Fabra Law School & Barcelona Graduate School of Economics September 2021

2022

Deliktische Haftung im Licht der Verhaltensforschung

16. Travemünder Symposium zur ökonomischen Analyse des Rechts, Timmendorf March 2022

Sanction Severity Influences Learning About Enforcement Policy

Workshop, Experimental Methods in Legal Scholarship, MPI Bonn April 2022

2023

Verfahrensfairness in der Prädiktiven Polizeiarbeit

Tagung Künstliche Intelligenz in der Kriminalitätskontrolle, Technical University Berlin May 2023

Courts and Public Opinion in International Multi-Level Court Systems

40th Annual Conference of the European Association of Law and Economics (EALE), Free University and Humboldt University Berlin

September 2023

Courts and Public Opinion in International Multi-Level Court Systems

Conference of the European Society of Empirical Legal Studies (ESELS), Warsaw School of Economics

September 2023

Social Dilemmas and Elections: No Premium for Democratic Representation

Self-organized panel, Experimental Law and Economics: Regulating Social Dilemmas and Rule Compliance

Conference of the European Society of Empirical Legal Studies (ESELS), Warsaw School of Economics

September 2023

Courts and Public Opinion in International Multi-Level Court Systems

17th Conference on Empirical Legal Studies (CELS)

University of Chicago School of Law October 2023

#### **Public Service**

2018-2022

Member of the Works Council of the Max Planck Institute for Research on Collective Goods

2021

Member of the Selection Committee for *Die Junge Akademie* 

2023

Member of the Selection Committee for *Die Junge Akademie* 

2023-2024

Board member of Die Junge Akademie

#### Professional Activities

Referee for

Volkswagenstiftung

**Since 2021** 

Co-speaker of the working group on Artifical Intelligence of *Die Junge Akademie* 

Since 2021

Co-organizer, ECONtribute Law &-Econ Workshop, Faculty of Law and Economics, University of Bonn

September 2022

Co-organizer, Workshop: Interdisciplinary Conversations on the Fairness, Explainability, and Uncertainty of AI, *Die Junge Akademie*, BBAW

October 2023

Co-organizer, Workshop: Wissenschaft in der Debatte, *Die Junge Akademie* 

Memberships

Since 2023

European Association of Law and Economics

Since 2023

Society of Empirical Legal Studies



# Contact

m.li@qub.ac.uk

https://pure.qub.ac.uk/en/persons/mengyao-li

# Mengyao Li

# **Summary Report**

I was a Senior Research Fellow in the Research Group "Moral Courage" from May 2017 to May 2022. I am currently a lecturer in social and political psychology at Queen's University Belfast.

Motivated by the belief that the social sciences offer unique tools and theories for advancing justice, peace, and human well-being, my research focuses broadly on the socio-psychological underpinnings and consequences of conflicts both within and between societies. I have a particular interest in contextualizing psychological research and extending it to underrepresented regions and marginalized groups. My research draws on theories from various disciplines, such as political science, international relations, and health psychology. It uses several methods, including surveys, experiments, field experiments, archival analyses, and interviews.

# Research Projects (since 2021)

Collective Trauma and Contemporary Conflicts

In collaboration with colleagues from different parts of the world, I have been investigating the long-term impact of historical trauma on contemporary conflicts from both victim and perpetrator perspectives. We recently developed a new theoretical model of collective trauma (Li, Leidner, Hirschberger, & Park, 2023). This new perspective challenges the dominant view on collective trauma as catastrophic and threatening, thus eliciting maladaptive and destructive responses among victims/survivors and perpetrators. Integrating theories of intergroup violence and the biopsychosocial theory of threat and challenge, we propose that people appraise their group's historical trauma differently, either as a threat or a challenge to their

group. When appraised as a challenge, collective trauma presents opportunities for group members to cope with and overcome the trauma. A challenge mindset therefore has the potential to motivate individuals to react constructively to intergroup violence. A first set of studies with both self-report and physiological measures (e.g., impedance cardiography), conducted in Israel, the U.S., China, and South Korea, has provided initial empirical support for the threat and challenge model of collective trauma (e.g., McLamore et al., 2021).

In an ongoing project with colleagues from Armenia and Israel, I am exploring the impact of genocide commemorations on victim group members' responses to contemporary conflicts. We conducted two longitudinal studies in Armenia and Israel, where participants were recruited first around the Remembrance Day for the Armenian Genocide and the Holocaust, and were reinvited to a follow-up study two months later when the salience of historical victimhood was relatively low. These findings demonstrated the impact of commemorating historical collective victimhood on attitudes toward contemporary conflicts, and that the impact varied depending on the nature of the current intergroup relationship.

# Understanding Resistance under Repression

In another line of research, I have focused on understanding the motivations and perceptions of political resistance in relatively repressive contexts. With colleagues from Hong Kong and Chile, I explored the socio-psychological mechanisms underlying radical versus non-radical political resistance in non-Western, repressive contexts (Li, Adra et al., conditional acceptance). Our data from activists and movement participants in Hong Kong and Chile revealed that actual behavioral engagement in radical resistance was driven by

protesters' moralization of violence, as well as their perceived efficacy of radical tactics for achieving political goals and for preserving the power and dignity of the people. This suggests that people adopt violence for both moral and strategic reasons. Moreover, past (direct and indirect) experiences of police violence positively predicted protesters' willingness to bear personal risks and engage in future radical actions.

Recently, I have engaged in another collaborative project with researchers in Hong Kong, Lebanon, Iran, Turkey, and Colombia, in order to understand everyday forms of resistance in repressive contexts. We plan to conduct interviews and qualitative surveys with dissidents in differentially repressive countries to gauge their understanding of "resistance" and develop a repertoire of the variety of actions considered as resistance across those contexts.

# **Publications (since 2020)**

#### **Articles in Peer-Reviewed Journals**

Li, M., Leidner, B., Hirschberger, G., & Park, J. (2023). From threat to challenge: Understanding the impact of historical collective trauma on contemporary intergroup conflict. *Perspectives on Psychological Science*, 18(1), 190–209

Li, M., Watkins, H. M., Hirschberger, G., Kretchner, M., Leidner, B., & Baumert, A. (2023). National glorification and attachment differentially predict support for intergroup conflict resolution: Scrutinizing cross-country generalizability. *European Journal of Social Psychology*, 53(1), 29–42

McLamore, Q., Syropoulos, S., Leidner, B., Hirschberger, G., van Bezouw, M. J., Rovenpor, D., ..., & Zein, R. A. (2023). The distinct associations of ingroup attachment and glorification with responses to the coronavirus pandemic: Evidence from a multilevel investigation in 21 countries. *British Journal of Social Psychology*, 62(2), 992–1012

Baumert, A., Adra, A., & Li, M. (2022). Justice sensitivity in intergroup contexts: A theoretical framework. *Social Justice Research*, 35, 7–32

McLamore, Q., Syropoulos, S., Leidner, B., Hirschberger, G., Young, K., Zein, R. A., ..., & Burrows, B. (2022). Trust in scientific information mediates associations between conservatism and coronavirus responses in the U.S., but few other nations. *Scientific Reports*, 12, 3724

Sasse, J., Li, M., & Baumert, A. (2022). How prosocial is moral courage? *Current Opinion in Psychology*, 44, 146–150

Watkins, H. M., Li, M., Allard, A., & Leidner, B. (2022). The effect of war commemorations on support for diplomacy: A five-nation study. *Personality and Social Psychology Bulletin*, 48(2), 315–327

Li, M., Leidner, B., & Petrović, N. (2021). Close or distant past? The role of temporal distance in responses to intergroup violence from victim and perpetrator perspectives. *Personality and Social Psychology Bulletin*, 47(4), 657–672

McLamore, Q. J., Leidner, B., Park, J., Hirschberger, G., Beals, K., Li, M., & Reinhard, D. (2021). Strong hearts, open minds: Cardiovascular challenge predicts non-defensive responses to ingroup-perpetrated violence. *Biological Psychology*, 161, 108054

Aya, A., Harb, C., Li, M., & Baumert, A. (2020). Predicting collective action tendencies among filipina domestic workers in Lebanon: Integrating the social identity model of collective action and the role of fear. *Group Processes & Intergroup Relations*, 23(7), 967–978

Aya, A., Li, M., & Baumert, A. (2020). What they think of us: Meta-beliefs and solidarity-based collective action among the advantaged. European Journal of Social Psychology, 50(6), 1292–1305

Baumert, A., Li, M., Sasse, J., & Skitka, L. (2020). Standing up against moral violations: Psychological processes of moral courage. Journal of Experimental Social Psychology, 88, 103951

Li, M., Leidner, B., & Fernandez-Campos, S. (2020). Stepping into perpetrators' shoes: How ingroup transgressions and victimization shape support for retributive justice through perspective-taking with perpetrators. *Personality and Social Psychology Bulletin*, 46(3), 424–438

#### **Book Chapters**

Li, M., & Leidner, B. (forthcoming). Transitional Justice. In C. Cohrs & G. Sommer (Eds.), Handbook for Peace Psychology

Leidner, B., Tropp, L., Lickel, B., & Li, M. (2022). Politische Psychologie von Gruppen. In S. Zmerli & O. Feldman (Eds.), *Politische Psychologie*, 295–314. Baden-Baden: Nomos

## **Manuscripts under Review**

Li, M., Adra, A., Yuen, S., Salfate, S. V., Chan, K-M., & Baumert, A. (conditional acceptance). Understanding radical civil resistance under repression – evidence from Hongkong and Chile. *Political Psychology* 

McLamore, Q., Syropoulos, S., Li, M., ..., & Baracewicz, J. (conditional acceptance). Tightness shifts in the U.S. and China implications of tightening or loosening norms during the coronavirus pandemic. Social and Personality Psychology Compass

Castano, E., Cehajic-Clancy, S., Leidner, B., Baumert, A., & Li, M. (under review). Outgroup help in the time of COVID-19 and intergroup reconciliation in western balkans. European Journal of Social Psychology

# Lectures and Presentations (since 2020)

2020

National Glorification and Attachment: A Multi-country Assessment of Measurement Invariance and Their Divergent Implications for Conflict Resolution (with Watkins, M. H., Allard, A., Hirschberger, G., Kretchner, M., Leidner, B. and Baumert, A.)
Conflict and Conflict Resolution Preconference of the Annual Meeting of the Society for Personality and Social Psychology, New Orleans, LA, USA
February 2020

The Cycles of Intergroup Violence: A Social Psychological Perspective on Group-Based Violence and its Potential Remedies (invited talk)

Peace Research Institute Frankfurt, Germany February 2020

Political Resistance and Radicalization under Repression: Evidence from the Hong Kong Anti-ELAB Movement (invited talk) Brown Bag Talk at the Department of Psychology, University of Illinois at Chicago, IL, USA

March 2020, postponed

Understanding Violent and Non-Violent Political Resistance under Repression – Evidence from the Hong Kong Anti-ELAB movement (with Yuen, S., Adra, A., Chan, K-M. and Baumert, A.)

Annual Conference of the International Society for Justice Research, Lisbon, Portugal July 2020, postponed

# D. Research Portraits

#### 2021

Political Resistance and Radicalization under Repression: Evidence from the Hong Kong Anti-ELAB Movement Featured Presentation at the 14<sup>th</sup> Biennial Conference of the Asian Association of Social Psychology, Seoul, South Korea July 2021 Normative Change of Hate: How Do People Respond to Increasing Discrimination? International Conference on Hate Studies, Gonzaga, WA, USA November 2021

#### 2022

Understanding Intergroup Violence from Victim and Perpetrator Perspectives Bard Center for the Study of Hate, Annandale-on-Hudson, NY, USA February 2022

#### 2023

The Social Psychology of Resistance in Violent and Repressive Contexts (with J. Vollhardt) Chaired Symposium at EASP General Meeting, Krakow, Poland July 2023

The Impact of Commemorating Historical Collective Victimhood on Contemporary Conflicts. EASP Small-Group Meeting on Social Cohesion in Divided Societies, Belfast, UK June 2023

Harmful Normative Change: Divergent Reactions to Increasing Discrimination against Minority Groups
Society for Personality and Social Psychology Annual Meeting, Atlanta, USA
February 2023

# Professional Activities (copied from old report)

#### Memberships

European Association of Social Psychology, Society for Personality and Social Psychology

#### Ad-hoc Reviewer for

Personality and Social Psychology Bulletin, European Journal of Social Psychology, PLOS One, Group Processes and Intergroup Relations, Peace and Conflict: Journal of Peace Psychology, Journal of Social and Political Psychology, Psychological Reports, Social Psychology, Personality and Individual Differences, Social Psychological and Personality Science, Routledge Handbook of Dehumanization

# **Nathan Maddix**

## **Summary Report**

From December 2017 to January 2022, I was a member of the Experimental Economics Group (EEG) while a doctoral candidate at the University of Cologne. Though part of this time was challenging due to COVID, we were able to complete experimental studies involving nudging, team incentives, cognitive biases, and expert predictions, as well as laying the groundwork for more experimental studies in this area for future research collaborations. Previous to joining Max Planck, I completed a masters at Harvard University in cognitive science and worked in the Computer Lab for Experimental Research (CLER) at Harvard Business School founded originally by Alvin Roth.

## Research Agenda

My academic and applied work explores the effects that cognitive and behavioral mechanisms have on economic outcomes, with applications to public policies and organizations. To do this, I employ measures and methods from both psychology and economics in lab, online, and field experiments. The research I conducted at the Max Planck institute covers three main streams of research: cognitive biases and nudging, incentive design, and expert predictions in experimental economics and management science.

In one stream of research, I studied the role of incentives, nudges, and behavioral interventions in preventing and counteracting cognitive and behavioral biases with the goals of both understanding and improving decision-making. A cognitive bias is a systematic error even very intelligent people make related to doing 'mental math' in common statistical and reasoning tasks. With Matthias Sutter, we designed a laboratory study implemented in the United States to estimate how much

team membership (dyads) and standard incentives (\$1.00 per item) affect decision-making on the most-cited cognitive biases (for example, base rate neglect, anchoring effect, and conjunction fallacy, among others). Many of these, such as the conjunction fallacy, have been studied extensively in psychology without considering how incentivized teams may perform differently, potentially improving decision-making and thereby also improving economic outcomes. Our results follow existing research in showing that both individual incentives and team membership improve decision-making to some extent. To the extent possible. our research was pre-registered on the OSF and AEA Registry online to make clear about our expected hypotheses related to the effects of teams and incentives on performance and accuracy. My previous research (prior to 2020; listed below) explored the roles of domain-specific nudging on choices in the financial sector, and this work furthers that stream of research by incorporating incentives.

In a second stream, I use large-scale field experiments to understand how team membership and incentives motivate human behavior for effort-related tasks. In a notable study with Matthias Sutter, we use an online labor market to study how placing employees in teams with differing incentive structures may increase effort provision. For example, in one treatment, workers are given individualistic incentives, such as equity-based incentives where they earn their share of the work relative to the whole, compared to equal outcomes where workers are paid equally regardless of effort. We also give incentives where employees work to donate their earnings to charity and do things like tell employees to do their best without any incentives at all, in order to integrate psychological frames into our work on incentive design in management contexts. We varied many different incentives to contribute



#### Contact

maddix@coll.mpg.de

https://www.coll.mpg.de/nathan-maddix

to recent work on human motivation in management science spanning both psychology and economics. This work led to a collaboration study that is ongoing research with Yucheng Liang (Carnegie Mellon); together we conduct an online effort task to measure how helping behavior in team effort tasks is affected by both the design and visibility of the shared incentives, focusing on the information that agents have about the other team members.

Finally, a third stream of research running through my work at the Max Planck institute asks, "Can experts even predict the effectiveness of incentives? If so, which experts: Academics who run research studies on teams or those who actually manage teams in industry settings?" To make our experimental research most valuable to economic settings, we aimed not only to run experimental research studies on incentives and choices, but also to test whether experts in industry and academia can themselves predict which incentive design most motivates employees. As a follow-up to our experimental research, we conducted a representative panel survey with managers in the United States and a similar academic survey with experimental economists throughout the world. In our prediction surveys, experts were incentivized to guess correctly as they were paid for their accuracy! See our work below for more details about each study.

# **Work in Progress**

Liang, Y., & Maddix, N. (In progress: Data collection completed). Team helping behavior: Theory and evidence

Maddix, N., & Rees, V. (In Field. On hold due to COVID19). Using behavioral insights to decrease youth smoking in schools: Evidence from goal setting, implementation intentions, and financial budgeting. Sponsored by the World Health Organization

Maddix, N. (2020). Financial nudges: Policy preferences for debt and savings. Working Paper

Maddix, N. (2020). How stable are nudge preferences? Evidence from domain experts in finance, energy, and health domains. Working Paper. OSF Pre-registration

Maddix, N., & Sutter, M. (in preparation). Cognitive biases and team incentives. AEA Registry: https://www.socialscienceregistry. org/trials/6596

Maddix, N., & Sutter, M. (in preparation). What motivates teams? Evidence from experts and workers. AEA Registry: https://www.socialscienceregistry.org/trials/6861

Maddix, N. & Sutter, M. (in preparation). Expert Predictions on the Extent of Cognitive Biases in Individuals and Groups

# Lectures and Presentations (since 2020)

2020

Opt-Out Defaults and Active Choices (Discussion Paper)
MPI, Friendly Review Seminar Series, Bonn,
Germany
7 October 2020

2021

Financial Nudges (Discussion Paper) MPI, Friendly Review Seminar Series, Bonn, Germany 13 April 2021

What Motivates Teams? Large-Scale Experimental Evidence from Workers and Academic Experts
UCSD/MPI 1st Annual Experimental Economics Workshop (Virtual), Bonn/San Diego 5 May 2021

What Motivates Teams? Large-Scale Experimental Evidence from Workers and Academic Experts
Behavioral Insights Global Seminar Series (session with Devin Pope, U-Chicago) (Virtual)

2022

What Motivates Teams? Large-Scale Experimental Evidence from Workers and Academic Experts
Economic Science Association North America Meeting, Tucson, AZ
28–31 October 2022

Cognitive Biases and Team Incentives Economic Science Association World Meeting, Boston, MA 13–16 June 2022

#### **Professional Activities**

Referee for

Management Science, Journal of Economic Behavior and Organization, Journal of Behavioral and Experimental Economics

Memberships
Academy of Management
American Economic Association
Economic Science Association
Society for the Advancement of Behavioral
Economics
Society for Judgment and Decision Making

# **Dorothee Mischkowski**

## **Summary Report**

Being a social psychologist by training, I joined the research group of Behavioral Law and Economics in April 2022 to extend my interdisciplinary work on (pro-)social decision-making and legal judgments. During the fall semester 2022 /2023, I served as deputy professor at the University of Heidelberg, chairing the department of Social Psychology. From September 2023 onwards, I have been combining my work at the research group of Behavioral Law and Economics with an EU-awarded Marie Curie Fellowship at the University of Leiden (NL), within the Department of Social, Economic, and Organizational Psychology.

# Research Agenda

My research focuses on different facets of prosocial vs. norm-deviant (e.g., delinquent) behavior and its dispositional and situational antecedents next to its consequences (e.g., punishment and legal judgments). To illustrate the overarching connection of my research projects, I organize their presentation across the time span preceding – or resulting from – (a lack of) prosocial behavior.

#### Antecedents and Determinants of Prosocial Behavior

In my PhD thesis (Mischkowski, 2020), I focused on decision time as a determinant of cooperative and punitive behavior in collective goods; namely, how individuals who differ in their dispositional prosociality vary in their cooperative behavior across the course of decision time. I have integrated this focus on person-situation interactions into many of my projects, for instance when investigating which situational properties attract dispositional prosocial individuals and thereby elicit prosocial behavior (Bartosch & Mischkowski, 2023; Mischkowski, Siol, & Thielmann, in prepara-

tion). Specifically, the paper of Bartosch and Mischkowski (2023) analyzes different kinds of prosocial behavior regarding their degree of active versus reactive prosociality, and it tests relations to corresponding basic personality traits. The second paper (Mischkowski, Siol, & Thielmann, in preparation) extends these findings to the negotiation context and investigates the effectiveness of different negotiation settings conditional on an active versus reactive prosocial personality. Results indicate that negotiation formats allowing for reciprocity increase the willingness to negotiate also from reactive prosocials who would otherwise be unwilling and refrain to negotiate joined commitments.

# Punishment as a Consequence of Norm Deviance

Social psychologists and empirical legal scholars alike are interested in identifving reasons for variance in sanctions that are not rooted in the actual severity of norm deviance. In two recent publications, I investigated which factors further influence punishment decisions - be it peer-to-peer punishment or punishment exerted by a third party. The publication by Funk and Mischkowski (2022) picks on a current debate in the literature, whether punishment is mainly conducted for retributive reasons or for consequentialist motives (e.g., deterrence from future norm-violating acts). The results could not refute the influence of retributive motives. A cognitive-psychological examination shed light on how legal judgments are distorted: Since judges have to reconcile disparate, potentially contradictory evidence in order to reach a judgment, they strive for coherence that can lead to biased judgments. This striving for coherence is even larger when the situation allows for a strategic search of evidence material in combination with a biased evaluation thereof (Mischkowski, Glöckner, & Lewisch, 2021).



### Contact

mischkowski@coll.mpg.de

https://www.coll.mpg.de/dorothee-mischkowski

Currently, I am pursuing the topic of punishment behavior in an ongoing project from a slightly different angle (Offer, Mischkowski, Rahwan, & Engel, revise & resubmit): Since punishment is also costly for the punisher, we investigate whether individuals exploit the benefit of the doubt and choose strategically to ignore norm violations in order to avoid the urge to punish.

# Prospective Increase of Prosocial Behavior and Norm Compliance

The guestion how to increase prosocial behavior to encounter current societal challenges is an ongoing interdisciplinary research endeavor in behavioral economics, social psychology, and beyond. In cooperation with the University of Leiden (NL), I have been awarded a three-year postdoctoral fellowship within the EU's Marie Curie program for my project "From Low- to High-Cost Cooperation: Increasing Costly Cooperation Behavior through Internalized Low-Cost Prosociality". In a new approach, I focus on training daily-life kindness as a form of low-cost cooperation to investigate whether and how trained low-cost cooperation spills over to costly cooperation behavior in social dilemmas, where individual and collective interests are at odds. In a set of preparatory studies, different training strategies were tested. in order to find out how to increase low-cost prosociality most effectively (Mischkowski, Ortlepp-Appl, & Nett, in preparation). The upcoming series of lab and field studies will yield insights when and how routinized low-cost cooperation spills over and thus "primes the pump" for costly cooperation behavior in the lab and in daily life.

#### **Current Directions**

The question of routine-building has similarly become relevant in a recently started project: how law is re-learned after a change of the normative rule (Engel, Holzhausen, & Mischkowski, in preparation). Given that norm compliance is a matter of routinized behavior that is generalized across contexts,

the question arises how rule changes are adopted if the new rule needs to be discovered first. Different channels of adapting the new norm will be tested in their effectiveness (e.g., observing the behavior of others), in addition to varying the consequences of a rule breach for the self vs. other individuals.

#### **General Methodological Approach**

Conducting my research on experimental-quantitative grounds, my methodological approach is characterized by two main aspects: first, the adherence to open-science principles (e.g., preregistration, open data and materials); and second, integrating experimental standards from behavioral economics into social psychological research. With regard to fostering open science, I not only apply open-science principles in my research and teaching, but also engage in the investigation of the replicability of existing findings. Recently, for instance, a registered report was accepted in principle for publication in Psychological Science. In this paper, we attempt to replicate the increase in prosocial (i.e., donation) behavior when being mimicked (Westphal, Mischkowski, Crusius, & Genschow, in-principle acceptance).

Secondly, it is of greatest importance to me to adapt methodological standards from behavioral economics (i.e., no deception, incentivized decision-making) to the investigation of social psychological research questions. One exemplary research project in this regard investigates the relation between benign vs. malicious envy and social preferences (Mischkowski, Lange, Crusius, & Glöckner, in preparation). Psychological distinction between benign and malicious envy has so far only been assessed based on self-report scales that suffer from biased (e.g., socially desirable) responses. In turn, paradigms (e.g., envy games) from behavioral economics have to date been without empirical validation as to whether they actually assess the underlying psychological construct. Together with my colleagues, I have developed and empirically validated a game-theoretical paradigm that elicits, measures, and incentivizes benignly vs. maliciously envious behavior.

Taken together, these projects reflect my aim to provide interdisciplinary relevant, robust, and replicable evidence of prosocial decision-making and its underlying psychological processes.

# **Publications (since 2020)**

#### Articles in Peer-Reviewed Journals

Funk, F., & Mischkowski, D. (2022). Examining consequentialist punishment motives in one-shot social dilemmas. *Zeitschrift für Psychologie*, 230, 127–137

Mischkowski, D., Glöckner, A., & Lewisch, P. (2021). Information search, coherence effects, and their interplay in legal decision making. *Journal of Economic Psychology*, 87, 102445

Mischkowski, D. (2021). Schau, ich lasse dir die Wahl! – Sozial achtsames Verhalten als Zeichen für Prosozialität und Perspektivübernahme im Alltag. *In-Mind Magazin*, 4/2021

Mischkowski, D. (2020). Decision time in social dilemmas: Personality and situational factors moderating spontaneous behavior in first and second order public good games. *Doctoral Thesis* published at Göttingen State and University Library

Jekel, M., Fiedler, S., Allstadt Torras, R., Mischkowski, D., Dorrough, A. R., & Glöckner, A. (2020). How to teach open science principles in the undergraduate curriculum: The Hagen Cumulative Science Project. *Psychology Learning & Teaching*, 19(1), 91–106

#### **Working Papers**

Mischkowski, D., Siol, J., & Thielmann, I. (2023). Negotiation designs through the lens of situational affordances: A person-situation perspective on negotiation in public-good settings

Van Doesum, N.J., Van Lange, P.A.M., Mischkowski, D., & Van Dijk, E. (to be sumitted to *Personality and Social Psychology Review*). A decade of social mindfulness. A review and research agenda

Twardawski, M., Mischkowski, D., & Hechler, S. (Registered Report to be submitted to *Journal of Experimental Social Psychology*). Do offenders differ in their attribution of second- and third-party punishment?

Bössel-Debbert, N., Kluge, A. Leising, D., Mischkowski, D., Phan, L.V., Richter, F., Schmitt, M., & Stahl, J. (under review at *Meta Psychology*). An analysis of functional relationships between systemic conditions and unethical behavior in German academia

Bartosch, L., & Mischkowski, D. (2023). The importance of reciprocity: Investigating individual differences underlying conditional cooperation. MPI Discussion Paper 2023/1

Schönbrodt, F., Gärtner, A., Frank, M., Goll-witzer, M., Ihle, M., Mischkowski, D., Phan, L. V., Schmitt, M., Scheel, A. M., Schubert, A.-L., Steinberg, U., & Leising, D. (2022). Responsible research assessment I: Implementing DORA for hiring and promotion in psychology. *PsychArchives* 

### In-Principle Acceptance

Westfal, M., Mischkowski, D., Crusius, J. & Genschow, O. Mimicry and prosocial behavior: A direct replication and extension of van Baaren, Holland, Kawakami, and Knippenberg (2004). *Psychological Science* 

Offer, K., Mischkowski, D., Rahwan, Z., & Engel, C. Avoiding punishment by ignoring unfairness: Responses to uncertain inequality in the ultimatum game. *Communications Psychology* 

# Work in Progress

Engel, C., Holzhausen, T., & Mischkowski, D. (in preparation) The legislator speaks, and nobody listens: An experiment on law-abiding after legislative change if behavior is routinized

Mischkowski, D., Lange, J., Crusius, J., & Glöckner, A. (in preparation). Social preferences and envy. Linking the concepts of benign and malicious envy with social value orientation

Mischkowski, D., Ortlepp-Appl, C., & Nett, T. (in preparation). Punishing social (un-)mindfulness

### **Grants & Prizes**

### 2023

Marie-Sklodowska-Curie Postdoctoral Fellowship (187,624.32€), awarded by the EU, in collaboration with the University of Leiden (Department for Social, Economic and Organizational Psychology; Prof. Eric van Dijk).

### 2022

Acquired funding (6,570 €) from the University of Cologne, Competence Field II on Social and Economic Behavior, for organizing the PostDoc Workshop together with Dr. Angela Dorrough (University of Cologne)

#### 2021

Seedcorn-Grant (4,992 €) from the Center for Social and Economic Behavior, University of Cologne, for the project "Negotiation Designs through the Lens of Situational Affordances". Nominated for the "University Prize of the University of Cologne, Category Teaching".

### 2020

Acquired funding (4,500 €) from the University of Vienna together with Prof. Dr. Peter Lewisch for the project "Increasing Climate Cooperation through Institutional Change".

# Appointment Lists for Professorships

### 2023

3rd place on the list for a Professorship (W2) in Social Psychology with a focus on Legal Psychology at the University of Munich

### 2022

2nd place on the list for an Assistant Professorship (W1) in Legal Psychology at the University of Mainz

# Lectures and Seminar Presentations (since 2020)

### 2020

Decision Time in Social Dilemmas: Personality and Situational Factors Moderating Spontaneous Behavior in First- and Second-Order PublicGood Games

Virtual Colloquium of the Department for Social Neuroscience, University of Bern, Switzerland 27 October 2020

### 2021

### Social Preferences and Envy Virtual Conference of Experimental Psychologists ("Tagung experimentell arbeitender Psychologen" (TeaP)), University of Cologne, Germany

21 March 2021

Consequentialist Punishment Motives in One-Shot Social Dilemmas

Virtual Conference of the International Society for Justice Research, University of Lisbon, Portugal 8 July 2021

Social Preferences and Envy. Linking the Concept of Benign and Malicious Envy with Social Value Orientation.

Virtual Conference of the European Social Cognition Network (ESCON) 14 September 2021

On the Relation of Low- and High-Cost Cooperation

"Psychology and Law" Conference, University of Vienna, Austria 4 October 2021

#### 2022

The Psychology of Comparative Law. Comments on Leibovitch, Harel, and Dari-Mattiaci Virtual Workshop on "Experimental Methods in Legal Scholarship" 2 April 2022

Is One Judging Head the Same as Three: A Natural Experiment on Individuals vs. Teams. Comments on Alysandratos and Kalliris. Regulation Research Conference, University of Regensburg, Germany 5 April 2022

A Social and Personality Psychological Perspective on the Design of Regulatory Instruments.

Regulation Research Conference, University of Regensburg, Germany 6 April 2022

Social Preferences and Envy Workshop of the Center for Social and Economic Behavior ("C-SEB"), University of Cologne, Germany 18 May 2022

Social Preferences and Envy International Conference on Social Dilemmas, University of Copenhagen, Denmark 22 July 2022

Information Search, Coherence Shifts, and their Interplay in Legal Decision-Making Talk at the 'DGPs Congress', University of Hildesheim, Germany 13 September 2022

Who Complies with (Social) Norms? Comparing Social Preference Models from Social Psychology and Behavioral Economics.
Conference "Psychology & Law", University of Vienna, Austria
6 October 2022

#### 2023

Information Search, Coherence Shifts, and their Interplay in Legal Decision-Making Colloquium "Adaptive Cognition", University of Heidelberg, Germany 11 January 2023

Consequentialist Punishment Motives in One-Shot Social Dilemmas Conference of the European Association for Social Psychology, Krakow, Poland 3 July 2023

Negotiation designs through the lens of situational affordances – A person-situation perspective on negotiation behavior in public good settings

Talk at the Subjective Probability, Utility and Decision Making Conference ("SPUSM"), Vienna, Austria 22 August 2023

Negotiation designs through the lens of situational affordances – A person-situation perspective on negotiation behavior in public good settings

Fachgruppentagung Sozialpsychologie, University of Graz, Austria 12 September 2023

Negotiation designs through the lens of situational affordances – A person-situation perspective on negotiation behavior in public good settings

Invited Talk at the workshop "Psychology and Law", University of Vienna 10 October 2023

# **Teaching**

Winter term 2020/21 Institution: University of Cologne Course name: Research Colloquium (MA seminar)

Winter term 2020/21 Institution: University of Cologne Course name: Facets of Prosociality (BA seminar)

Summer term 2021 Institution: University of Cologne Course name: Research Ethics in (Social) Psychology (BA seminar)

Summer term 2021 Institution: University of Cologne Course name: Experimental Research Projects (MA seminar)

Winter term 2021/2022 Institution: University of Cologne Course name: Research Ethics in (Social) Psychology (BA seminar) Winter term 2021/2022 Institution: University of Cologne Course name: Facets of Prosociality (BA seminar)

Summer term 2022 Institution: University of Cologne Organisationspsychologie: Applied Diagnostics (BA seminar)

Winter term 2022/2023 Institution: University of Heidelberg Course name: Lecture Social Psychology (BA lecture)

Winter term 2022/2023 Institution: University of Heidelberg Course name: Experimental Research Projects (BA seminar)

Winter term 2022/2023 Institution: University of Heidelberg Course name: Accompanying Tutorial of the Social Psychology Lecture (BA seminar)

### **BA Theses**

Supervision of eight Bachelor theses at the University of Cologne and one at the University of Heidelberg

### **MA Theses**

Supervision of three Master theses at the University of Cologne

# **Public service**

Since 2023

Research Representative and Ombudsperson of the MPI

**Since 2021** 

Committee member of the German Psychological Society (DGPs) on "Incentive structures in academia, abuse of power and scientific misconduct"

Since 2021

Assistant Youth Representative for the German Psychological Society's Social Psychology Unit

2020

Mid-level representative of the appointment committee for the professorship "Cognitive Neuropsychology" (W2), Institute for Psychology, University of Cologne

2014-2022

Member of the ethics committee, Institute for Psychology, University of Göttingen

## **Professional Activities**

Referee for

British Journal of Psychology; Collabra: Psychology; Frontiers in Psychology; Group Processes & Intergroup Relations; European Journal of Personality; Experimental Psychology; International Journal of Psychology; Journal of Behavioral and Experimental Economics; Journal of Behavioral Decision Making: Journal of Economic Behavior and Organization; Journal of Economic Psychology; Journal of European Law and Economics; Journal of Experimental Psychology: General; Journal of Experimental Social Psychology; Journal of Social Psychology; Judgment & Decision Making; Organizational Behavior and Human Decision Processes; Plos One; Psychology, Crime and Law; Rationality & Society; Scientific Reports; The Spanish Journal of Psychology; Thinking & Reasoning; Zeitschrift für Psychologie

# Memberships

German Psychological Society (DGPs), International Society of Justice Research (ISJR), European Association for Decision Making (EADM), European Association for Social Psychology (EASP), Society for Judgment and Decision Making (SJDM).

# Sofia Monteiro

# **Summary Report**

I was a Research Fellow in the "Experimental Economics Group" at the MPI from October 2017 to November 2021. Currently, I am a postdoctoral researcher in the "Global Health Research Group" at the Kiel Institute for the World Economy. I work on developing methods of economic evaluation for personalized medicine, contributing to the DFG-funded Cluster of Excellence "Precision Medicine".

# Research Agenda

I draw on the behavioral literature to design and test interventions aimed to debias individual belief formation and to enable healthier decision-making on food choices, thus improving health outcomes. Using the methodology foundational to behavioral economics, I explore cognitive biases in belief formation in the conventional experimental economist's laboratory as well as online. I use insights from behavioral economics to test empirical hypotheses on behavior change in a cross-sectional non-randomized field study and in a randomized controlled trial in South Africa.

My PhD thesis sheds light on the following interconnected questions: How can individuals be supported to shift their mental model and update their beliefs? Can people update their food choices when they receive nutrition education, and is there a valid methodology for measuring food preferences? What measures of support are needed to help individuals with various economic preferences and make healthier decisions?

The mass of information of varying quality that people have access to through our mobile phones has to compete for our limited attention. In addition, we commonly face problems of selected information, and the way it is presented can distort our perception of reality.

How we form beliefs and habits regarding nutrition, for example, can impact health outcomes.

Monteiro (nd) tests whether a novel visual representation training activity can teach individuals to reason the Bayesian way, thereby reducing selection neglect in belief formation. This paper builds on previous work by Gigerenzer, as well as Enke and Zimmermann. The paper is under consideration at Humanities and Social Sciences Communications. Monteiro, Praxmarer, and Sutter (nd) examines team versus individual decision-making in correlation neglect in belief formation. Additional data collection to increase the sample size replicated the results from the thesis, and the paper is currently being revised for publication.

The burden of non-communicable diseases such as diabetes is a growing global problem, not only for patients and families, but also for health insurance providers and the wider economy. Type 2 diabetes is largely lifestyle-driven. However, health-related behavior is difficult to shift, and measuring and tracking behavior in the field is often a challenge. Additional challenges are introduced when there is low health and/or technology literacy. There may be unintended consequences or barriers to adoption with a new self-monitoring technology if it is not supplemented with additional continuous support from a health coach, such as continuous glucose monitoring via a minimally invasive device under the skin and a mobile app. These observations motivated my PhD thesis "The behavioural economics of interventions for healthier beliefs, choices and outcomes", supervised by Matthias Sutter and Bettina Rockenbach at the University of Cologne and awarded the grade magna cum laude (2022).

Monteiro, Larmuth, Wiesen, Kroff, and Sutter (nd) is a project funded by the MPI and DFG. We designed and pre-reg-



# Contact

Sofia.Monteiro@ifw-kiel.de

https://www.ifw-kiel.de/experts/ifw/sofia-monteiro/

istered a randomized controlled trial to evaluate the potential of continuous glucose-monitoring and health-coaching to put type 2 diabetes into remission. Monteiro, Larmuth, Guillen, and Smith (nd) links surveys to behavioral data from supermarket purchases. For this project, I partnered with the Noakes Foundation to evaluate the Eat Better South Africa program and examine the validity of nutrition surveys by comparing them to incentivized food choices among a sample of women in an underprivileged community.

Since leaving the MPI, my focus is on global health and international development. The scope of the DFG project at the Kiel Institute for the World Economy covers a wide range of chronic diseases whose prevalence is increasing in many industrialized countries. This has allowed me to build on research begun at the MPI with Matthias Sutter and to revise papers for publication from my PhD. In the global health research group, we aim to develop new patient-centered methods of economic evaluation for the application of innovative tools within the paradigm of precision medicine. These economic evaluations are meant to support the adoption and adaptation of precision medicine in solidarity-based health systems around the world and to help identify priorities for public and private investments while health systems seek to adapt.

# **Publications (since 2020)**

Monteiro, S. (2023). The behavioural economics of interventions for healthier beliefs, choices and outcomes. PhD Thesis, UniKöln

# **Work in Progress**

Monteiro, S. (submitted to HSSCOMMS). VVisual representation training to debias selection neglect in belief formation

Monteiro, S., Guillén, G. P. B., Smith, J., & Larmuth, K. (ongoing). Improving food preferences through a nutrition education programme: An evaluation comparing survey evidence with behavioural measures

Monteiro, S., Larmuth, K., Wiesen, D., Kroff, J., & Sutter, M. (ongoing). Technology-assisted behavioural interventions in type 2 diabetes

Monteiro, S., Praxmarer, M. & Sutter, M. (ongoing). Correlation neglect in belief formation:Teamversus individual decision-making

Monteiro, S. & Stolpe, M. (ongoing). Parameter estimates for economic evaluations of medical treatments of Bullous Pemphigoid and Pemphigus Vulgaris

Monteiro, S., & Wellington, N. (ongoing). The sustainability of remission in diabetes through therapeutic carbohydrate restriction: Retrospective study of 10 years at a primary care practice

Monteiro, S. & Wellington, N. (ongoing). The correlation of structured digital self-monitoring blood glucose with HbA1c

# Lectures and Presentations (since 2020)

2020

Technology-Assisted Behavioural Interventions in Type 2 Diabetes Sports Science Institute of South Africa, PANO Guest Seminar, Cape Town, South Africa 9 June 2020

### 2021

A Behavioural Economist's Perspective on Nutrition and Disease: Insights and Interventions for Healthier Decision-Making Inaugural Nutrition Network Summit, Online 3 March 2021

What She Says Is What She Does: Revealed Food Preferences of Women Who Have Taken Part in a Nutrition Education Program ASHEcon Virtual Conference 22 June 2021

### 2022

Dietary Modification for Reproductive Health in Women

University of Cape Town, Diabetes Remission Seminar, Online 16 March 2022

CGM, Coaching and Type 2 Diabetes 2<sup>nd</sup> Nutrition Network Summit, Online 24 March 2022

The Behavioural Economics of Interventions for Healthier Beliefs, Choices and Outcomes University of Cologne, Doctoral Defense, Online 27 June 2022 Food as Medicine! Insight, Foresight, Cape Town, South Africa 19 July 2022

Food as Medicine! Insight, Foresight, Johannesburg, South Africa 21 July 2022

The Behavioural Economics of Interventions for Healthier Beliefs, Choices and Outcomes Centre for Diabetes and Endocrinology, Guest Seminar, Online 24 August 2022

Panel Discussant: World Diabetes Day Masterclass Panel: Nutrition Network, Online 14 November 2022

Technology-Assisted Behavioural Interventions in Type 2 Diabetes IDOS/DIE, Guest Seminar, Bonn, Germany 14 December 2022

## **Professional Activities**

Referee for

Humanities and Social Sciences Communications

Memberships

Since 2021
Member of ASHEcon, Nutrition Network

Since 2022

Member of DFG Cluster of Excellence "Precision Medicine", Leibniz Research Alliance "INFECTIONS", Leibniz Research Alliance "Resilient Aging"

# **Axel Ockenfels**

In August 2023, I will assume the role of Co-Director at the Max Planck Institute (MPI) in Bonn. Although I have yet to take up my position at the time of writing this, my plan is to establish a new research group, Economic Design & Behavior (EDB). The research area of this group is outlined elsewhere in this report, and as I will gradually bring new members on board, I anticipate that the research focus will continue to evolve.

In addition to my new position at the MPI, I will continue my role as Professor of Economics at the University of Cologne, while also serving as Director of the MPI on a part-time basis ("Nebenamt"), devoting 20% of my professional time. This dual role will lead to a significant overlap in my research activities at both institutions.

Accordingly, I intend to structure my research group in such a way that — while some members may hold positions at both the University of Cologne and the MPI and others may be affiliated with only one of the two institutions — all are expected to contribute to the common research agenda. I expect further potential synergies between the MPI and the University of Cologne, especially in the management and operation of the various economic laboratory facilities, in the context of the Cluster ECONtribute, and of the Center for Social and Economic Behavior (C-SEB) in Cologne.

Details of this arrangement will be worked out in the coming months. It is likely that adjustments to my initial plans for leading the group will be necessary as we gain experience with this kind of institutional overlap.

# **Publications (since 2020)**

**Articles in Peer-Reviewed Journals** 

Ockenfels, A. (2023). Behavioral market design (Commentary). *Behavioral and Brain Sciences*, 46, e171

Ockenfels, A. (2023). Woran scheitert die Klimapolitik bislang? Wirtschaft verstehen, Zukunft gestalten. Beiträge zum Jubiläum des Vereins für Socialpolitik

Bolton, G., Breuer, K., Greiner, B., & Ockenfels, A. (2023). Fixing feedback revision rules in online markets. *Journal of Economics and Management Strategy*, 32(2), 247–256

Gretschko, V., & Ockenfels, A. (2023). Empfehlungen für das Marktdesign zur Befüllung der Gasspeicher. *Wirtschaftsdienst*, 103(2), 105–111

Ockenfels, A., & Wambach, A. (2023). Was tun, wenn der (Gas-)Markt kollabiert? Wirtschaftsdienst, 103(1), 29–32

Berger, S., Ockenfels, A., & Zachmann, G. (2023). The behavioral route to encouraging household participation in gas savings. *Joule*, 7(1), 1-4

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Ambuehl, S., Ockenfels, A., & Stewart, C. (2022). Who opts in? Composition effects and disappointment from participation payments. *The Review of Economics and Statistics*, 1–45. (best paper award NeuroPsychoEconomics conference (2021).

Ockenfels, A. (2022). Optionen und Herausforderungen für ein neues Strommarktdesign in der Krise. *Wirtschaftsdienst*, 102(10), 766–769

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# Contact

ockenfels@coll.mpg.de

https://www.coll.mpg.de/axel-ockenfels

Hausmann, R., Łoskot-Strachota, A., Ockenfels, A., Schetter, U., Tagliapietra, S., Wolff, G., & Zachmann, G. (2022). How to weaken Russian oil and gas strength. *Science (Letter Section)*, 376 (6592)

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Ackfeld, V., & Ockenfels, A. (2021). Do people intervene to make others behave prosocially? *Games and Economic Behavior*, 128, 58–72

Schmidt, K., & Ockenfels, A. (2021). Focusing climate negotiations on a uniform common commitment can promote cooperation. *Proceedings of the National Academy of Sciences (PNAS)*, 118(11), e2013070118

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Ockenfels, A. (2021). Marktdesign für eine resiliente Impfstoffproduktion. *Perspektiven der Wirtschaftspolitik*, 22(3), 259–269

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Ockenfels, A., & Schier, U. (2020). Games as frames. *Journal of Economic Behavior and Organization*, 172, 97–106

Kübler, D., & Ockenfels, A. (2020). Überkreuznierenspenden in Deutschland? *Medizin*recht. 38.89–94

Edenhofer, O., Kalkuhl, M., & Ockenfels, A. (2020). Das Klimaschutzprogramm der Bundesregierung: Eine Wende der deutschen Klimapolitik? *Perspektiven der Wirtschaftspolitik*, 21(1), 4–18

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Cramton, P., Ockenfels, A., Roth, A. E., & Wilson, R. B. (2020). Borrow crisis tactics to get COVID-19 supplies to where they are needed. *Nature*, 582, 334–336

Bolton, G., Mans, J., & Ockenfels, A. (2020). Norm enforcement in markets: Group identity and the volunteering of feedback. *The Economic Journal*, 130, 1248–1261

Ockenfels, A., Werner, P., & Edenhofer, O. (2020). Pricing externalities and moral behaviour. *Nature Sustainability*, 3, 872–877

Ambuehl, S., Roth, A. E., & Ockenfels, A. (2020). Payment in challenge studies from an economics perspective (Commentary). *Journal of Medical Ethics*, 46(12), 831–832

### **Book Chapters**

Ockenfels, A. (2023). ... denn sie wissen, was wir tun. In S. Hobe & et. al. (Eds.), *Die Macht der Algorithmen*, 121–126. Baden-Baden: Nomos

Ockenfels, A. (2023). Die Geschichte von Design & Behavior' in vier Amtszeiten. In Festschrift für den Rektor der Universität zu Köln

Ockenfels, A. (2021). Stabiles Genie. In Ottmar Edenhofer – Festschrift zum 60sten Geburtstag

Engel, C., & Ockenfels, A. (2020). Maverick: Experimentally testing a conjecture of the antitrust authorities. In V. Buskens, R. Corten, & C. Snijders (Eds.), Advances in the Sociology of Trust and Cooperation, 357–391, Berlin: De Gruyter

### **Selected Policy Reports**

Academic Advisory Board at the Federal Ministry of Economics and Technology (2023). "Bundeswehr besser ausrüsten – aber wie?" Member of the group preparing the report

Academic Advisory Board at the Federal Ministry of Economics and Technology (2023). "Transformation zu einer klimaneutralen Industrie: Grüne Leitmärkte und Klimaschutzverträge." Member of the group preparing the report

Walter-Siegenthaler-Gesellschaft (2023). "Digitalisierung der Medizin für das Patienten- und Gemeinwohl". Chair, together with Michael Hallek, of the Think Tank preparing the report

Ockenfels, A., Clausing, K., and Cramton, P. (2022). "Forging a path for a minimum carbon

price agreement: A Note on the current elaboration of the climate club concept." Policy Brief (unpublished)

Edenhofer, O., Kalkuhl, M., Ockenfels, A., & Zachmann, G. (2022). "Without cooperation, Europe is in danger of collapsing from the energy crisis: A proposal." Policy brief (unpublished)

Ockenfels, A. (2022). "How can the wholesale electricity market be used to skim the windfall profits of the gas crisis? A simple and non-intrusive proposal." *Euractiv* 

Hausmann, R., Łoskot-Strachota, A., Ockenfels, A., Schetter, U., Tagliapietra, S., Wolff, G., & Zachmann, G. (2022). "Cutting Putin's energy rent: 'Smart sanctioning' Russian oil and gas." Working Paper 05/2022, Bruegel, and CID Faculty Working Paper No. 412, Harvard

Academic Advisory Board at the Federal Ministry of Economics and Technology (2022). "Ukraine Krise – Brief an den Bundeswirtschaftsminister." Member of the group preparing the report

Academic Advisory Board at the Federal Ministry of Economics and Technology (2022). "Menschenrechte und unternehmerische Sorgfaltspflichten." Member of the group preparing the report

Cramton, P., Leveque, F., Ockenfels, A., & Stoft, S. (2022). "An EU gas-purchasing cartel framework." Vox (voxeu.org), 25 May

Schmidt, K., Inderst, R., Ockenfels, A., & Wambach, A. (2022). "Klimaschutzverträge und die Transformation zu einer klimaneutralen Grundstoffindustrie." Memorandum für das BMWK

Bierbrauer, F., Felbermayr, G., Ockenfels, A., Schmidt, K., & Südekum, J. (2021). "A CO2-border adjustment mechanism as a building block of a climate club." (Translated, adjusted and taken from: Academic Advisory Board at the Federal Ministry of Economics and Technology. 2021. "Ein CO2-Grenzausgleich als Baustein eines Klimaclubs." Member of the group preparing the report.)

acatech/Leopoldina/Akademienunion (2020). "Netzengpässe als Herausforderung für das Stromversorgungssystem. Optionen zur Weiterentwicklung des Marktdesigns." Member of the group preparing the report

acatech/Leopoldina/Akademienunion. (2020). "CO2 bepreisen, Energieträgerpreise reformieren. Wege zu einem sektorenübergreifenden Marktdesign." Member of the group preparing the report. (Also published in 2021 titled "Pricing carbon, reforming energy prices pathways to a cross-sectoral market design".)

acatech/Leopoldina/Akademienunion. (2020). "Netzengpässe als Herausforderung für das Stromversorgungssystem. Regelungsfelder, Status quo und Handlungsoptionen." Member of the group preparing the report. (Also published in 2021 titled "Grid congestion as a challenge for the electricity system options for a future market design.)

# Grants / Prizes / Honors (since 2020)

### 2022

Exeter Prize for the best paper in Experimental Economics, Decision Theory and Behavioral Economics

### 2020

Hans Kelsen Award ("Zukunftspreis") of the University of Cologne

# Lectures and Presentations (since 2020)

**CO2-Bepreisungen** Grüne Jugend / Fachforum Wirtschaft, online January 2020

Die Vermessung des Menschen: Künstliche Intelligenz versus natürliche Dummheit in Modell und Praxis Die Welt im Computer – Einführung in Big

Die Welt im Computer – Einführung in Big Data, Machine Learning und Quantitative Modellierung, University of Cologne January 2020

Gast in der öffentlichen Podiumsdiskussion: Künstliche Intelligenz und menschliche Dummheit – Steuern Algorithmen unser Leben besser als wir selbst? Hochschule Fresenius, Cologne February 2020

Impulsvortrag "Die perfekte Strategie: Künstliche Intelligenz versus natürliche Dummheit"

Fachsymposium "Daten und Algorithmen allerorten. Algorithmische Individualisierung, Profilbildung und Microtargeting" Hochschule Fresenius, Cologne February 2020

Die perfekte Strategie: Künstliche Intelligenz versus Natürliche Dummheit Rationalität und Verhaltensökonomie – Der homo oeconomicus auf dem Prüfstand University of Mannheim February 2020

Klimawandel: Das größte Kooperationsproblem der Menschheitsgeschichte Telekom: GC University, online September 2020 Klimawandel: Das größte Kooperationsproblem der Menschheitsgeschichte Karl Rahner Akademie Veranstaltungsreihe "Das Haus brennt, die Klimakatastrophe kommt" September 2020

Klimawandel: Das größte Kooperationsproblem der Menschheitsgeschichte Telekom Trainee Programm September 2020

Die Herausforderungen der Klimaveränderung aus Sicht eines Ökonomen Deutscher Hochschulverband-Symposium "Was nun? Die Herausforderungen des Klimawandels im Spiegel der Wissenschaft" Wissenschaftszentrum Bonn October 2020

Die Vermessung des Menschen: Künstliche Intelligenz versus natürliche Dummheit in Modell und Praxis

Die Welt im Computer – Einführung in Big Data, Machine Learning und Quantitative Modellierung University of Cologne November 2020

Engineering trust among strangers Research Seminar at the College of Business, Southern University of Science and Technology, SUSTech Shenzhen, China, online December 2020

Klimawandel: Das größte Kooperationsproblem der Menschheitsgeschichte Vortrag Rotary Club Köln-Hahnentor, online December 2020

Das größte Kooperationsproblem der Menschheitsgeschichte: Was nützt im Kampf gegen den Klimawandel – und was nicht? Veranstaltungsreihe AStA zum Thema Klimakrise Tag 4, online University of Cologne January 2021

Engineering trust among strangers University of Leicester, School of Business, Research Seminar, Online February 2021

Negotiating Climate Cooperation Market Design Seminar Series of the Zurich Market Design Center of the University of Zurich, online March 2021

Das größte Kooperationsproblem der Menschheitsgeschichte: Was funktioniert und was nicht im Kampf gegen den Klimawandel Nachhaltigkeitswoche an der Zeppelin Universität, EconoMix (Ökonomik-Initiative), online April 2021 Elfmeter, Auktionen, Klimawandel und Finanzmarktkrisen: Die Suche nach der perfekten Strategie (Rahmenvorlesung) UzK Schülertag, online May 2021

Das größte Kooperationsproblem der Menschheitsgeschichte: Was nützt im Kampf gegen den Klimawandel – und was nicht? Ringvorlesung an der CAU zu Kiel/Rethinking Economics Kiel, online June 2021

Besprechung des BMWi-Gutachtens "Klimaclubs und Grenzausgleich" EWI Alumni-Webinar, online June 2021

Marktdesign in einer Pandemie BBAW-Tagung "Pandemien – was kann man in der Zukunft besser machen?", online June 2021

Impulsvortrag zur internationalen Kooperation (Klimaclubs)
Seminarreihe zwischen Wirtschaftsprofessoren mit Mitarbeitern des Bundeskanzleramtes zu aktuellen wirtschaftspolitischen Fragestellungen, online
July 2021

Menschen und Märkte: Wie die VWL bei Ebay, Organspenden, Finanzmarktkrisen und Klimawandel helfen kann UzK Open Campus, University of Cologne November 2021

Vortrag mit Kommentaren zu Glasgow und einem konkretisierten Vorschlag für einen Klimaclub Climate Cooperation Initiative Kick-Off Event

Climate Cooperation Initiative Kick-Off Event University of Cologne November 2021

The Best Argument for Carbon pricing is not Economic Efficiency, but Rather that it Fosters Cooperation Florence School of Regulation Climate Annual Conference 2021, Session on Environmental taxation, online November 2021

"Zur Überlegenheit von Algorithmen" Ringvorlesung "Die Macht der Algorithmen" University of Cologne, online December 2021

Engineering Trust Leopoldina Treffen der Sektion "Empirische Wirtschafts- und Sozialwissenschaften", online March 2022

Why is the soft reserve auction so popular? Workshop of Experimental and Behavioral Economics of the Americas, online March 2022 Why is the soft reserve auction so popular? (with Dirk Bergemann, Kevin Breuer, Peter Cramton)

NYU Shanghai Economics Group Seminar Series, online March 2022

Auf der Suche nach der perfekten Strategie BAI Alternative Investor Conference (AIC) 2022, Frankfurt May 2022

Die Suche nach der perfekten Strategie Köln Alumni-Dinner May 2022

Why is the soft reserve auction so popular? WU Vienna Research Seminar Wirtschaftsuniversität Wien, Wien June 2022

Why is the soft reserve auction so popular? Research Seminar des Institut für Volkswirtschaftslehre University of Vienna June 2022

### **Behavioral Market Design**

2022 European Economic Science Association Conference, University of Bologna, Italy September 2022

### **Behavioral Market Design**

Symposium 40 Jahre Verleihung der Ehrendoktorwürde an F. A. v. Hayek und James M. Buchanan an der Universität Giessen Justus-Liebig-Universität Gießen, Ludwigstraße 23, 35390 Gießen October 2022

Strommarktdesign in der Krise Rotary Club Köln-Hahnentor, Cologne October 2022

Die Vermessung des Menschen: Künstliche Intelligenz versus natürliche Dummheit in Modell und Praxis

Die Welt im Computer – Einführung in Big Data, Machine Learning und Quantitative Modellierung, University of Cologne October 2022

Die Suche nach der perfekten Strategie Zentralbeiratssitzung der Bank für Sozialwirtschaft AG November 2022

Why is the soft reserve auction so popular? Behavioral and Experimental Economics Seminar (University of Zürich), online November 2022

Behavioral Market Design Beijing MEET, online November 2022

### **Behavioral Market Design**

Research Seminar in Economics, Department of Economics, Freie Universität Berlin November 2022

### **Behavioral Market Design**

Inaugural Behavioral Policy Design in MENA conference, NYU Abu Dhabi

November 2022

Das größte Kooperationsproblem der Menschheitsgeschichte – und warum wir es vermasseln

10-jähriges Jubiläum des Jungen Kollegs Greifswald, online December 2022

Behavioral Market Design: Parts I and II Special lecture series of UTokyo Market Design Center (UTMD) Zoom, online March 2023

Klimakooperation: Wie weltweiter Klimaschutz gelingen kann ECONWATCH Vortrag, online April 2023

### Behavioral Market Design

GSM Behavioral Science in Action Seminar at Guanghua School of Management, Peking University, online March 2023

# Behavioral Market Design

Talk in Econ Research Seminar at Loyola Marymount University, Loyola Marymount University March 2023

### **Behavioral Market Design**

Special Lecture: "Behavioral Market Design" by Professor Axel Ockenfels The University of Tokyo Market Design Center (UTMD) March 2023

Why is the soft floor auction so popular? The role of bidder regret

Stanford Economic Behavioral and Experimental (B&E) Seminar, Stanford University June 2023

Klimaschutz: Das größte Kooperationsproblem der Menschheitsgeschichte Natur- und Ingenieurwissenschaftliches Kolleg IX der Studienstiftung, Cologne September 2023

### Panel Klimagerechtigkeit

AKADEMIENTAG 2023 "Was ist gerecht? – Gerechtigkeitsvorstellungen im globalen Vergleich", Berlin-Brandenburgische Akademie der Wissenschaften November 2023

# Professional Activities (since 2020)

- 2023 Climate Economists' Roundtable at the Federal Chancellery (Bundeskanz leramt)
- 2022 Economists' Roundtable at the Federal Chancellery (Bundeskanzleramt)
- 2022 Team Scientist at the Behavior Change for Good Initiative (U Penn)
- 2022 Energy experts' roundtable at the Federal Ministry for Economic Affairs and Climate Action.
- 2021 2022 Scientific Advisory Board of the University of Cologne on Sustainability
- 2021 Co-Editor Management Science SI "The Human-Algorithm Connection"
- 2021 Sozialwissenschaftlicher Ausschuss des Vereins für Socialpolitik
- 2021 2022 Advisor to the Federal Government's Taskforce on Vaccine Production
- 2021 2022 Economists' Roundtable at the Federal Ministry of Finance
- 2019 Advisory Board of "Leaders for Climate Action"
- 2019 Advisory Board of the "Walter-Siegenthaler-Gesellschaft"
- 2018 Coordinator of the Research Area "Market Design & Behavior" in the Excellence Cluster ECONtribute
- 2018 Department Editor at Management Science
- 2017 Scientific Advisory Council of the ZEW in Mannheim
- 2015 Speaker of the "Excellence Center for Social and Economic Behavior" of the University of Cologne
- 2010 Academic Advisory Board of the Federal Ministry for Economic Affairs and Climate Protection (BMWK)
- 2007 2023 Scientific Advisory Board of the University of Cologne
- 2004 Founding Director of the Cologne Laboratory for Economic Research
- 2004 Board of Trustees of the student-run Organisationsforum Wirtschaft

### Memberships in Academies of Science

- 2021 German National Academy of Sciences Leopoldina
- 2017 National Academy of Science and Engineering – acatech
- 2016 European Academy of Sciences
- 2006 Berlin-Brandenburg Academy of Sciences and Humanities
- 2005 North Rhine-Westphalian Academy of Sciences, Humanities and the Arts

# **Teaching**

Each year - University of Cologne

- Master-Course in "Economic Engineering" (Winter term, 3 SWS)
- Bachelor-Course in "Microeconomics II" (Summer term, 6 SWS)
- Bachelor theses in Economics (2 SWS)
- Supervision of PhDs in Economics (2 SWS)
- Research and PhD seminar

Winter term 2022/2023 – University of Cologne

Bachelor-Course "Economic Design" (4 SWS)

Each year until 2022 – University of Cologne ECONtribute and C-SEB Design & Behavior Seminar (4 SWS)

# Diploma Theses, Dissertations, and Habilitations

### **Dissertations**

April 2020

Viola Sophia Ackfeld, University of Cologne: "Essays on Repugnance in Economic Transactions"

October 2020

Patrick Bernau, University of Cologne: "Learning. Giving. Teaming Up. – Essays in Economic Decision Experiments" (second examiner)

September 2021

Shambhavi Priyam, Max Planck Institute for Research on Collective Goods: "Essays in Behavioral Development Economics" (second examiner)

May 2022

Kevin Leonard Breuer, University of Cologne: "Essays on Market Design"



Contact
ohara@coll.mpg.de

https://www.coll.mpg.de/laurence-ohara

# Laurence O'Hara

I joined Christoph Engel's research group in mid-2018 as a postdoctoral researcher. My background is largely in law (especially constitutional and administrative), though I have a second degree in quantitative/economic policy analysis. I came to the institute to work on the relationship of legal doctrine and theory with the behavioral sciences. I maintain a special focus on the German tradition of government. Its doctrinal frameworks of controlled verbal reasoning produce ways of judgment and decision-making, which are less common or explicitly developed in other systems, and about which less is known behaviorally-empirically. I am interested in investigating such forms of behavior, both from a doctrinal/theoretical and from a behavioral/empirical angle.

### **Behavioral Analysis of Public Law**

First of all. I work on Behavioral Public Law in the German jurisdiction. I am especially interested in behavior-oriented analyses of the law itself: how legal institutions digest behavior, in particular what their underlying conceptions about judgment and decision-making are. Engel et al. (forthcoming) undertakes a comprehensive account for the field of German Public Law, Linitiated this in 2019 with Christoph Engel, and it is now about to be published. Together with other group members, we wrote a book that systematically approaches the classic sub-matters in their behavioral dimensions. My own part (O'Hara, forthcoming) is about the use of state authority by administrative law and the enforcing executive in order to affect behavior. It covers classic forms of legal action and coercion, but also informal forms of influence on behavior.

Previously, in O'Hara (2020), I developed a related conception for the area of fundamental rights. At the center of the academic debate, here is the question of a state restriction of individual liberties (*Eingriff*) through behavioral state

intervention. I suggest ways in which doctrine and court practice might deal with the phenomenon without being either overly restrictive or lenient, among others the alternative concept of a "configuration" of rights (Ausgestaltung). The central concept to work with is less rationality than autonomy (I frame the constitutional problem as one of "bounded autonomy").

Empirical Legal Studies: Normative and Juridical Judgment and Decision-Making

My own empirical work looks mainly at basic categories of (public) law and the way people use its central operators when asked to judge and decide cases. I have designed my research program so that it attends to the practically most relevant levels of legal reasoning in Government.

Egidy/O'Hara (work in progress) is about proportionality assessments by balancing of interests. The applicable decision-making technique is frequently described by the metaphor of weighing (Abwägung). One of the core foundational topics about weighing is whether it can be rationalized or is mainly an arbitrary process. However, both in legal education and methodology of judicial opinion-writing, there are efforts to make the decisions more reliable by structured assessment frameworks (see also the jurisprudential section below). With our vignette study, we investigate whether such structured procedures predictably reduce bias. Through experimental manipulations (irrelevant information inviting discrimination), we induce bias in the normative decisions for part of the group. We then test whether different degrees of structured decision-making can reduce said bias.

A bigger project together with Rima Rahal is again vignette-based with experimental manipulations; it also uses the COVID-19 pandemic as a natural

experiment. We investigate several domains of juridical operators in different studies. We deal with the effects of different kinds of (mainly governmental) measures, for example a prohibition by statutory law, a prohibition by an administrative agency, or a mere informal request. That includes the degree to which participants perceive a measure as binding or freedom-restricting, and to which they see it fit to alter their behavior. We also elicit motivations to comply with or offend against different legal measures. Furthermore, we investigate the evaluation of dangerous situations under uncertainty, as is a central concept in German public-security law. We have so far developed two manuscripts for papers: O'Hara/Rahal (work in progress a)) investigates patterns of compliance motivations depending on the purpose of a rule. While in the prevalent framework of deterrence/incentives/ legitimacy/morality a lot of research has focused on the domain of legitimacy, this study seeks to shed light on the components of morality, where traditionally all substantive normative reasons have been summed up. Individual senses of obligation can be based on very different considerations, however, ranging from hereditary popular morality to instrumental rationality, i.e., the notion that a rule "makes sense" and following it supports a worthwhile purpose. The second paper (work in progress b)) deals with relative effects of different forms of government action. It is the first systematic empirical assessment of the German Handlungsformen- or Instrumentenlehre.

Jurisprudential/Meta-Doctrinal Analytical Theory of Legal Cognition

I also engage in theoretical and doctrinal debates. I have, however, always done so from a behavioral angle – and that is in two regards: First, in line with the concept of behavioral law discussed above, behavioral findings may concern thought patterns that are present in legal

thinking and therefore inform our knowledge on the functioning of law. Second, analytical jurisprudence itself deals with cognition, i.e., with standards according to which we (ought to) think. This type of analysis is (or should be) also a prerequisite for a lot of empirical behavioral work, which requires a concept of the task at hand. From this analytical-cognitive angle, I published three papers:

O'Hara (2022a) deals with the status of logic in legal reasoning. In particular, it discusses whether norm-application processes can be theorized as defeasible normative reasoning (nicht-monotone Normlogik). I express doubts given the indeterminacy and complexity of the law, as well as the fact that the actual cognitive process is not guided the letter of the law, but by doctrinal application rules. I do, however, point out that practically important lines of argument on the meta-level should theoretically work according to defeasible logic (even though formalizations of practical legal thought processes are essentially doomed to fail, because the reasoning is always only weakly-inferential, schwach-inferenziell).

O'Hara (2022b) asks for the role of intuition in normative government work and introduces some notions from the debate about "intuitive deontology" into the jurisprudential discourse.

O'Hara (2022c): Previous work, among others a habilitation thesis from our institute by Niels Petersen, has demonstrated that, contrary to the prevailing impression in the literature, the jurisdiction of the Federal Constitutional Court is not predominantly based on balancing. Based on a qualitative decision analysis, I develop a positive conception of what the court does instead. At the center is the idea of rules-based, binary thinking within norm systems instead of gradual maximization.

Habilitation Project: Leading by Law

My habilitation thesis ties together my different research interests. It is about the leadership of/in the executive ("Führung durch Recht"). I mean leadership not only in the formal sense with regard to hierarchical structures (though they are important), but also in substantive terms: how the administration provides for the right policies being made and enforced, how it motivates its personnel to promote good targets. In Germany, where through the principle of Rechtsstaat as well as the civil-service law (especially the so-called Folgepflicht) not just rule of law, but "rule by law" is prescribed, this is to a large extent a matter to be resolved within legal terms. First of all, the topic is about motivating individuals through administrative law and about the solution of conflicts within the administrative legal order. A presently much-discussed subtopic is the prevention of misconduct, especially in the police and armed forces. Like all fields of legal-compliance research, this topic must increasingly be approached with special regard to the behavioral sciences. From that angle, it is about the behavioral design of institutions within government bodies. Further, importantly for the practice of administration in Germany, also the trends towards "reform" in the public sector now date back so far that the time for evaluations has come; the discipline of Public Law might profit from insights from administrative science debates on "post-New Public Management" and the reappraisal of bureaucracy. In that context, the topic relates back to the normative-juridical tradition I mention above. Since worldwide (but especially in Europe) governments have deserted predominantly economic policy and resumed actively shaping society (especially as part of transformation policy), there is an increased need for content, i.e., for substantive principles to guide decisions.

# **Publications (since 2020)**

### **Articles in Peer-Reviewed Journals**

O'Hara, L. (2022a). Logik beim dogmatischen Setzen mit schwach inferenziellem Anspruch. Nicht-Monotonie und Geltungsränge in der juristischen Ordnungsbildung, *RphZ*, 8, 39–58

### Journal Articles (not peer-reviewed)

O'Hara, L. (2022b). Intuitionen in der staatlichen Normarbeit. Wertungsgründe im Recht des psychologisch aufgeklärten Staates zwischen utilitaristischer Rechtsstaatskritik und identitätspolitischem Misstrauen, *Der Staat* 61, 1–31

O'Hara, L. (2020). Grundrechtsschutz vor psychisch vermittelter Steuerung. Beschränkte Autonomie und verhaltenswissenschaftliche Annahmen in der Grundrechtsdogmatik, *AöR*, 145, 133–187

### **Book Chapters**

O'Hara, L. (forthcoming). Ordnungsrecht und staatlicher Rechtsgüterschutz, in Engel, C., O'Hara, L., Egidy, S., Hermstrüwer, Y., Hoeft, L., & Langenbach, P. (Eds.). Öffentliches Recht als Verhaltensordnung. Ein neues Paradigma. Tübingen: Mohr Siebeck

O'Hara, L. (2022c). Rationales Entscheiden jenseits von Abwägung. Deduktiv-konstruktive Regelbegründung in grundrechtsdogmatischen Systemen, in Lübbe/Grosse-Wilde (Hrsg.), Abwägung. Voraussetzungen und Grenzen einer Metapher für rationales Entscheiden, Brill Mentis Paderborn, 327–385

### Book

Engel, C., O'Hara, L., Egidy, S., Hermstrüwer, Y., Hoeft, L., & Langenbach, P. (Eds.). (forthcoming). Öffentliches Recht als Verhaltensordnung. Ein neues Paradigma. Tübingen: Mohr Siebeck

# **Work in Progress**

### **Habilitation Thesis**

O'Hara, L. Führung durch Recht. Verhaltenstheorie des öffentlichen Dienstverhältnisses: Normbasierte Politikgenerierung und individuelles Entscheidungsverhalten in der Exekutive.

### **Book Project**

O'Hara, L. Der Staat, der handeln muss. Zurechnung bei staatlichem Unterlassen in der Ära expandierender Verantwortung (ed. together with *Thomas Grosse-Wilde*). To be published at Mohr Siebeck Tübingen. Funded by the TRA Individuals, Institutions and Societies (University of Bonn) as part of the Excellence Strategy of the federal and state governments. Contributors: Weyma Lübbe, Wolfgang Seibel, Ralf Poscher, Thomas Grosse-Wilde, Charlotte Schmitt-Leonardy, Laurence O'Hara, Thomas Wischmeyer, Angela Schwerdtfeger, Stefan Martini, and Alexander Hellgardt.

### **Empirical Work**

O'Hara, L. and Rahal, R. (work in progress a). Governing by persuasion. The motivational role of regulatory purpose for compliance with the law.

O'Hara, L. and Rahal, R. (work in progress b). Variations in normative force. Patterns of norm-perception and behavioral effects of types of government action.

Egidy, S. and O'Hara, L. (work in progress). Structured balancing of interests.

# Lectures and Presentations (since 2020)

Intuitionenbegriffe in der praktischen Normarbeit. Was bleibt von der "empirisch fundierten" Deontologiekritik?
Arbeitskreis "Zurechnung", Fritz Thyssen Foundation, online

Governing with Authority: Public Security Law; State Coercion; Protection of Vulnerable Interests Max Planck Law Network, Behavioral Public

Max Planck Law Network, Benavioral Public Law Workshop, online 2021

Nach dem Maximierungsdenken: Was das erneuerte Abwägungsverständnis für die Bestimmung von Spielräumen bedeutet ICON-S Germany Conference, Gießen 2022

Der Staat, der handeln muss. Zurechnung bei staatlichem Unterlassen in der Ära expandierender Verantwortung

Workshop of the working group "Zurechnung bei staatlichem Unterlassen", Bonn 2022

Implementation deficits in the German (/European) regulatory context; dysfunctional enforcement versus dysfunctional law. Commentary on K. Basu: The Republic of Beliefs

A new Approach to Law and Economics, workshop, Bucerius Law School, Hamburg (host: C. Bumke) 2023

# **Teaching**

2021

Westfälische Wilhelms-Universität Münster, Institut für Politikwissenschaft Lecture Constitutional Law II and European Public Law (with P. Langenbach)

# Jerome Olsen

### Overview

In the broadest sense, my research deals with the psychology of economic decision-making. Most of my projects investigate individuals' tax-compliance behavior and how it is influenced by institutional settings, as well as how it varies between individuals. In my most recent work at the institute, which I joined in October 2019, I focus on risky decision-making in neutral versus normative contexts, on the emergence of prosocial behavior, and on a meta-analysis of deontological versus utilitarian moral decision-making. Finally, I contribute to different large-scale collaborative science initiatives. I will provide short summaries for all of these areas of interest.

### Tax-compliance behavior

Arguments against taxes are often emotionally charged. However, little research has linked emotions to tax-compliance decisions and perceptions of the authorities. In a mixed-methods study, we aimed to lay the ground by using focus groups to investigate which integral emotions are actually present during the process of paying taxes and in which specific situations they are elicited (Enachescu et al., 2019). In a representative survey, we then quantified these results and inspected associations with compliance intentions. The results revealed that noncompliance is influenced by specific emotional experiences.

We did not only investigate integral emotions, those that are causally linked to the choice-relevant event, but also conducted an experimental study on the role of incidental emotions, those that are unrelated to the decision setting and occur casually (Enachescu et al., resubmitted after revision). While self-reports and physiological measures confirmed a successful manipulation of specific emotions, we did not observe any com-

pliance differences between different emotion conditions.

These results are not a contradiction, but reveal an important distinction. The emotions that most likely affect taxpayers are not those that occur randomly (i.e., incidental), but those that can be deliberately influenced by the authorities themselves (i.e., integral) (as discussed in Enachescu et al., in press). Such results should be of interest to policy-makers who design services that try to make compliance easy and less frustrating.

Further work in the field of tax decisions concerned the role of mental accounting for differences in tax burden perceptions (Olsen et al., 2019), the cross-cultural generalizability of trust in the authorities along with deterrence power to predict tax behavior (Batrancea et al., 2019), perceptions of direct versus indirect taxes (Olsen et al., 2017), a replication study on whether taxes are disliked more than equivalent other costs (Olsen et al., 2019), the potential effects of anonymity breaches on tax decisions in the lab (Kogler et al., resubmitted after revision), and information-processing in classical tax experiments using MouselabWEB (Kogler et al., under review). Different follow-up projects in these areas are currently under development.

Risky decision-making in different contexts

Tax decisions can be viewed as a case of risky decisions in a normative context where the sure option (i.e., tax compliance) is the normatively expected response. Especially in economics, there is a debate whether such experiments should therefore deliberately use a context-rich experimental setting or rather one that is context-free. Together with Susann Fiedler, we are currently planning an eye-tracking experiment where we aim directly to compare tax decisions with monetarily equivalent



Contact
jeromeolsen@gmail.com
https://www.coll.mpg.de/

jerome-olsen

gamble-like decisions. We will not only investigate individuals' eye gazes to infer underlying cognitive processes, but also include individual measures of norm espousal. We expect individuals to be more conflicted about choosing a risky option in a tax setting, especially if they identify as individuals who value following social norms. The results will add to the experimental design literature as well as to understanding differences that are driven by interindividual tendencies to follow rules and norms.

### The emergence of prosocial behavior

Prosocial behavior is often viewed from a dual-process framework perspective, where the case has been made that intuition should favor prosociality. However, the cumulative empirical evidence concerning this effect is mixed. Together with Susann Fiedler and Robert Lillig (in preparation), in this experimental study we argue that this effect could be a function of the proportion of prosocials and proselfs in a study sample (in terms of social value orientation), where prosociality is only intuitive for individuals with a prosocial personality. We not only consider choice behavior, but, utilizing eye-tracking, we are able to investigate differences in cognitive decision processes between individuals. While we do not find the proposed moderation pattern, our results highlight the role of interindividual differences in the construction of decision situations. which are not overwritten by situational changes like induced time pressure or cognitive load. To simplify, prosocial behavior seems to depend more on personal factors (i.e., social value orientation) than on situational factors (induced intuition vs. deliberation).

# Meta-analysis of deontological versus utilitarian moral decision-making

Two commonly contrasted ethical frameworks in moral philosophy are deontology and utilitarianism. While deontological ethics judges an action based on moral standards, utilitarian ethics judges an action merely based on

its consequences. For instance, when faced with a dilemma to sacrifice one person to save five others, deontology would argue not to sacrifice the single person, whereas utilitarianism would argue the opposite. Drawing from a dual-process perspective, it has been argued that individuals are more prone to deontological judgments when they are in an intuitive cognitive mindset and that utilitarian judgements are promoted through deliberation. To date, a meta-analytic synthesis of this effect is missing. Together with Susann Fiedler, Rima-Maria Rahal, and Alina Fahrenwaldt, we aim to estimate the size of the cumulative effect of intuitive deontology and to identify potential boundary conditions. We have already identified the relevant studies and are now in the process of coding all study effect sizes.

### Collaborative science initiatives

As a response to low replicability rates, the research culture in many fields, most prominently in psychology, is facing a constructive reform. The Psychological Science Accelerator (PSA) is a crowdsourced large-scale collaboration network that aims to overcome criticism that is often characteristic of single empirical studies, as, for instance, restricted samples, ungeneralizable settings, or not enough statistical power (Moshontz et al., 2018). As a member of this network, I contribute my available resources to support research endeavors that aim at conducting generalizable studies.

In this spirit of an open and cumulative science approach, I adhere to open-science practices in my own primary research, by making materials, data, and code publicly available and preregistering hypotheses before data collection.

# **Publications (since 2020)**

### Articles in peer-reviewed journals

Kogler, C., Olsen, J., Kirchler, E., Batrancea, L. M., & Nichita, A. (2022). Perceptions of trust and power are associated with tax compliance: A cross-cultural study. *Economic and Political Studies*, 1–17

Bago, B., Kovacs, M., Protzko, J., Nagy, T., Kekecs, Z., Palfi, B., ..., Olsen, J., ..., & Aczel, B. (2022). Situational factors shape moral judgements in the trolley dilemma in Eastern, Southern and Western countries in a culturally diverse sample. *Nature Human Behaviour*, 6(6), 880–895

Anvari, F., Efendić, E., Olsen, J., Arslan, R. C., Elson, M., & Schneider, I. K. (2022). Bias in Self-Reports: An Initial Elevation Phenomenon. *Social Psychological and Personality Science*, 14(6), 727–737

Kogler, C., Olsen, J., Mueller, M., & Kirchler, E. (2021). Information processing in tax decisions: a MouselabWEB study on the deterrence model of income tax evasion. *Journal of Behavioral Decision Making*, 35(4), e2272

van den Akker, O. R., Weston, S., Campbell, L., Chopik, B., Damian, R., Davis-Kean, P., ... & Bakker, M. (2021). Preregistration of secondary data analysis: A template and tutorial. *Meta-psychology*, 5

Enachescu, J., Puklavec, Z., Olsen, J., & Kirchler, E. (2021). Tax compliance is not fundamentally influenced by incidental emotions: An experiment. *Economics of Governance*, 22(4), 345–362

Anvari, F., Olsen, J., Hung, W. Y., & Feldman, G. (2021). Misprediction of affective outcomes due to different evaluation modes: Replication and extension of two distinction bias experiments by Hsee and Zhang (2004). *Journal of Experimental Social Psychology*, 92, 104052

Kogler, C., Olsen, J., & Bogaers, R. I. (2020). Enhanced anonymity in tax experiments does not affect compliance. *Journal of Economic Behavior and Organization*, *177*, 390–398. https://doi.org/10.1016/j.jebo.2020.06.023

McCarthy, R., Gervais, W., Aczel, B., Al-Kire, R. L., Aveyard, M., Marcella Baraldo, S., ..., & Zogmaister, C. (2021). A multi-site collaborative study of the hostile priming effect. *Collabra: Psychology*, 7(1). https://doi.org/10.1525/collabra.18738

Jones, B. C., DeBruine, L., Flake, J. K., Aczel, B., Adamkovic, M., Alaei, R., Olsen, J., ..., & Chartier, C. R. (2021). To which world regions does the valence–dominance model of social perception apply? *Nature Human Behavior*, *5*, 159-169

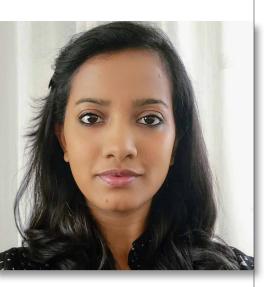
## **Book Chapters**

Enachescu, J., Puklavec, Z., Bauer, C., Olsen J., Kirchler, E., & Alm, J. (2020). Incidental emotions, integral emotions, and decisions to pay taxes. In M. M. Erdogdu, L. Batrancea, & S. Cevik (Eds.), *Behavioral public finance: Individuals, society and the state.* London: Routledge, 157-177

Olsen, J., Kapferer, T., & Kirchler, E. (2020). Comparación psicológica del impuesto sobre la renta y el impuesto al valor agregado: representaciones sociales, registro mental y cumplimiento. In C. A. Ruiz Jiménez (Ed.), Derecho tributario y derechos humanos: Diálogo en México y el Mundo, Cuauhtémoc, Mexico: Tirant lo blanch, 445-476

# **Professional Activities**

Member of the expert group for the evaluation of horizontal tax monitoring of the Austrian Ministry of Finance



Contact

shambhavipriyam@gmail.com

https://www.coll.mpg.de/ shambhavipriyam

# **Shambhavi Priyam**

### Overview

I was a Research Fellow in the Experimental Economics Group from 2017-2021 and then remined a part of the group as a Senior Research Fellow from 2021-2022. Currently, I am an Economist (Young Professional) at the World Bank Group, Washington D.C. During my time at the MPI, I obtained my PhD from the University of Cologne (2021), with Matthias Sutter and Axel Ockenfels as my supervisors. My research was at the intersection of behavioral and development economics and involved running lab-in-the-field-based experiments in India and Bangladesh. My research work since my time at the MPI has pivoted towards application of development economics to water and climate analytics across the globe, with special focus on the Middle East.

From 2020 until the end of my employment at the Max Planck Institute for Research on Collective Goods, I was fascinated about conducting research in areas that are traditionally understudied in mainstream economics literature. The focus of experimental economics has largely been in areas that are easier to study, which often limits the sample to a group of college students from developed nations. As the outcomes from studies in development economics are most applicable to developing countries, from a policy perspective, I aimed to bring experimental techniques to the developing-country setup, and to work on problems that have real-life implications. For this reason, I actively participated in carrying out several rounds of field-based research work in India and Bangladesh.

In India, the research I conducted with my colleagues was in the form of randomized controlled trials. Through this, we wanted to understand behavioral practices and health implications of safely managed water in villages affected by naturally occurring arsenic, a known carcinogen, in their drinking water. In two different sets of experiments that extended from 2019 until 2022, we administered light-touch informational interventions (through videos and phone calls) and stronger-implements interventions (as water purifiers) to examine take-up of safe-water practices and spillovers of such practices to health and information dissemination in the village area. To ensure objective results in one of the studies, we measured arsenic consumption by analyzing the contents of urine for a subsample of the population.

In Bangladesh, the work I did with my colleagues lay mainly in attempts to create a database of economic preferences for rural families in the country. In an extensive data-collection exercise, we conducted lab-in-the-field experiments with real incentives for children and their parents in different administrative regions of Bangladesh to see how economic preferences (risk, time, and social preferences) for these families might change. From these data, we were able to study the behavior of siblings and the impact of parenting styles on the outcome of children.

Due to the hands-on nature of these projects, they were severely affected by the COVID-19 pandemic. This required the teams to be agile enough to adapt to the changing situations. We continued our research efforts using phone surveys and developing protocols through which we could protect the surveyors and the participants, while still collecting data for our research. I was happy to be part of a team and institution that allowed for flexibilities though which these research efforts could be sustained. I am currently building on my academic research in water to research global systems for safely managed water under climate-change scenarios.

# **Work in Progress**

Priyam, S., Salicath, & Sutter, M. Information intervention to promote safe water consumption: An RCT affected by groundwater arsenic in india

Priyam, S., Salicath, & Sutter, M. Promoting safe water practices in arsenic-affected regions in india

Priyam, S., Breitkopf, L., Chowdhury, S., Schildberg-Hörisch, H., & Sutter, M. Do economic preferences of children predict behavior?

Priyam, S., Breitkopf, L., Chowdhury, S., Schildberg-Hörisch, H., & Sutter, M. Economic preferences and behaviors of children

# Lectures and Presentations (since 2020)

### 2020

Information Intervention to Promote Safe Water Consumption: An RCT Affected by Groundwater Arsenic in India Young Scholar Matchmaking Workshop, Private Enterprise Development in Low Income Countries

### 2021

Information Intervention to Promote Safe Water Consumption: An RCT Affected by Groundwater Arsenic in India Economic Science Association Conference

## **Professional Activities**

Managing the social media profiles for the Experimental Economics Group (till 2022)

Organizing Mental Health and Economics workshop (March 2021) with Lukas Kiessling and Johannes Haushofer

### Referee

Labor Economics

### Other

Exploratory Research Grant, Private Enterprise Development in Low Income Countries (2020)

Presentation of projects as Science Slam at University of Cologne (2020, 2021)



Contact

puente@coll.mpg.de

https://www.coll.mpg.de/manuela-puente-beccar

# Manuela Puente-Beccar

# **Summary Report**

I joined the Experimental Economics Group as a Senior Research Fellow in September 2022. I hold a PhD in Economics from Bocconi University and an MSc in Econometrics from the University of Amsterdam. I am an applied economist with research on health, urban. and development economics. A lot of my work focuses on understanding differences in health behavior, through differences in people's means, their preferences, their access to information, their beliefs, and their social networks. I complement this work with attention to the location of individuals and their local environment. Finally, I am particularly interested in developing settings where preferences and types of behavior have been less studied, and where interventions can have a higher impact.

# Research Agenda

I will continue my research on health behavior, studying, for example, the recent decline in beliefs about the harmfulness of smoking in the developed world and the decline in vaccination take-up in the developing world. I will combine the analysis of available observational data with interventions and experimental data. My research agenda also covers the analysis of the geolocation of individuals to understand differences in their preferences and behavior.

# Publications (since 2020)

**Articles in Peer-Reviewed Journals** 

Puente-Beccar, M., Gulesci, S., & Ubfal, D. (2021), Can youth empowerment programs reduce violence against girls during the COVID-19 pandemic?, *Journal of Development Economics*, 153, 102716

# Work in Progress

Puente-Beccar, M. (submitted) Health preferences and sorting in the city.

Adda, J. & Puente-Beccar, M. (ongoing)
Health beliefs and the long-run effect of medical information

Chowdhury, S., Puente-Beccar, M., Schneider, S. O., Schildberg-Hörisch, H., & Sutter, M. (ongoing): Spatial correlations in economic preferences

Puente Beccar, M., Tissen, J., & Tonke, S. (in preparation). Increasing the take-up of medical controls for children in Bolivia

## **Grants / Prizes / Honors**

2021

Scholarship for promising PhD candidates, from the Fondazione Romeo and Enrica Invernizzi

# Lectures and Presentations (since 2020)

2021

Health Preferences and Sorting in the City Bocconi University, Applied microeconomics seminar, Milan, Italy 4 October 2021

2022

Health Preferences and Sorting in the City Applied Young Economist webinar, online 11 May 2022

2023

Spatial Correlations in Economic Preferences University of Amsterdam, CREED Workshop, The Netherlands 27 May 2023

# **Professional Activities**

**Referee for** Review of Economic Studies

Memberships

since 2021 BOWEN (Bolivian Women in Economics Network)

since 2022 Royal Economic Society

# Rima-Maria Rahal

# **Summary Report**

In 2020, I re-joined the institute as a Senior Research Fellow in Prof. Engel's group. After previous posts as a PhD student and a guest researcher in Susann Fiedler's research group on Cognitive Processes Underlying Economic Decision-Making, and following my time at Goethe University Frankfurt and Tilburg University, I am exuberant about the opportunity of continuing my research interest in processes driving decision-making in the interdisciplinary context of the institute.

# Research Agenda

As a researcher working at the intersection of psychology, law, and behavioral economics, my work aims to investigate the complex interplay between human cognition, legal decision-making, and economic behavior. My particular focus is on moment-by-moment steps of constructing decisions, the cognitive processes underlying human behavior. While advancing this micro-level research agenda, it is important to me to engage in research with downstream implications for societal questions. Therefore, I select to study types of decisions with externalities in the social contexts: generosity, stereotyping, moral decisions, legal decisions, and compliance. My research agenda comprises projects that contribute to three overarching themes: understanding cognitive processes in decision-making, exploring the interrelations of human cognition and legal systems, and working towards ensuring good research practice by engaging in international collaboration and big-team science.

# Cognitive Processes in Decision-Making

My basic research interest is investigating the cognitive processes involved in decision-making. One aspect of these

projects is understanding decisions in the context of economic decisions to maximize own outcomes selfishly or forego potential own outcomes to increase generously the outcomes of others affected (Rahal & Fiedler, 2022). In a review on motivated belief formation and reasoning in cooperation, we construct a comprehensive understanding of how beliefs can bias prosocial decision-making (Fiedler et al., under review). Thanks to methodological advances over the past few years, it has become possible to leverage the promise of eye-tracking as a tool to investigate moment-by-moment cognitive processes engaged in decision formation in new contexts: Webcam-based eye-tracking allows us to explore the presence and impact of ingroup bias in seventeen societies across the globe (Rahal & Schulze Spüntrup, in preparation). In a follow-up study, we aim to deconstruct the processes involved in ingroup-biased giving in real groups, with the goal of understanding the cognitive processes underlying stereotyping of national ingroups and outgroups (Rahal & Schulze Spüntrup, in preparation). By identifying and deconstructing biases involved in self-serving, parochial, or (generalized) prosocial behavior, future research can be dedicated to developing targeted interventions to mitigate their effects.

Closely related, two projects focus on cognitive processes underlying decisions in the moral context. Our meta-analysis on the dual-process theory of moral judgments aims to provide insights into the intuition or deliberation involved in moral decision-making to prioritize deontological or utilitarian outcomes (Fahrenwaldt et al., in preparation). Furthermore, a mouse-tracking project on decision processes and introspective reports in the moral context allows us to examine the limitations of individuals' self-reported knowledge and inferences from their motor movements (Rahal & Schulte-Mecklenbeck, in prepa-



Contact
rahal@coll.mpq.de

https://www.coll.mpg.de/rima-maria-rahal

ration). This research project helps to elucidate the overlap of introspective reports and motor-based inferences, with implications for methodological questions of measurement validity. Further, this research trajectory opens up new research questions in applied contexts, such as regarding the processes underlying witness testimonies in legal contexts.

# Application to Legal Decisions and Compliance

The applicability of research on cognitive processes underlying human decision-making to the legal context is clear. Therefore, this second research line builds an agenda of understanding legal decisions and legal compliance. In our study on governing by persuasion, we investigate the role of regulatory purpose in motivating individuals to comply with legal regulations (O'Hara & Rahal, in preparation). Additionally, our planned project using eye-tracking analyses in jury decisions will demonstrate how individuals cognitively process inadmissible evidence, contributing to the understanding of the factors that impact juror decision-making (Engel & Rahal, in preparation). Through eye-tracking analysis, we explore how conflicting concerns influence judges' normative weight in torts cases (Engel & Rahal, under review). Understanding the cognitive processes that occur during decisions about compliance with the law can inform policymakers and legal practitioners on effective strategies for achieving compliance. Additionally, our research on the processing of inadmissible evidence has implications for the fairness and accuracy of legal proceedings, leading to potential improvements in the justice system, as we argue in our book chapter on using eye-tracking as a method in experimental jurisprudence (Engel & Rahal, accepted).

# **Advancing Good Scientific Practice**

Recognizing the importance of good scientific practice (Rahal et al., 2022, 2023), and valuing collaboration and

diversity in research, I actively engage in research projects in the context of Open Science and Metascience, often in international collaborative projects (Bauer et al., revise; Brohmer et al., in-principle acceptance; Huber et al., 2023; Buchanan et al., 2023; etc.). These projects involve multidisciplinary and multicultural teams, enabling diverse perspectives and providing a broader understanding of human behavior across different contexts. Data collection is often international, too. In these projects, a central aim is to test and advance the generalizability and robustness of research findings, offering insights into the universality and context dependence of effects and methods. By fostering collaborations across borders and disciplines, a more complete evidentiary basis on research is built, allowing it to address complex societal challenges more effectively, to enhance the credibility of research, and to inform evidence-based policies that have global relevance.

# **Publications (since 2020)**

### **Articles in Peer-Reviewed Journals**

Fiedler, S., Habibnia, H., Fahrenwaldt, A., & Rahal, R. M. (2023). Motivated cognition in cooperation. *Perspectives on Psychological Science*, 17456916231193990

Luebber, F., Krach, S., Martinez Mateo, M., Paulus, F. M., Rademacher, L., Rahal, R.-M., & Specht, J. (2023). Rethink funding by putting the lottery first. *Nature Human Behavior*, 7, 1031–1033

Huber, C., Dreber, A., Huber, J., Holzmeister, F., Fiedler, S., Rahal, R.-M., Saral, A. S. & et al. (2023). Competition and moral behavior: A meta-analysis of forty-five crowd-sourced experimental designs, *PNAS*, 120(23), e22155721

Heck, T., Steinhardt, I., Rahal, R.-M., Schubotz, M., Scholl, D., & Behrens, S. (2023). Bootstrapping the Open Science culture: The fellowship approach. Research Ideas and Outcomes, 9

Rahal, R.-M., Fiedler, S., Adetula, A., Berntsson, R. P.-A., Dirnagl, U., Feld, G. B., ..., & Azevedo, F. (2023). Quality research needs good working conditions. *Nature Human Behaviour*, 7, 164–167

Rahal, R.-M., Hamann, H., Brohmer, H., & Pethig, F. (2022). Sharing the recipe: Repro-

ducibility and replicability in research across disciplines. Research Ideas and Outcomes, 8

Delios, A., Clemente, E. G., Wu, T., Tan, H., Wang, Y., Gordon, M., ... et al. (2022). Examining the generalizability of research findings from archival data. *PNAS*, 119(30)

Psychological Science Accelerator Self-Determination Theory Collaboration, Rahal, R.-M., & et al. (2022). A global experiment on motivating social distancing during the COVID-19 pandemic. *PNAS*, 119(22)

Dorison, C., Lerner, J. S., Heller, B. H., Rothman, A., Kawachi, I. I., Wang, K., ... et al. (2022). In COVID-19 health messaging, loss framing increases anxiety with little-to-no concomitant benefits: Experimental evidence from 84 countries. *Affective Science*, 3, 577–602

Rahal, R.-M., & Fiedler, S. (2021). Cognitive and affective processes of prosociality. *Current Opinion in Psychology* 

Wang, K., Goldenberg, A., Dorison, C. A., Rahal, R.-M., & et al. (2021). A multi-country test of brief reappraisal interventions on emotions during the COVID-19 pandemic. *Nature Human Behaviour*, 5, 1089–1110

Wanders, F., Homan, A. C., van Vianen, A. E. M., Rahal, R.-M., & van Kleef, G. A. (2021). How norm violators rise and fall in the eyes of others: The role of sanctions. *PLOS ONE* 

Tierney, W., Hardy, J., Ebersole, C. R., Viganola, D., Clemente, E. G., Gordon, M., ... Rahal, R.-M. (2021). A creative destruction approach to replication: Implicit work and sex morality across cultures. *Journal of Experimental Social Psychology*, 93

Tierney, W., Hardy, J. H., Ebersole, C. R., Leavitt, K., Viganola, D., Clemente, E. G., ... et al. (2020). Creative destruction in science. *Organizational Behavior and Human Decision Processes*, 161, 291–309

Rahal, R.-M., Fiedler, S., & De Dreu, C. K. W. (2020). Prosocial preferences condition decision effort and ingroup biased generosity in intergroup decision-making. *Scientific Reports* 

# **Book Chapters**

Engel, C., & Rahal, R.-M. (forthcoming). Eye-tracking as a method for legal research. In *The Cambridge Handbook of Experimental Jurisprudence* 

Rahal, R.-M., & van Beest, I. (forthcoming). Conflict and competition. In R. A. R. Gurung (Ed.), Research encyclopedia of psychology in the real world, Routledge

van Beest, I., & Rahal, R.-M. (2022). Social change: Conflict and competition. *The Routledge Encyclopedia of Psychology in the Real World* 

### **Working Papers**

Buchanan, E. M., C. Lewis, S., Paris, B., Forscher, P. S., Pavlacic, J. M., Beshears, J. E., ... et al. (2023). PSACR: The psychological science accelerator's COVID-19 rapid-response dataset. *OSF Preprints* 

Engel, C., & Rahal, R.-M. (2022). Eye-tracking as a method for legal research. *MPI Discussion Paper* 2022/7

Engel, C., & Rahal, R.-M. (2020). What the judge argues is not what the judge thinks: Eye tracking as a window into judicial decision making. *MPI Discussion Paper* 2020/3

# **Work in Progress**

Rahal, R.-M., & Schulze Spüntrup, F. (in preparation). Cognitive processes across the globe: Webcam-based eye-tracking analysis of ingroup bias in 17 societies

Rahal, R.-M., & Schulze Spüntrup, F. (in preparation). Cognitive processes of stereotyping in real groups: Deconstructing ingroup-biased giving with webcam-based eye-tracking

Rahal, R.-M., & Schulte-Mecklenbeck, M. (in preparation). Telling more about "telling more than we can know": Inferences from mouse-tracking and introspective reports

O'Hara, L.B.W., & Rahal, R.-M. (in preparation). Governing by persuasion: The motivational role of regulatory purpose for compliance with the law

Engel, C., & Rahal, R.-M. (in preparation). The jury will disregard this information: An eye-tracking analysis of cognitively processing inadmissible evidence

Engel, C., & Rahal, R.-M. (in preparation). Failure to replicate: No evidence of biased judgments when receiving inadmissible evidence

Fahrenwaldt, A., Olsen, J., Fiedler, S., & Rahal, R.-M. (in preparation). The intuition of deontological judgments: A meta-analysis

Engel, C., & Rahal, R.-M. (under review). What the judge argues is not what the judge thinks: Eye tracking evidence about the normative weight of conflicting concerns in a torts case

Bauer, G., Breznau, N. Gereke, J., Höffler, J.H., Janz, N., Rahal, R.-M., Rennstich, J.K., Soiné, H. (alphabetical order, revise) Teaching constructive replications in the social sciences

Brohmer, H., Hofer, G., Bauch, S., Breitner, J., Berkessel, J., Corcoran, K., Garcia, D., Gruber, F.M., Giuliani, F., Jauk, E., Krammer, G., Malkoc, S., Metzler, H., Mües, H., Otto, K., Rahal, R.-M., Salwender, M., Sczesny, S., Stahlber, D., ..., & Athenstaedt, U. (registered replication report, stage 1 in-principle acceptance). Effects of the generic masculine and its alternatives in germanophone countries. A

multi-lab replication and extension of Stahlberg, Sczesny, and Braun, 2001

Rahal, R.-M., Siebers, T., Sleegers, W.W.A., & van Beest, I. (revising). Your lies don't leave me cold. Assessing direct, indirect and physiological measures of lie detection

Rahal, R.-M., Fiedler, S., & De Dreu, C.K.W. (revising). Staying blind to stay fair: To avoid ingroup favoritism, decision makers avoid information about group membership

Rahal, R.-M., Hoeft, L., & Fiedler, S. (revising). Eyes on morals: An eye-tracking analysis of the cognitive processes of moral decision making

### **Grants / Prizes / Honors**

### 2020

Commendation of the Society for the Improvement of Psychological Science

### 2021-2025

Fellowship at the Center for Interdisciplinary Research (Young ZiF), Bielefeld University

### 2021

Workshop Grant International Association for Research in Economic Psychology

Workshop Grant Associatie van Sociaal Psychologische Onderzoekers

Workshop Grant German Social Psychology Section

### 2022

Hans Sauer Stiftung Special Funding Program (research funding)

# Lectures and Presentations (since 2020)

## 2020

## Invited Talks:

- University of Mannheim
- Leiden University
- Mannheim Centre for European Social Research, online
- Department of Social Psychology, Tilburg University, online
- Institute for Educational Quality Improvement, Humboldt University of Berlin, online
- Higher School of Economics, National Research University, online
- Higher School of Economics, National Research University, online
- Section of Cognitive Psychology, University of Bonn, online

### **Conference Presentations:**

- General Meeting of the European Association of Social Psychology (conference cancelled), Krakow
- 52nd Congress of the German Psychological Society (DGPs)/ 15th Austrian Psychological Society Congress (conference cancelled), Vienna
- 62nd Meeting of Experimental Psychologists (conference cancelled), Jena
- 41st Society for Judgment and Decision-Making Meeting, online

### 2021

### **Invited Talks:**

- Glasgow ReproducibiliTea, University of Glasgow, online
- London Judgment & Decision-Making Seminar, University College London, online
- University of the Netherlands, Hilversum
- Centre for Integrative Business Psychology, Aarhus University, online
- University of Vienna
- Higher School of Economics, National Research University, online
- Mainz University, online
- Max Planck Digital Library, online
- Beilstein Open Science Symposium, online

### **Conference Presentations:**

- Open Science Conference (Leibniz Information Centre for Economics), online
- Virtual Unconference in Open Science for Education Research (Center for Open Science), online
- Open Science and Replicability in the Behavioural Social Sciences Conference, online
- 19th TIBER Symposium, online
- 28th Subjective Probability, Utility, and Decision-Making Conference, online

### 2022

### **Invited Talks:**

- Saarland University, online
- Barcamp Open Science, Leibniz Information Centre for Economics, online
- Open Science Conference, Leibniz Information Centre for Economics, online
- Steedelijke Bestuur, Leiden University

### **Conference Presentations:**

- 63rd Meeting of Experimental Psychologists (symposium cancelled), Cologne
- Morality Workshop (talk cancelled), Obergurgel
- 53rd Congress of the German Psychological Society (DGPs), Hildesheim

### 2023

### Invited Talks:

- Italian Reproducibility Network, online
- Department of Social Psychology, Vrije Universiteit Amsterdam, talk cancelled

- Psychology Congress, Leiden University, talk cancelled
- 3rd Toronto Conference on Reproducibility, University of Toronto, online
- Bucerius Law School, Hamburg
- Meeting of the Society for the Improvement of Psychological Science, Padova (Keynote Speaker)
- University of Lübeck, online
- Researcher Mental Health Observatory (COST Action), forthcoming, online

### **Conference Presentations:**

- 1st Workshop for Women in Macroeconomics, Law and Economics, and Economic History, forthcoming, Bonn
- 29th Subjective Probability, Utility, and Decision-Making Conference, forthcoming, Vienna
- 41st European Group of Process Tracing Studies Annual Meeting, forthcoming, Vienna
- 20th Fachgruppentagung Rechtspsychologie (Legal Psychology Conference), forthcoming, Mainz

# **Teaching**

Summer term 2021 Heidelberg University Process Tracing in Judgment and Decision-Making Research (seminar)

Summer term 2022
Bonn University
Deciding What's Right (graduate lecture, European Summer School on Eye Movements)

Trifels Summer School Open Research Data: Quantitative & Qualitative

Winter term 2022/2023
Bonn University
Cognitive Psychology I: Judgment and Decision-Making (seminar)

Summer term 2023 Heidelberg University Experimental Psychology (seminar)

Heidelberg University Decision Processes in Social Contexts (seminar)

## **Public Service**

Since 2020 Steering Group Member of the German Reproducibility Network

**Since 2020** 

Equal Opportunities Officer at the Max Planck Institute for Research on Collective Goods

2022-2023

Advisory Board Member at Meta-Psychology

**Since 2022** 

Open Science Ambassador of the Center of Open Science

**Since 2023** 

Open Science Ambassador at the Max Planck Institute for Research on Collective Goods

# **Professional Activities**

### Referee for

Psychological Science, Journal of Experimental Psychology: General, Journal of Experimental Psychology: Learning, Memory, and Cognition, Judgment and Decision Making, Journal of Behavioral and Experimental Economics, Acta Psychologica, Psychonomic Bulletin & Review, European Journal of Personality, Psychophysiology, Psychoneuroendocrinology, Philosophical Psychology, PLOS ONE, International Journal of Occupational Safety and Ergonomics, Open Science Conference, Quarterly Journal of Experimental Psychology, Societies, Mathematics, British Journal of Psychology, Communications Psychology, Social Psychology Quarterly, Motivation and Emotion, Collabra: Psychology, Social Cognition, Meta-Psychology, Journal of Cognitive Psychology, Journal of Economic Psychology, Journal of Experimental Social Psychology, Scientific Reports, Group Processes & Intergroup Relations, Management Science Reproducibility Project

### **Editorial boards**

Meta-Psychology (editorial board member)
Peer Community in Registered Reports
(action editor)
Collabra: Psychology (associate editor)

### Memberships

Sigma Xi, European Association for Decision Making, Society for Judgment and Decision Making, German Psychological Society (DGPs), Associatie van Sociaal Psychologische Onderzoekers, Psychonomic Society

# Sebastian Riedmiller

# **Summary Report**

I started as a PhD student in the Experimental Economics Group and the University of Cologne under the supervision of Matthias Sutter in October 2020, after having successfully finished my M.Sc. and B.Sc. degrees in Economics at the University of Münster. Within my research since starting at the Max Planck institute, I explore how preferences influence the decision-making process and how policy interventions can help people make better decisions.

### **Preferences and Decision-Making**

One of my research areas lies in understanding how preferences shape individual decision-making. In one project, Sebastian Schneider, Stefan Trautmann, and I investigate the relationship between prudence as a third-order risk preference and precautionary saving, using a representative sample of German adults. Contrary to theoretical predictions, we find that people who are more prudent have lower precautionary savings, both on the intensive and on the extensive margin. However, since data collection took place during the second COVID lockdown, it could be that there were biases due to unexpected income losses or limited consumption opportunities. To investigate this from a long-term perspective, a second data collection with the same sample is currently being conducted.

Together with Enrico Diecidue, Thomas Langer, Sven Nolte, and Judith C. Schneider, I examine differences in preferences for information revelation. In contexts where there are multiple ways to disclose and communicate information about an outcome – such as earnings announcements, hiring decisions, or gambling – the timing, skewness, and information environment can influence which information the stakeholders want to know when. So far, it is not known how these preferences are

distributed and how they interact with each other, even though this is relevant for how information is communicated according to preferences. We investigate this interaction with the help of an experimental study. Currently, we are revising the paper and collecting more data for a requested resubmission.

## Policy Interventions to Make Better Decisions

My more applied research focus lies on testing and designing policy interventions to help people make better decisions. To design interventions that are more effective, Matthias Sutter, Sebastian Tonke, and I developed and tested a simple diagnostic framework together with a diagnostic survey tool to determine behavioral problems and predict the success of interventions across contexts. Using an online experiment, we show that the tool can identify whether people have awareness, intention, or implementation problems to follow a policy recommendation. Within our experiment, we find that our survey tool is able to show the behavioral problems at hand, and to predict the effectivity of interventions across contexts. Additionally, the survey tool can diagnose problems and predict intervention success on an individual level, therefore making it possible to target interventions and increase welfare. We are currently writing the first draft of the paper such that a working paper will be available shortly.

For my single-authored project for the PhD, I analyze how misperceptions and their correction relate to the take-up of the German federal means-tested financial student aid (BAföG), and how this interacts with the reasons for non-take-up. To this end, I have designed a new approach to measure misperceptions and apply an information intervention in a survey experiment with two phases. The first phase of the data collection has been completed. The second phase will follow at the end of



### Contact

riedmiller@coll.mpg.de

https://www.coll.mpg.de/sebastian-riedmiller

2023. As a subsequent project, working with the first-phase dataset, Sascha Strobl and I estimate the extent of the take-up gap that is caused by information constraints through micro-simulations. Additionally, we evaluate which students are particularly suffering from information constraints and therefore do not take up BAföG as a result. Setting up a new panel-survey with several thousands of students in Germany, we also plan to evaluate the impact of financial aid through BAföG on educational and labor market outcomes.

# Research Agenda

Within the next three years, I mainly plan to continue working on both streams of my research interests to develop current projects further and investigate consequential research questions. With regard to higher-order risk preferences, Sebastian Schneider, Stefan Trautmann, and I aim to investigate how an exogenous shock like the COVID pandemic influences risk preferences from a dynamic point of view. Since our project is based on data from the German Socioeconomic Panel, we have the chance to measure the preferences again and compare them to what we saw during the COVID pandemic.

With regard to my research area on policy interventions, I hope to test the diagnostic tool that Matthias Sutter, Sebastian Tonke, and I have developed in a field context. Additionally, first data of my single-authored dissertation project hint towards misperceptions of parents as drivers of students not applying for BAföG, as most of the means test is based on parents' income. I hope to set up a field experiment matching senior high-school students and child-parents to investigate these frictions more closely.

# **Work in Progress**

Riedmiller, S., Sutter, M., & Tonke, S. (draft available shortly). Designing effective interventions: Anamnesis, diagnosis, and prescription

Schneider, S. O., Riedmiller, S., & Trautmann, S. (draft available shortly). Higher-order risk intensities to predict field behavior in the general population

Diecidue, E, Langer, T., Nolte, S., Riedmiller, S., & Schneider, J. C. (data collection in preparation). Timing and skewness of information revelation: Evidence on information structures and compound lotteries

Riedmiller, S. & Strobl, S. (analysis ongoing). Identifying the information gap: Measuring the role of information constraints in student aid non-take-up

Riedmiller, S. (endline data collection in preparation). 'I won't get it anyway' – A field study on misperceptions about financial student aid and reasons for non-take-up

### **Grants / Prizes / Honors**

#### 2020

Max Planck Institute PhD Scholarship (1,500 € per month)

### 2023

- Research Visit Doctoral Scholarship (declined), Fulbright Germany (~8,500 €)
- Research Visit Doctoral Scholarship, German Academic Exchange Service (~10,000 €)
- Add-on Fellowship, Joachim Herz Foundation (12,500 €)

# Lectures and Presentations (since 2020)

2021

Interventions to Induce Behavioral Change IMPRS Thesis Workshop, Max Planck Institute, Bonn (virtual) March 2021

Present State of Research Chair of Experimental and Behavioral Economics Internal Seminar, University of Cologne, Germany September 2021

Anamnesis, Diagnosis, and Prescription for Economists EEG Internal Seminar, Max Planck Institute, Bonn (virtual) October 2021

### 2022

'I Won't Get It Anyway' – A Field Study on Misperceptions about Financial Student Aid and Reasons for Non-Take-Up IMPRS Thesis Workshop, Max Planck Institute, Bonn (virtual) March 2022

Theory-Based (Higher-Order) Risk Intensities in a Representative Sample and Their Role in Predicting Decisions in Risky Con-

2<sup>nd</sup> MPI-NHH Workshop, Max Planck Institute, Bonn, and FAIR NHH, Bergen (virtual) May 2022

Higher-Order Risk Intensities to Predict Field Behavior in the General Population Foundations of Utility and Risk Conference, Ghent, Belgium July 2022

'I Won't Get It Anyway' – A Field Study on Misperceptions about Financial Student Aid and Reasons for Non-Take-Up Summer School "RCTs in the Social Sciences", University of Stavanger, Norway September 2022

'I Won't Get It Anyway' – A Field Study on Misperceptions about Financial Student Aid and Reasons for Non-Take-Up C-SEB Early Ideas Seminar, University of Cologne, Germany October 2022

'I Won't Get It Anyway' – A Field Study on Misperceptions about Financial Student Aid and Reasons for Non-Take-Up IMPRS-OVGU Topics Workshop, University of Magdeburg, Germany November 2022

2023

Warum beantragen Studierende kein BAföG, obwohl sie förderfähig sind? Und kann man sie dazu bringen? German Federal Ministry of Education and Research, Berlin/Bonn (virtual) February 2023

Designing Effective Interventions: Anamnesis, Diagnosis, and Prescription IMPRS Thesis Workshop, Raesfeld, Germany March 2023

Designing Effective Interventions: Anamnesis, Diagnosis, and Prescription Summer School "Behavioral Economics: Behind the Scenes", University of Copenhagen, Denmark June 2023 'I Won't Get It Anyway' – A Field Study on Misperceptions About Financial Student Aid and Reasons for Non-Take-up IMPRS-UPF Topics Workshop, University Pompeu Fabra, Barcelona, Spain November 2023

Designing Effective Interventions: Anamnesis, Diagnosis, and Prescription
Experimental and Behavioral Economics
Workshop, Ca' Foscari University of Venice,
Italy
November 2023

# **Public Service**

Since 2021 PhD representative, Max Planck Institute for Research on Collective Goods

# **Professional Activities**

Referee for

Management Science



Contact
rottmann@coll.mpg.de

https://www.coll.mpg.de/ johannes-rottmann

# Johannes Rottmann

# **Summary Report**

I have been a part-time Research Fellow at the institute and a PhD candidate in law since October 2020. Besides that, I am affiliated with the University of Bonn as a part-time Research Fellow at the Institute for Commercial and Economic Law as well as the Center for Advanced Studies in Law and Economics, As a participant of the IMPRS BeSmart doctoral program, I have spent most of my first year completing PhD studies at the Cologne Graduate School of Economics, where I focused on theoretical and applied (micro-)economics as well as experimental and empirical methods, including econometrics.

During the second year, I worked out my dissertation topic, which lies at the intersection of industrial organization and competition law and deals with competitor-based pricing (so-called meeting/ beating competition clauses). While according to economic research these clauses pose a threat to competitive pricing, the traditional understanding of competition law is only poorly suited to deal with such instances of unilateral collusion, that is, supra-competitive pricing accomplished by unilaterally applied means of coordination. For the thesis, I aim to translate the existing economic evidence for a legal audience and transpose it into the prevailing legal doctrine of German and European Competition Law. The ultimate goal is to advance the legal notion of a "concerted practice" under the existing cartel prohibitions (Art. 101 TFEU; § 1 GWB). In addition to that, a workable theory of harm regarding the anti-competitive effects of competitor-based-pricing has to be established.

Besides that, I became part of a research project on the self-selection of lawyers into different legal professions. The project evolved from an early-stage research proposal with a fellow PhD candidate from the University of Cologne.

Together with personnel, organizational, and behavioral economists from the Universities of Cologne, Innsbruck, and our own MPI's Experimental Economics group, we entered into a cooperation with the North-Rhine-Westphalian Ministry of Justice and gained access to a large-scale sample of trainee lawyers at the state's regional courts.

During the third year, I conducted most of the material research for the PhD project. Half of the project is dedicated to an in-depth analysis of the economic evidence on "competitor-based pricing". The other half contains the respective legal analysis in which I analyze if and how the use of meeting/beating competition clauses could be tackled under current competition laws. I have recently completed a first draft of the dissertation.

Between April 2022 and March 2023, we ran the aforementioned (lab-in-the-field) survey experiment in almost 90 sessions at various regional courts across the state with every newly-hired trainee lawyer in NRW, Germany (n = 1653). Because the study is designed as a panel, we are currently preparing a second survey, meant to be answered by trainee lawyers at the end of their two-year mandatory training. This will allow us to undertake a before/after comparison and evaluate, among other things, how the practical training shapes career decisions.

# Research Agenda

My research agenda for the remaining time as a PhD student features the completion of the aforementioned two streams of research, the legal monograph in competition law, and the empirical field research on social preferences and self-selection of job market entrants into different legal professions. Aside from the PhD monograph in German, I plan to target an international and inter-

disciplinary audience with a companion paper summarizing my findings in English. In the late summer of 2023, the second wave of data elicitation will start and take place throughout an entire year (August 2023-July 2024).

# **Publications (since 2020)**

### Journal Articles (not peer-reviewed)

Rottmann, J. & Zimmer, D. (2022). Mehr Konvergenz im Kartellrechtssystem? Die Bedeutung der Intel-Entscheidungen aus Anlass von EuG, Urt. v. 26.01.2022, Rs. T-286/09 RENV, Wirtschaft und Wettbewerb (WuW), 370-377

Rottmann, J. & Schäfer, L. (2021). Das Ende einer langen Reise – Anmerkung zu BGH, Beschl. v. 18.05.2021, KVR 54/20 - "enge Bestpreisklausel / Booking.com", Wirtschaft und Wettbewerb (WuW), 562-567

Rottmann, J., Göhsl, J.-F., & Schaut, M. (2021). Tagungsbericht "Regulierung für Algorithmen", *Juristenzeitung (JZ)*, 34-36

Rottmann, J. & Göhsl, J.-F. (2020). Nichtkoordinierte Effekte in der Europäischen Zusammenschlusskontrolle im Lichte der ,CK Telecoms'-Entscheidung des EuG, Zeitschrift für Wettbewerbsrecht (ZWeR), 4, 493-532

### **Book Chapter**

Rottmann, J., Göhsl, J.-F., & Schaut, M. (2021). Tagungsbericht, in: Zimmer, D. (Hrsg.), Regulierung für Algorithmen und Künstliche Intelligenz, 357-384

# **Work in Progress**

Rottmann, J., The law and economics of competitor-based-pricing – can German & European competition law deal with unilateral collusion? (PhD thesis, monograph, in preparation for 2023/2024, first draft completed in February 2023: 281 p.)

Rottmann, J., Should I Stay or Should I Go? How do law-school preparatory classes perform against commercial cram courses in preparing law students for the first state exam? Evidence from Germany (Working Paper in preparation for 2024)

Grabe, L., Heinz, M., Rottmann, J., & Schumacher, H., Law careers in the public and private sector – social preferences and self-selection of German trainee lawyers into different legal occupations (lab-in-the-field-/survey-experiment; data collection ongoing; first draft expected in 2024)

# **Presentations (since 2020)**

### 2022

The Law and Economics of Competitor-Based-Pricing, or: Can German & European Competition Law deal with unilateral collusion?

Max Planck Institute for Research on Collective Goods & University of Magdeburg, IMPRS BeSmart Topics Workshop, Magdeburg 23 November 2022

#### 2023

(Exklusive) Fremdbegünstigung aus der Perspektive des Kartell- und digitalen Regulierungsrechts (w/J-F. Göhsl) University of Bonn, Center for Advances Studies in Law and Economics, Rechtsökonomisches Kolloquium 26 January 2023

Should I Stay or Should I Go? Wie gut bereiten universitäre und kommerzielle Repetitorien auf die (erste) staatliche Pflichtfachprüfung in den Rechtswissenschaften vor? University of Bonn, Center for Advances Studies in Law and Economics, Rechtsökonomisches Kolloquium 27 April 2023

# **Teaching**

Winter term 2021/2022, 2022/23, 2023/24 (scheduled)

University of Bonn, Germany Gesellschaftsrecht und Ökonomie (Law and Economics of Corporations) Elective module for 3<sup>rd</sup> year bachelor's and 4<sup>th</sup> year law students; Co-lecturer (/w Dr. J.-F. Göhsl)

### Summer term 2022

University of Bonn, Germany
Grundlagen der Rechtsökonomik (Introduction to Law and Economics)
Foundational lecture for 1st year bachelor's / law students; one time substitute lecturer for JProf. Dr. S. Hippel

Besprechung einer zivilrechtlichen Examensklausur (Debriefing of a private law mock exam)

Klausurenkurs des universitären Repetitoriums (1st state exam preparatory course)

### Summer term 2023

University of Bonn, Germany
Grundlagen der Rechtsökonomik (Introduction to Law and Economics)
Foundational lecture for 1st year Bachelor and law students; one time substitute lecturer for JProf. Dr. S. Hippel
Rechtsökonomisches Seminar (Bachelor thesis seminar)

Co-supervision of three Bachelor theses in the area of Law & Economics (with JProf Dr. S. Hippel)

# **Professional Activities**

### Since 2020

University of Bonn, Germany & Max Planck Institute for Research on Collective Goods, Bonn, Germany Co-Organizer of the bi-weekly ECONtribute Law & Econ Workshop

(currently) joint with D. Damast, F. Göhsl, S. Hippel, P. Langenbach



Contact
salicath@coll.mpg.de

https://www.coll.mpg.de/daniel-salicath

# **Daniel Salicath**

# **Summary Report**

I joined Matthias Sutter's Experimental Economics Group as a Research Fellow in October 2017. After completing my PhD in Economics at the University of Cologne in December 2021, I continued as a Senior Research Fellow until May 2023. In June 2023, I started a position as a Senior Advisor for the Norwegian Labour and Welfare Organization. I hold an MSc in International and Development Economics from the University of San Francisco and a BSc in Economics from the University of Toulouse. Over the past few years, my research has focused on conducting large-scale field experiments in three main areas: (i) the impact of poverty on decision-making; (ii) information and resource interventions; and (iii) incentives.

## The Impact of Poverty on Decision-Making

In recent years, there has been renewed interest among scientists and policy-makers in understanding the psychological causes and consequences of poverty. In Haushofer and Salicath (work in progress), we summarize new developments in this literature. First, we discuss advances in our understanding of the relationship between income and psychological well-being. There is a robust positive relationship, both within and across countries, and in both correlational and causal analyses. Second, we summarize recent work on the impact of "scarcity" and stress on economic preferences and decision-making. Our view of this literature is that the evidence is relatively weak. Third, we summarize evidence on the impact of psychological interventions on economic outcomes. Light-touch psychological interventions, such as videos that aim to raise aspirations, have shown some promise in encouraging investment and improving economic well-being. Similarly, psychotherapy and pharmacological mental-health treatments have

positive effects on economic outcomes. Relative to the effects of cash transfers, these impacts are small in absolute terms and large in per-dollar terms.

In Salicath and Sutter (work in progress), we investigate the impact of financial shocks on economic decision-making among low-income individuals. Through a lab-in-the-field experiment involving 1,917 factory workers in Nairobi, we manipulate poverty levels and financial shocks by varying monthly paydays and credit exposures. Our findings reveal significant effects on various aspects of economic decision-making, including time preferences, higher-order risk preferences, and competitiveness. Cluster analysis further identifies distinct clusters of economic preferences among participants. Overall, this study emphasizes the importance of considering the impact of financial shocks when understanding economic decision-making in low-income populations experiencing persistent poverty.

### **Information and Resource Interventions**

In our projects, we aim to understand how information and resource interventions can effectively address the issue of arsenic contamination in groundwater, which poses a significant health risk. In a first project, Priyam, Salicath, and Sutter (work in progress), we examine the consequences of a light-touch information intervention on changes in water quality, safe water practices, and health outcomes in rural areas of Bihar, India. Since arsenic in groundwater is tasteless, colorless, and odorless; villagers are generally unaware of the health risks associated with its consumption. Using a randomized controlled trial with over 2,300 households, we implement two treatments to determine the most effective format for delivering information and influencing behavior. The intervention successfully spreads knowledge and encourages the adoption of healthy water-treatment practices, even one year after the intervention. Moreover, there is a substantial reduction in the consumption of unsafe water.

In a second project with a similar context, Priyam, Salicath, and Sutter (work in progress), we recruited 3,700 households to explore the interplay between lack of knowledge and limited resources in a 2x2 design. Our results suggest that combining information and resources is the most effective approach to improving health outcomes. Initially, over 80% of the population were consuming unsafe water, but our water-filter treatments significantly reduced arsenic levels compared to other treatments. The provided resources were utilized effectively, resulting in positive outcomes. While a detailed analysis of health data is still pending, it appears that both information and resources are crucial for achieving positive behavioral changes related to health.

### **Incentives**

Incentives are commonly used to increase effort, but individuals respond differently to them. In Bašić et al. (work in progress), we investigate this heterogeneity by examining how personal characteristics, preferences, and socioeconomic backgrounds relate to performance in a real-effort task. We analyze the performance of 1,914 highschool students under fixed, piece-rate, or tournament payment schemes. When self-selection into a scheme is possible, we observe strong sorting based on abilities, as well as personality traits, economic preferences, and socioeconomic status. In cases of exogenous assignment, different factors come into play, suggesting that optimal effort depends on the payment-scheme assignment and individual traits.

## Research Agenda

In my new position in Norway, I intend to continue employing experimental methods and field experiments to investigate ways to enhance the digital services provided by the Norwegian Labour and Welfare Administration. While still in the early stages, one primary goal is to establish collaborations with external researchers who can contribute their expertise. Additionally, I plan to publish the work conducted at the MPI, where we are nearing submission. Therefore, I will continue working on topics related to financial shocks and decision-making, information and resource interventions, and incentives.

# **Work in Progress**

Bašić, Z., Bortolotti, S., Salicath, D., Schmidt, S., Schneider, S. O. and Sutter, M. (draft in preparation). Heterogeneity in effort provision: Evidence from alabin-the-field experiment

Haushofer, J. and Salicath, D. (draft in preparation). The psychology of poverty: Where do we stand?

Priyam, S., Salicath, D. and Sutter, M. (draft in preparation). Information intervention to promote safe water consumption: Evidence from an rct in arsenic affected areas in india

Priyam, S., Salicath, D. and Sutter, M. (draft in preparation). How to contain arsenic-contaminated groundwater: An RCT in India and its effects on health

Salicath, D. and Sutter, M. (draft in preparation). Impact of financial shocks on decision-making: Experimental evidence from Kenya

# **Grants / Prizes / Honors**

2022

Diligentia Foundation for Empirical Research

### 2020

- ECONtribute: Markets & Public Policy (w/ Shambhavi Priyam and Matthias Sutter)
- ECONtribute: Markets & Public Policy (w/ Angelo Romano and Matthias Sutter)
- Cluster's Young ECONtribute
- C-SEB junior start-up grant

# Lectures and Presentations (since 2020)

2020

Information Intervention to Promote Safe Water Consumption: Evidence from an RCT in Arsenic Affected Areas in India Economic Science Association (ESA) Global Online Around-the-Clock Meetings 2020 September 2020

2021

Information Intervention to Promote Safe Water Consumption: Evidence from an RCT in Arsenic Affected Areas in India NHH-MPI Workshop, virtual April 2021

Information Intervention to Promote Safe Water Consumption: Evidence from an RCT in Arsenic Affected Areas in India Economic Science Association (ESA) Global Online Around-the-Clock Meetings 2021 July 2021

Information Intervention to Promote Safe Water Consumption: Evidence from an RCT in Arsenic Affected Areas in India Young Economist in Applied Economics Workshop (YEP), Cologne October 2021

Information Intervention to Promote Safe Water Consumption: Evidence from an RCT in Arsenic Affected Areas in India Symposium on Economic Experiments in Developing Countries (SEEDEC), Bergen (virtual)

October 2021

Information Intervention to Promote Safe Water Consumption: Evidence from an RCT in Arsenic Affected Areas in India Field Experiments and Experiments with Non-Standard Subjects (EAYE) workshop, Innsbruck (virtual) November 2021

2022

Information Intervention to Promote Safe Water Consumption: Evidence from an RCT in Arsenic Affected Areas in India Seminar presentation, University of San Francisco (virtual) March 2022

Information Intervention to Promote Safe Water Consumption: Evidence from an RCT in Arsenic Affected Areas in India Seminar presentation, University of Stavanger, Stavanger March 2022 Information Intervention to Promote Safe Water Consumption: Evidence from an RCT in Arsenic Affected Areas in India Seminar presentation, Chr. Michelsen institute (CMI), Bergen March 2022

Information Intervention to Promote Safe Water Consumption: Evidence from an RCT in Arsenic Affected Areas in India Seminar presentation, NHH, Bergen March 2022

Impact of Financial Shocks on Decision-Making: Experimental Evidence from Kenya
FAIR Development workshop, Bergen

Information Intervention to Promote Safe Water Consumption: Evidence from an RCT in Arsenic Affected Areas in India Seminar presentation, Frisch Center, Oslo

May 2022
Information Intervention to Promote Safe Water Consumption: Evidence from an RCT in Arsenic Affected Areas in India Seminar presentation, University of Gothen-

burg, Gothenburg May 2022

March 2022

Information Intervention to Promote Safe Water Consumption: Evidence from an RCT in Arsenic Affected Areas in India Seminar presentation, OsloMet, Oslo June 2022

Information Intervention to Promote Safe Water Consumption: Evidence from an RCT in Arsenic Affected Areas in India 7th Maastricht Behavioral Economic Policy Symposium, Maastricht June 2022

Information Intervention to Promote Safe Water Consumption: Evidence from an RCT in Arsenic Affected Areas in India Nordic Conference in Development Economics, Helsinki June 2022

Information Intervention to Promote Safe Water Consumption: Evidence from an RCT in Arsenic Affected Areas in India Seminar presentation, Norwegian University of Life Sciences, Ås June 2022

Information Intervention to Promote Safe Water Consumption: Evidence from an RCT in Arsenic Affected Areas in India Seminar presentation, Norwegian Agency for Development Cooperation, Oslo June 2022 How to Contain Arsenic-Contaminated Groundwater: An RCT in India and its Effects on Health Economic Science Association (ESA) European Meeting 2022, Bologna

### 2023

August 2022

Impact of Financial Shocks on Decision-Making: Experimental Evidence from Kenya
Seminar presentation, NHH, Bergen
March 2023

Impact of Financial Shocks on Decision-Making: Experimental Evidence from Kenya
Seminar presentation, Busara, Nairobi (virtual)
April 2023

Impact of Financial Shocks on Decision-Making: Experimental Evidence from Kenya
MPI – CREED workshop, Amsterdam
May 2023

### **Professional Activities**

Memberships

Member of Center for Social and Economic Behavior (C-SEB) since 2021

# **Ali Seyhun Saral**

# **Summary Report**

I worked as the Lab Manager of the Decision Lab, the experimental laboratory of the institute, from February 2018 to August 2021. From 2019 to 2021, I was a part-time member of Matthias Sutter's Experimental Economic Group. As Lab Manager, during my time at the institute, my main task was to facilitate the experiments conducted by the researchers at the institute. However, I also had the opportunity to do research, which I am continuing as a postdoctoral researcher at the Institute for Advanced Study in Toulouse, France.

I hold a B.A. in Economics from Istanbul University, an M.Sc. in Economics from Istanbul Bilgi University, and a PhD in Economics and Management from the University of Trento.

My research focuses on cooperation, public goods, and cultural evolution. I use a diverse set of research methods, including lab and online experiments, as well as computational and mathematical modeling.

## Research Agenda

### **Cooperation and Reciprocity**

Cooperation and reciprocity are fundamental aspects of human behavior and have been extensively studied across various disciplines. By using experiments and agent-based models, I aim to bridge the gap between experimental fundings and evolutionary insights.

The project titled "The Evolution of Conditional Cooperation" (Saral) investigates the evolutionary success of conditionally cooperative strategies. Using an agent-based evolutionary model, the project aims to establish connections between experimental findings from the literature and the measures of evolu-

tionary viability obtained through simulations.

In the research project "Reciprocity as a Social Strategy: Evolution under Conflict rather than Cooperation" (Romano, Saral, and de Dreu), we delve into the evolution of cooperation and reciprocity within socio-ecological systems, focusing on conflict. Through an agent-based study, we manipulate the level of conflict among agents engaged in asymmetric games. The study finds that reciprocity as a strategy is particularly successful in defending against competitiveness and evolves more readily under competition.

### **Collective Choice**

In this research area, I try to provide insights into collective decision-making processes, such as voting procedures, consensus-building, and deliberation, to identify and address potential biases and inefficiencies in decision-making. In the project titled *Wisdom of Crowds and Voting* (Saral, Hennes, work in progress), we experimentally and computationally investigate several voting procedures and their effect on the performance of individuals collaborating on a peer-production good. We examine how social influence hinders or promotes better choices under different voting rules.

In the study "Open and Closed Societies: Six Centuries of Institutional Change" (Casari, Lisciandra, and Saral), we investigate how affluent societies employ immigration restrictions to protect their wealth. Through the use of a model and historical evidence, we demonstrate how institutional change emerges locally, spreads contagiously, and leads to societies becoming locked into closed systems. We focus on the institutional trajectory of hundreds of communities in Italy over six centuries (1200-1800), where the closure took the form of patrilineal versus egalitarian membership. We uncover the mechanisms behind the gradual transition from an open to a



Contact
saral@posteo.de
https://www.saral.it/

closed system and explore the potential for restoring an open system through centralized intervention.

#### **Cultural Evolution**

My most recent interdisciplinary research focuses on how cultural evolution shapes human development. The study on cumulative culture aims to explore the dynamics and conditions of cultural evolution. I investigate how innovations and knowledge accumulate across generations, leading to advancements in human society.

In Evolution of Cognitively Appealing Practices (Saral, Jacquet, Singh, and Derex) we aim to investigate the persistence of ineffective cultural practices and the role of subjective appeal in their evolution. Many cultures have developed and retained such practices as bloodletting, voodoo, magic, and alternative medicine. We experimentally investigate whether biases based on the subjective appeal hinder collective learning. In our experiment, participants interact with a task and transmit information to subsequent players, including their strategies and explanations. The experiment employs low-appeal and high-appeal treatments, with varying levels of aesthetic appeal and associated costs. By analyzing the participants' behavior, we seek to gain insights into the impact of ineffective subjective appeal on the evolution of potential solutions.

Relatedly, Freeriding on the Past: Investigating the Effect of the Age of Social Information on Human Exploration (Derex, Yasar, and Saral) investigate how individuals value social information based on the features of the cultural evolutionary process such as the age and the length of this process. By conducting a computer-based experiment, the study aims to provide insights into the human exploration and its potential effects on technological development.

# **Publications (since 2020)**

Articles in Peer-Reviewed Journals

Huber, C., Dreber, A., Huber, J., Holzmeister, F., Fiedler, S., Rahal, R.-M., Saral, A. S., & et al. (2023). Competition and moral behavior: A metaanalysis of forty-five crowd-sourced experimental designs, *PNAS*, 120(23), e22155721

Romano, A., Saral, A. S., & Wu, J. (2022). Direct and indirect reciprocity among individuals and groups. *Current Opinion in Psychology*, 43, 254-259

Andreozzi, L., Ploner, M., & Saral, A. S. (2020). The stability of conditional cooperation: Beliefs alone cannot explain the decline of cooperation in social dilemmas. *Scientific Reports*, 10(1), 13610

### **Working Papers**

Andreozzi, L., Faillo, M., & Saral, A. S. (2021). Reciprocity in dictator games: An experimental study. *Available at SSRN* 3959663

# Work in Progress

Casari, M. Pinna, M., & Saral, A. S. (revise and resubmit), Are gender differences in risk attitudes weaker in representative samples?

Romano, A., Saral, A. S., & De Dreu, C. (in submission), Reciprocity as a social strategy evolves more readily under conflict rather than cooperation

Saral, A. S. (in preparation), Evolution of conditional cooperation in prisoner's dilemma: An agent-based model

Saral, A. S. & Hennes, A. (in preparation), Wisdom of crowds and social influence: A comparison of voting rules

Casari, M., Lisciandra, M., & Saral, A. S. (in preparation), Open and closed societies: Six centuries of institutional change

Saral, A. S., Jacquet, A., Singh, M., & Derex, M. (ongoing), Evolution of cognitively appealing practices

Derex, M., Yasar, A., & Saral, A. S. (ongoing), Freeriding on the past: Investigating the effect of the age of social information on human exploration

# Lectures and Presentations (since 2020)

2023

Evolution of Cognitively Appealing Practices MPI for Human Development, ESLR Workshop, Berlin, Germany 3 July 2023

2022

Is Transparency Surveillance? Institute for Advanced Study in Toulouse, PIREN Workshop, Collioure, France 20 October 2022

Wisdom of Crowds and Social Influence Institute for Advanced Study in Toulouse, Seminar, Toulouse, France 16 September 2022

Wisdom of Crowds and Social Influence Bologna University, ESA European Meeting, Bologna, Italy 31 August 2022

Wisdom of Crowds and Social Influence Leiden University, Conflict and Cooperation Lab Seminar, Leiden, Netherlands 15 June 2022

Wisdom of Crowds and Social Influence Trento University, Seminar, Trento, Italy 8 June 2022

### **Teaching**

Summer term 2022 Leiden University Agents and Games: Agent-Based Modelling Crash Course

Winter term 2021/2022 Trento University Introduction to Computer Science for Economics and Management

Summer term 2021 University of Erfurt Programming Experiments with oTree: Crash Course

## **Professional Activities**

### Referee for

Scientific Reports, Journal of Behavioral and Experimental Economics, Journal of Open-Source Software, International Journal of Behavioral Medicine

# Julia Sasse

# **Summary Report**

I was a member of the Research Unit "Moral Courage" as a Senior Research Fellow from May 2017 until April 2022. Afterwards, I joined the Chair of Cyber Trust at the Technical University in Munich before becoming a professor at the Applied University in Ansbach in March 2023.

At the MPI, our work, broadly speaking, centered on investigating when, why, and how uninvolved bystanders intervene against witnessed moral transgressions, despite potential costs to themselves. Within the group, I led and contributed to a range of research projects, from projects on fundamental psychological processes underlying moral courage to projects situated in rather applied contexts, such as the evaluation of different forms of social-media moderation. Below, I summarize central projects that I initiated during my time at the MPI and that have led to fruitful, ongoing collaborations.

# Research Agenda

A large part of my research focused on the functions of emotions in moral courage. While most theoretical models of moral courage assume a key role of anger, this role to date is not well understood. To establish whether anger is causal for moral courage to occur, Anna Baumert and I developed a modified version of the three-person-punishment game, which we coupled with an anger-induction procedure. The game allows us to observe costly behavioral reactions to observed unfairness, and anger induction allows us to manipulate the extent to which participants experience anger. In a series of experiments, we tested a range of anger-induction procedures and demonstrated that anger indeed leads to punishment of unfairness if it is integral - i.e., originates in the unfair situation - rather

than incidental – i.e., carried over from an unrelated situation. We are currently in the process of writing up these findings (Sasse & Baumert, in preparation). Moreover, we are preparing an application for DFG funding to expand this line of work. Against the backdrop that anger is causal for moral courage, we plan to investigate the concrete underlying psychological mechanisms.

Next to my research program on emotions in moral courage, I am a co-PI on a project titled "Personalized Al-Based Interventions against Online Norm Violations: Behavioral Effects and Ethical Implications", funded by the Institute for Ethics in Artificial Intelligence at the Technical University Munich. In this project, we combine expertise from psychology, computer science, and philosophy to advance the understanding of effective means against online norm violations. As part of this project, Prof. Dr. Jens Grossklags (Technical University Munich) and I investigated the effectiveness and acceptance of different forms of moderation (i.e., deletion and counterspeech) of sexist comments on social media (Sasse & Grossklags, in press). In further collaborative projects, we are currently running an intervention study against racist slurs on twitter (Cypris et al., ongoing a)) and are testing potential cumulative effects of repeated counterspeech on bystander engagement in a longitudinal study (Cypris et al., ongoing b)).

I also spend considerable time working with and mentoring Bachelor, Masters, and PhD students. I served as a day-to-day advisor for Dr. Daniel Toribio-Flórez (now University of Kent, UK), and we successfully published parts of his PhD project on the effects of situational factors on third-party punishment in one of the leading journals of our discipline (Toribio-Flórez et al., 2023). I am also the day-to-day advisor for Niklas Cypris, who investigates the effects of signaling social norms to bystanders of



Contact
julia.sasse@hs-ansbach.de

norm violations and to transgressors on social media. Together, we wrote a book chapter on Online Moral Courage for the Handbook of Peace Psychology. intended for use in research, teaching. and application (Sasse et al., 2023). With Gabriela Kuechler (now a PhD student at the University of Heidelberg), I investigated situational and dispositional predictors of high-risk prosocial behavior in the context of the COVID-19 pandemic (Kuechler et al., in preparation). Together with Valerie Benning (now a PhD student at the University of Munich), we looked at how anger expression in response to moral transgressions is perceived by others. We were particularly interested in whether anger expression may be used as situational information in the context of ambiguous norm transgressions (Benning et al., ongoing). With two Masters students at the University of Wuppertal, I investigated whether witnesses to norm transgressions use anger expression as a substitute or complement of behavioral intervention and investigated situational and dispositional factors that may impact the intervention decision (Sasse & Baumert, ongoing). Lastly, during my time at the Technical University in Munich, I supervised a range of student projects on the intersection of computer science and psychology, in which we looked at the effects and handling of sexist content on social media (e.g., Niedermeier, Sasse, & Grossklags, in preparation).

# **Publications (since 2020)**

### **Articles in Peer-Reviewed Journals**

Baumert, A., Mentrup, F. E., Klümper, L., & Sasse, J. (2023). Personality processes of everyday moral courage. *Journal of Personality*, 00, 1–20

Toribio-Florez, D., Sasse, J., & Baumert, A. (2023). "Proof under reasonable doubt": Ambiguity of the norm violation as boundary condition of third-party punishment. *Personality and Social Psychology Bulletin*, 49, 429-446

Sasse, J., Nazlich, T., Alrich, K., Frey, D., & Baumert, A. (2022). Mitigating intergroup conflict: Effectiveness of qualifying subjective justice views as an intervention technique

in comparison to empathy induction. Social Justice Research

Sasse, J., Halmburger, A., & Baumert, A. (2022). The functions of anger in moral courage – insights from a behavioral study. *Emotion*, 22, 1321-1335

Sasse, J., Li, M., & Baumert, A. (2022). How prosocial is moral courage? *Current Opinion in Psychology*, 44, 146-150

Sasse, J., van Breen, J., Spears, R., & Gordijn, E. (2021). The rocky road from experience to expression of emotions – women's anger about sexism. *Affective Science*, 2, 414-426

Baumert, A\*., Li, M\*., Sasse, J.\*., & Skitka, L. (2020). Standing up against moral violations: Psychological processes of moral courage [Editorial]. *Journal of Experimental Social Psychology*, 88, 103951. (\*shared first authorship)

### **Conference Proceedings**

Sasse, J., & Grossklags, J. (forthcoming). Breaking the silence: Investigating which types of moderation reduce negative effects of sexist social media content. *Proceedings of the ACM on Human-Computer Interaction* 

### **Book Chapters**

Sasse, J., Cypris, N., & Baumert, A. (2023). Civic courage online. In: C. Cohrs, N. Knab, & G. Sommer. *Handbuch Friedenspsychologie* 

# **Work in Progress**

Baumert, A., Halmburger, A., Kuechler, G., Sasse, J., & Wagner, J. (in preparation). Personality characteristics of moral courage: An extreme groups approach

Benning, V., Sasse, J., Baumert, A. (ongoing). Perceptions of anger expression in response to moral transgressions

Cypris, N., Engelmann, S., Sasse, J., Grossklags, J., (ongoing a)). Transgressor and bystander reactions to counterspeech on Twitter

Cypris, N., Engelmann, S., Sasse, J., Grossklags, J., (ongoing b)). Effects of longitutinal exposure to bystander counterspeech on own counterspeech

Fahrenwaldt, A.\*, Toribio-Florez\*, D., Sasse, J., & Baumert, A. (in preparation). The effect of governmental COVID-19 measures on physical distancing dorms and intervention against deviations: A case study in Germany.(\*shared first authorship)

Kuechler, G., Sasse, J., Niesta Kayser, D., & Baumert, A. (in preparation). Who cares – who dares? Predicting risky vs. non-risky prosocial behavior from personality and fear

Niedermeier, M., Sasse, J., & Grossklags, J. (in preparation). User-oriented evaluation of a nlp-based tool for the detection and distinction of benevolent and hostile sexism on social media

Sasse, J., & Baumert, A. (in preparation). The causal role of anger in moral courage.
Sasse, J., & Baumert, A. (ongoing). Strategic anger expression as a form of moral courage

# Grants / Prizes / Honors

2019-2023

"Personalized Al-Based Interventions against Online Norm Violations: Behavioral Effects and Ethical Implications" funded by the Institute for Ethics in Artificial Intelligence, Co-Pl; principal investigators: A. Baumert, J. Grossklags, (500,000 Euro)

# Lectures and Presentations (since 2020)

2021

Investigating the Causal Effects of Anger on Costly Third-Party Punishment TIBER Symposium, Tilburg, Netherlands August 2021

2022

Investigating the Causal Effects of Anger on Costly Third-Party Punishment International Conference on Social Dilemmas, Copenhagen, Denmark July 2022

Investigating the Causal Effects of Anger on Costly Third-Party Punishment DGPs Kongress, Hildesheim, Germany September 2022

2023

Strategic Anger Expression as a Form of Moral Courage EASP General Meeting, Krakow, Poland July 2023

### **Teaching**

Winter term 2022/2023 Applied University Ansbach Social Psychology (Sozialpsychologie) Summer term 2020-2023 University of Bonn, University of Wuppertal, Technical University Munich Supervision of Bachelor's and Master's Theses

# **Public Service**

2019-2022 Researcher Representative of the MPI for Research on Collective Goods

2019-2022 Ombudsperson of the MPI for Research on Collective Goods

# **Professional Activities**

## Referee for

Journal of Experimental Social Psychology Personality Social and Psychology Bulletin Nature Scientific Reports European Journal of Social Psychology Frontiers in Psychology Social Justice Research Comparative Political Studies Europe's Journal of Psychology

## Memberships

Since 2013 Member of the European Association of Social Psychology

Since 2013 Member of the Deutsche Gesellschaft für Psychologie



### Contact

scheuch@coll.mpg.de

https://www.coll.mpg.de/robin-scheuch

# **Robin Scheuch**

# **Summary Report**

I started my university studies with an interdisciplinary Bachelor's degree in Philosophy & Economics at the University of Bayreuth, Germany. In order to enhance my economic expertise, I then continued my studies with a Master's degree in Economics at the University of Trento, Italy, specializing in behavioral and experimental economics. I discovered the topic of tax evasion, which then became the subject of my Master's thesis and should become the main part of my future research agenda. After the Master's degree, I decided to take a break from the world of academia. I worked for three years as a data analyst and consultant in Milan, before finally starting as a Research Fellow at the Max Planck Institute in October 2022.

threat of sanctions. For many countries, it is of crucial importance to limit tax evasion. Often, however, resources for detecting and punishing evaders are limited. That is why it is important to understand the motives of people for (not) paying taxes. My research, someday in the future, can help policy-makers to find effective measures against tax evasion that might be less costly than traditional sanctioning mechanisms.

# Research Agenda

As I am at the beginning of my PhD, this research agenda is still work in progress. In my future research, I would like to continue the work that I started with my Master's thesis, analyzing tax evasion from a behavioral-economics point of view. As part of the thesis. I designed an experimental setup in order to elicit the intrinsic motivation of people to pay taxes and to see how this intrinsic motivation is affected by external enforcement mechanisms, such as audit and fines. I will use my time at the Max Planck institute to delve further into this topic, especially examining the effectiveness of so-called weak enforcement in the context of fighting tax evasion. The concept of weak enforcement describes a positive sanction that is too low to deter a rational agent from evading taxes. In fact, many people also pay taxes when they are not in danger of being punished. Standard economic theory does not have an answer for this phenomenon. In my research, I want to find experimental evidence on why people pay taxes when they face no direct

# Stefan Schmidt

#### Overview

In October 2019, I started as a PhD student at the University of Cologne and joined the Max Planck Institute for Research on Collective Goods as a member of Matthias Sutter's group. At the time of writing, I am in the fourth year of my PhD and plan to hand in my thesis at the end of 2023. My research interests are centered in behavioral & experimental economics. I employ lab and field experiments to answer questions on topics of social identity, belief formation, and moral behavior.

# **Current Research Projects**

A Flag to Wave: Status-Seeking Behavior in Groups

This study experimentally investigates status-seeking behavior in the context of group-level social status assignment, an area that is severely understudied. Although social status - defined as the position in a social hierarchy - is not attached to any monetary incentives, prior research has established that individuals are highly motivated to attain social status and are willing to expend significant resources to do so. However, the specific drivers of status-seeking behavior are not well understood. By drawing on social-identity theory and recent research on moral transgressions, this study analyzes two critical factors that influence status-seeking behavior in the form of effort provision and prosocial/antisocial behavior: social identification and the impact of competing image concerns.

Social Identity and Systematic Biases (with Zvonimir Bašić and Eugenio Verrina)

Selection bias, correlation neglect, and confirmation bias commonly appear in information structures where social-identity motives are present. Social-identity concerns might represent an incentive to place more weight on ingroup than on outgroup signals, e.g., due to individuals' willingness to conform to a common group belief, or to signal a group affiliation to others/ oneself. In this paper, we study the interplay between these three key behavioral biases that underpin belief polarization and social identity. To this end, we design a new laboratory experiment where we vary the signal structures und group affiliations of signal sources in a belief-updating paradigm. Our design ultimately allows us identify how the three biases and social identity interact in forming beliefs.

Preferences on Immigration and Beliefs about the Speed of Immigrants' Integration into Society (with Matthias Sutter and Frederik Schwerter)

This project studies the role of beliefs regarding immigrants' speed of integration as a determinant of immigration preferences. We conduct a representative survey in Germany and relate immigration preferences to individuals' beliefs regarding immigrants' speed of integration pertaining to Germany's culture and economy. Our results show that subjects with more benevolent immigration preferences believe immigrants to integrate quickly, while unfavorable immigration preferences are associated with beliefs of slower integration speed. In further analyses, (i) we show that, for the relationship between the speed of integration and immigration preferences, dimensions of cultural integration are especially relevant; (ii) we uncover interesting between-individual heterogeneity in relation to political affiliation and exposure to immigration; (iii) we show that the provision of hard information and anecdotal evidence on the speed of integration causally affects immigration preferences.



#### Contact

stschmidt@coll.mpg.de

https://www.coll.mpg.de/stefan-schmidt

https://sites.google.com/view/ stefanschmidt/main Heterogeneity in Effort Provision: Evidence from a Lab-in-the-Field Experiment (with Zvonimir Bašić, Stefania Bortolotti, Daniel Salicath, Sebastian O. Schneider, and Matthias Sutter)

Incentives are supposed to increase effort; yet, individuals react differently to incentives. We examine this heterogeneity by investigating how personal characteristics, preferences, and socioeconomic background relate to performance in a real-effort task. We analyze the performance of 1,914 high-school students under a fixed, piece-rate, or tournament payment scheme. If self-selection into a scheme is possible, we observe strong sorting on abilities, but personality traits, economic preferences, and SES also play a role. In the case of exogenous assignment, different factors partly matter, suggesting that optimal effort depends on the assignment of payment schemes and personality traits and preferences.

# Research Agenda

In the years to come, I plan to dig deeper into the effects of social identities on individual behavior using field experiments. Here, I am especially interested in adopting new methods of data collection such as via apps, trackers, and data-scraping, in connection with established methods such as controlled lab experiments. For this, I see many applications in issues relating to social-media networks, belief-updating and social-comparison processes.

# **Awards and Funding**

Reinhard Selten scholarship – Funding for "A Flag to Wave: Status-Seeking Behavior in Groups" (granted by GfeW e.V.)

# Lectures and Presentations (since 2020)

2023

Heterogeneity in Effort Provision: Evidence from a Lab-in-the-Field Experiment NHH-MPI-Workshop May 2023

A Flag to Wave: Status-Seeking Behavior in Groups NHH-CREED-Workshop May 2023

Heterogeneity in Effort Provision: Evidence from a Lab-in-the-Field Experiment M-BEES/M-BEPS, Maastricht June 2023

A Flag to Wave: Status-Seeking Behavior in Groups ESA World Conference, Lyon June 2023

Heterogeneity in Effort Provision: Evidence from a Lab-in-the-Field Experiment EEA-ESEM, Barcelona August 2023

# Memberships

Gesellschaft für experimentelle Wirtschaftsforschung e.V. (GfeW)

Economic Science Association (ESA)

European Economic Association (EEA)

# **Cornelius Schneider**

## **Summary Report**

I was a Research Fellow in the Behavioral Law and Economics research group from 2016 to 2021. During this time, I participated in a joint PhD program with the University of Cologne, supervised by Felix Bierbrauer and Christoph Engel. In 2021, I joined the Department of Economics at the University of Mannheim as a postdoc. Funded by the DAAD PRIME program, I visited the Norwegian Centre for Taxation (NoCeT) and the FAIR group at the Norwegian School of Economics (NHH) from fall 2021 to fall 2022. My research focuses on questions of optimal taxation and public economics, specifically using methods from experimental and behavioral economics. Currently I am exploring potentially positive welfare implications of evasion opportunities in tax regimes. Another line of my research addresses how personal preferences, (mis)perceptions, and norms can inform optimal (tax) policies.

# Research Agenda

Adverse Revenue Effects of Enforcement

Adverse effects of enforcement and control on the crowding-out of civic virtue have already been widely explored. Another, albeit empirically underexplored, mechanism lies within the early theoretical debate on optimal taxation and tax evasion. Weiss (1976) proposed a counterintuitive mechanism: Allowing for a certain degree of tax evasion could increase tax revenues overall, through a disproportionally increased labor supply. The underlying effect falls under the larger discourse on optimal decision-making in response to risk, and encompassing elements like precautionary saving, prudence, and higher-order risk aversion. Individuals confronted with income uncertainty, such as that induced by tax evasion, may increase

their labor supply as a self-insurance measure - enhancing their expected income to offset potential penalties. Importantly, while providing an avenue for cheating does not necessarily incite universal uncertainty in the general population, it does offer individuals an opportunity to self-select into a risky option ("unlawful" behavior like tax evasion) based on their preferences. Policy-makers could potentially harness these hedging strategies that result in increased individual performance to achieve a Pareto improvement by tailoring their strategies to the preferences of diverse taxpayers.

Mill and Schneider (work in progress) put this mechanism to a first empirical test by running an original online labor-market experiment. Specifically, we asked whether allowing taxpayers to opt into uncertainty through evasion could indeed enhance overall tax revenues. Our findings show significant positive labor-supply responses to the opportunity to evade (increased labor supply by 37%). More importantly, the expected tax revenue significantly and substantially increased by more than 50%. Strikingly, the efficiency of lowering effective tax rates through probabilistic enforcement (the opportunity to evade) surpasses that achieved by simply lowering statutory tax rates.

With these promising findings from a tightly controlled lab experiment, we plan to explore the "desirability of cheating" in its fundamental character from various angles, systematically less abstract and more generalizable. Specifically, we are examining data on staffing and enforcement strategies of German tax offices, collected via a series of Freedom of Information Act requests (Anfragen nach dem Informationsfreiheitsgesetz, IFG), and analyzing its correlation with individual taxpayer behavior. Beyond the realm of taxation, we have gathered data on ticket controls and revenues from Berlin's



Contact

schneider@uni-mannheim.de

https://www.vwl.uni-mannheim.de/schneider/

public-transport system. Additionally, we are planning a field experiment involving food-delivery cyclists to study the impact of tip observability on their performance.

Perceptions, Personal Preferences, and Cognitive Biases in Public Economics

Another strand of my research explores how personal preferences, misinterpretations, and norms influence optimal public (tax) policies. Current work incorporates normative criteria from surveys, experiments, and existing policies to create objective functions that echo prevailing public opinions. I apply these methodologies to topics of public economics, aiming to enrich conventional theory or empirical studies based on administrative data.

In Chirvi, Huber, and Schneider (work in progress), we explore the extent to which bounded rationality translates into preferences for specific wealth-tax designs. Specifically, we examine the well-documented difficulties individuals encounter in understanding nonlinear growth - an understanding inherently necessary for discussions on commonly debated tax parameters, such as tax allowances and tax rates. We find that the preferred effective tax rate drops by almost 15 percentage points for a yearly wealth tax if our participants are fully informed about the total burden consequences. In conclusion, we argue that both the (biased) perception of the total tax burden and the perceived feasibility of single payments are factors that form preferences for tax parameters.

In Langenbach and Schneider (work in progress), we analyze the normative impact of decisions by human-rights courts on public opinion: How do decisions of specific human-rights courts about rights violations affect public evaluations of the underlying legislation? With this, we also advance the literature by a multi-level court-system perspective. Does it matter if a national or a European court decides? What implications on public opinion does conflict

between these levels yield? In vignette studies with over 5000 participants, we show that rulings of both courts have an impact on domestic public opinion, although just in specific contexts. While the origin of a case does not appear to matter for average public opinion, there are interesting heterogeneous treatment effects for sub-samples of the political right.

Schneider and Todtenhaupt (work in progress) measure the impact of government interventions on social cohesion and altruism, using a unique dataset from donation buttons on recycling machines across all supermarkets in Norway between 2019 and 2022. The specifically examined interventions include those implemented during the COVID-19 pandemic and the resources crisis following Russia's invasion of Ukraine. Our results suggest that altruism increases following government interventions. These insights have implications for designing effective government interventions. For instance, if future crises necessitate greater revenue through increased taxes, the observed boost in altruism following government intervention could facilitate this process.

Bachmann, Hens, Lot, and Schneider (work in progress) explore the fundamental behavioral mechanisms driving the effectiveness of matching contributions in boosting payments, particularly within retirement savings. We delve into the Cumulative Prospect Theory (CPT) and hypothesize that this behavioral trait could be a key in shaping financial decisions in response to matching or rebates. Our research suggests that a perceived gain from matching contributions may override the perceived loss from equivalent rebates. Bridging two distinct strands of literature, we aim to clarify the influence of matching contributions on retirement savings and propose policies that leverage behavioral traits to encourage savings.

Most recently, my coauthors and I elicited public preferences in the realm of

sustainable investment (Lot, Masood, Santos, and Schneider, work in progress). Among the multitude of green labels in the investment market, this study aims to explore what "green" actually signifies to investors and how they value different aspects of a green investment. While the magnitude of the investment's impact does not appear significantly to influence decisions, investors demonstrate a substantial aversion to ambiguity, exhibiting a substantial preference for both certainty and geographic proximity, particularly favoring investments with local impact.

## **Work in Progress**

Chirvi, M., Huber, H.-P., & Schneider, C. (work in progress). (Mathematical) Complexity and preferences for taxation: The case of wealth taxation

Langenbach, P. & Schneider, C. (work in progress). Human rights courts and public opinion in international multi-level court systems

Mill, W. & Schneider, C. (work in progress). The bright side of tax evasion

Schneider, C. & Todtenhaupt, M. (work in progress). Altruism and social cohesion under government interventions in times of crisis

Lot, A., Masood, R., Santos, F., & Schneider, C. (work in progress). Green investments and impact dimensions

Bachmann, K., Hens, T., Lot, A., & Schneider, C. (work in progress). Why matching contributions work (for savers)

# Lectures and Presentations (since 2020)

2020

The Bright Side of Tax Evasion 15th Winter School on Inequality and Social Welfare Theory, Alba di Canazei, Italy January 2020

The Bright Side of Tax Evasion 35th EEA Congress, Erasmus University, Rotterdam, Netherlands August 2020

#### 2022

(Mathematical) Complexity and Preferences for Taxation: The Case of Wealth Taxation Verein für Socialpolitik Jahrestagung, Basel, Switzerland September 2022

(Mathematical) Complexity and Preferences for Taxation: The Case of Wealth Taxation ESA European Meeting, Bologna, Italy September 2022

#### 2023

(Mathematical) Complexity and Preferences for Taxation: The Case of Wealth Taxation HeiKaMaX workshop, Heidelberg, Germany April 2023

(Mathematical) Complexity and Preferences for Taxation: The Case of Wealth Taxation Ludwig Erhard ifo Conference on Institutional Economics, Fürth, Germany March 2023

# **Teaching**

Summer Term 2021

Friedrich Schiller University, Jena, Germany Seminar Designing Experiments on Crime and Punishment

Winter Term 2021/22

Friedrich Schiller University, Jena, Germany Seminar Experiments on Inequality and Redistribution

Summer Term 2022

Friedrich Schiller University, Jena, Germany Seminar Experiments on Fairness Views and the Demand for Redistribution

Winter Term 2022/23

Friedrich Schiller University, Jena, Germany Seminar Quantitative Economics

### **Professional Activities**

Referee for

Economic Systems National Tax Journal

Memberships

Since 2020

Member of *Economic* Science Association (*ESA*)

Since 2022

Member of Verein für Socialpolitik



#### Contact

sschneider@coll.mpg.de

https://www.coll.mpg.de/sebastian-schneider

# Sebastian O. Schneider

# **Summary Report**

Overview

I joined Matthias Sutter's Experimental Economics group in December 2017 as a Senior Research Fellow, following my graduation in economics from the University of Göttingen. I hold an MSc and BSc in Mathematics in Business and Economics from the University of Mannheim. My research in the past few years has mainly focused on three main areas: (i) economic preferences; (ii) information provision and processing; (iii) statistical aspects of experiments ("data science in economics"). A central aspect of this work is that most of it is conducted in the field (instead of the laboratory with student samples). Over the last three years, four papers of mine have been revised and resubmitted or been published by prestigious journals such as the American Economic Review, the Journal of Political Economy, and the Review of Economics and Statistics.

Economic Preferences, Their Determinants, and Their Consequences

Most of my work revolves around economic preferences: Risk and time preferences, as well as social preferences. My focus lies on understanding their determinants and their role in decision-making outside controlled laboratory settings.

In the last few years, I have devoted the majority of my research activities to higher-order risk preferences. In Schneider et al. (work in progress), I have developed a new, simple, and cost-efficient method to elicit experimentally (higher-order) risk preferences (e.g., prudence) by predicting individual utility functions. We now have successfully validated the method against alternative methods and can show in simulations that the method's error-smoothing capacities are comparable to that of parametric approaches, albeit with the

flexibility of non-parametric approaches (which is required in the context of higher-order risk preferences).

In Schneider and Sutter (2022), which has been resubmitted to the American Economic Review, we have applied this method to study field behavior. With our sample of adolescents, we find that behavior in several domains is predicted by prudence, including health-related behavior and, in particular, abusive smartphone behavior. We show that failing to account for higher-order risk preferences might lead to wrong conclusions about the relation of risk preferences to field behavior, which puts previous work into perspective by explaining the often-reported "null result" concerning the empirical relation of (theoretical) measures of risk aversion and field behavior. We can also show that the frequently used qualitative survey measures capture prudence and temperance in addition to risk aversion, and that this is a consistent explanation for their success in predicting field behavior relative to measures of risk aversion - in our sample and in a literature review.

In 2020, my method to elicit (higher-order) risk preferences was first included in the innovation sample of the German Socioeconomic Panel (SOEP) after a successful peer-reviewed proposal by Stefan Trautmann and myself. In 2023, it was included for the second time, after successful interim evaluation. The aim of this project (Schneider, Riedmiller, and Trautmann, ongoing) is to investigate determinants and the stability of (higher-order) risk preferences, and to investigate new, empirically unstudied areas of theoretically-related field behavior in a causal way by taking advantage of the SOEP's panel structure.

Another project in progress connected to higher-order risk preferences is Schneider, Breitkopf, Schildberg-Hörisch, and Sutter (ongoing). Using the sample from Bangladesh of, e.g., Chowdhury, Sutter, and Zimmermann (2022), we investigate whether a school intervention targeted at forward-looking and sustainable decision-making affects eco-friendly behavior and health-related behavior and, if so, whether this is related to a change in higher-order risk preferences.

Turning to economic preferences more generally, in Sutter et al. (2023), which has been resubmitted to the *Journal of Political Economy*, we show that a financial literacy school intervention affects risk and time preference measures even up to five years after the intervention. We show that these measures are related to financial field behavior, suggesting that the effect on field behavior of teaching financial literacy works at least partly via economic preferences (or a common channel affecting both).

Ibanez and Schneider (2023), investigating the relationship between loss aversion and household saving among the urban poor in Bogotá, Colombia, has been resubmitted to Management Science (reject and resubmit). We use a lab-in-the-field approach for elicitation of economic preferences, combining it with household data from an extensive survey on socioeconomic characteristics. Besides the theoretical contributions to the literature that this paper makes, we empirically confirm the relevance of loss aversion for household saving. In an accompanying laboratory experiment, we can now show that income risk causally increases household savings, and that this happens to a higher degree for loss-averse individuals.

Work in progress in this area is Chowdhury, Puente-Beccar, Schneider, Schildberg-Hörisch and Sutter (ongoing): We document that economic preferences show substantial spatial correlation, highlighting the influence of factors such as infrastructure, culture, and institutions. Another piece of work in this area is Bašić et al. (ongoing), for which – after a long break due to COVID-19 – we were finally able to complete our data collection in the fall of 2022.

In this project, we study how economic preferences and other personal characteristics determine effort provision and the effectiveness of incentives.

Finally, Barron et al. (2023), in which we study the integration of Syrian refugees in Jordanian society by means of social preferences, has been accepted for publication at the Review of Economics and Statistics.

#### **Information Provision and Processing**

In Chowdhury et al. (2022), we investigate whether an information campaign (with or without additional monetary payment) via telephone can help contain COVID-19 in remote villages in Bangladesh. The project was a huge success and helped to decrease the death toll in treated villages – importantly, to almost the same degree both for non-treated neighbors in the treated households and for treated households.

Momsen and Schneider (2022) investigates whether the presence of a pre-selected option (i.e., a default option) affects the way in which we search and process information. We find that this is indeed the case; significantly, less time is spent on information search, less information is collected, and the information that is available is processed to a lower degree as soon as one of two options has been pre-selected.

# Statistical Aspects of Experiments ("Data Science in Economics")

In Schlather and Schneider (2021), we develop a method to assign subjects or clusters optimally to possibly multiple treatment and control groups in (field) experiments, using a theoretically derived decision statistic. The method creates comparable experimental groups and increases the validity and efficiency of estimation. I have now added case studies to the paper, and we have considerably extended the mathematical part of the paper.

In addition, I have updated the software packages for treatment assignment according to Schlather and Schneider (2021) – the R package 'minMSE' (published on CRAN), and the one for computation of higher-order risk preferences from utility points according to Schneider, Ibanez, and Riener (2022) – the R package 'utilityFunctionTools' (published on CRAN).

## Research Agenda

My work on higher-order risk preferences - both the method (Schneider, Ibanez, and Riener, 2022) and the paper relating to these measures to field behavior among adolescents (Schneider and Sutter, 2020) - paves the way for future research and opens up many new questions for the whole literature on risk preferences and decision-making under risk and uncertainty. Some of these questions I try to answer myself, for example by using panel data from the SOEP (Schneider, Riedmiller, and Trautmann, ongoing), in order to investigate the stability and further consequences of (higher-order) risk preferences, or by using data from Bangladesh in an ambitious primary data collection to evaluate whether a school intervention may shape these preferences (Schneider, Breitkopf, Schildberg-Hörisch, and Sutter, ongoing). More generally, I am interested in the origins of economic preferences, where I plan to continue investigating the "environmental" influence (which we have already started in Chowdhury, Puente-Beccar, Schneider, Schildberg-Hörisch and Sutter, ongoing). On a more theoretical side, I would like to investigate the relation between prospect theory, salience theory, and higher-order risk preferences. On the other side, the applied side, I would like to implement field experiments that address some of the behavior under study in Schneider and Sutter (2020) with app-based interventions to help people making better decisions.

# **Publications (since 2020)**

**Articles in Peer-Reviewed Journals** 

Barron, K., Harmgart, H., Huck, S., Schneider, S., & Sutter, M. (2023). Discrimination, narratives and family history: An experiment with Jordanian host and Syrian refugee children. *Review of Economics and Statistics*, 105(4), 1008–1016

#### **Working Papers**

Chowdhury, S., Schildberg-Hörisch, H., Schneider, S. O., & Sutter, M. (2022). Information provision over the phone saves lives: An RCT to contain COVID-19 in rural Bangladesh at the pandemic's onset. MPI Discussion Paper 2022/9

Momsen, K., & Schneider, S. O. (2022). Motivated reasoning, information avoidance, and default bias. *MPI Discussion Paper* 2022/3

Schneider, S.O., Ibanez, M., & Riener, G. (2022). Measuring utility – Application to higher-order risk and saving in Bogotá. *Working Paper MPI Bonn* 

Schneider, S.O. & Schlather, M. (2021). Rerandomization to improve covariate balance by minimizing the MSE of a treatment effect estimator. *Working Paper MPI Bonn* 

Riener, G., Schneider, S., & Wagner, V. (2020). Addressing validity and generalizability concerns in field experiments. *MPI Discussion Paper* 2020/16

#### **R & R**

Kaba, M., Koyuncu, M., Schneider, S. O., & Sutter, M. (2023). Social norms, political polarization, and vaccination attitudes: Evidence from a survey experiment in Turkey. Revision requested at the *European Economic Review* 

Ibáñez, M. & Schneider, S. O. (2023). Income risk, precautionary saving, and loss aversion – An empirical test. Reject & Resubmit at *Management Science* 

Sutter, M., Weyland, M., Untertrifaller, A., Froitzheim, M., & Schneider, S. O. (2023). Financial literacy, experimental preference measures, and field behavior: A randomized educational intervention. Revision requested by *Journal of Political Economy* 

Schneider, S. O. & Sutter, M. (2022). Higher-Order Risk Preferences: New experimental measures, determinants and field behavior. Revision requested at the *American Economic Review* 

## **Work in Progress**

Bašić, Z., Bortolotti, S., Salicath, D., Schmidt, S., Schneider, S. O., & Sutter, M. (in preparation). Heterogeneity in effort provision: Evidence from a lab-in-the-field experiment

Schneider, S. O. (in preparation). oTree: Ready-made apps for elicitation of higherorder risk preferences in the spirit of Deck & Schlesinger (2010), Ebert & Wiesen (2014), and Schneider, Ibanez & Riener (2022)

Schneider, S. O., Breitkopf, L., Schildberg-Hörisch, H. & Sutter, M. (ongoing). Evaluation of an intervention to shape higher-order risk preferences, healthy and environmentally friendly behavior in adolescents

Chowdhury, S., Puente-Beccar, M., Schneider, S. O., Schildberg-Hörisch, H., and Sutter, M. (ongoing): Spatial correlations in economic preferences

Schneider, S. O., Riedmiller, S., & Trautmann, S. (ongoing). Higher-order risk preferences, financial decision-making, and addiction – Evidence from the general German population (SOEP)

Czermak, S., Schneider, S.O. & Zoller, C. (ongoing). An intervention to increase activity among adolescents: The role of economic preferences

### **Grants / Prizes / Honors**

#### 2021

Project grant (EUR 40,000) and scholarship, Daimler and Benz Foundation

#### 2023

Project grant/fee waiver, SOEP-IS at DIW, Berlin. Free implementation (and data collection) of my method to elicit higher-order risk preferences

Project grant (EUR 20.158), Diligentia Foundation

# Lectures and Presentations (since 2020)

#### 2020

Risk Preferences and Field Behavior: The Relevance of Higher-Order Risk Preferences BEHnet, 7th Workshop in Behavioral and Experimental Health Economics, Innsbruck/ Austria

7 February 2020

Risk Preferences and Field Behavior: The Relevance of Higher-Order Risk Preferences Econometric Society, World Meeting, Online 17 July 2020

Risk Preferences and Field Behavior: The Relevance of Higher-Order Risk Preferences German Economic Association (VfS), Annual Conference, Online 28 September 2020

Information Provision over the Phone Saves Lives – A Randomized Controlled Trial to Contain COVID-19 in Rural Bangladesh at the Pandemic's Onset

National Bureau of Economic Research (NBER), Development Economics Meeting, Online

20 November 2020

#### 2021

Information Provision over the Phone Saves Lives – A Randomized Controlled Trial to Contain COVID-19 in Rural Bangladesh at the Pandemic's Onset

JHU Hopkins Business of Health Initiative (HBHI) and LSE Department of Psychological and Behavioural Science, Conference on Experimental Insights from Behavioral Economics on Covid-19, Online 19 February 2021

Information Provision over the Phone Saves Lives – A Randomized Controlled Trial to Contain COVID-19 in Rural Bangladesh at the Pandemic's Onset

UC Santa Barbara and Max Planck Institute for Research on Collective Goods Bonn, Workshop on Behavioral Economics, Online 14 April 2021

Information Provision over the Phone Saves Lives – A Randomized Controlled Trial to Contain COVID-19 in Rural Bangladesh at the Pandemic's Onset

UC San Diego and Max Planck Institute for Research on Collective Goods Bonn, Workshop on Behavioral Economics, Online 5 May 2021

Information Provision over the Phone Saves Lives – A Randomized Controlled Trial to Contain COVID-19 in Rural Bangladesh at the Pandemic's Onset

University of Göttingen, International Conference on Globalization and Development, Online

6 July 2021

Risk Preferences and Field Behavior: The Relevance of Higher-Order Risk Preferences International Health Economics Association (iHEA), World Congress, Online 14 July 2021 Risk Preferences and Field Behavior: The Relevance of Higher-Order Risk Preferences European Economic Association (EEA), World Congress, Online 25 August 2021

Motivated Reasoning, Information Avoidance, and Default Bias

WZB Berlin and Max Planck Institute for Research on Collective Goods Bonn, Workshop on Behavioral Economics, Online 9 December 2021

Motivated Reasoning, Information Avoidance, and Default Bias ZEW/Uni Mannheim, Experimental Seminar, Online 21 December 2021

#### 2022

Information Provision over the Phone Saves
Lives – A Randomized Controlled Trial to
Contain COVID-19 in Rural Bangladesh at the
Pandemic's Onset

Centre for the Study of African Economies at Oxford University, CSAE Conference 2022, Online

16 March 2022

Risk Preferences and Field Behavior: The Relevance of Higher-Order Risk Preferences Heinrich Heine University, Seminar, Düsseldorf/Germany 7 July 2022

Risk Preferences and Field Behavior: The Relevance of Higher-Order Risk Preferences University of Gent, Foundations of Utility and Risk Conference, Gent/Belgium 13 July 2022

Risk Preferences and Field Behavior: The Relevance of Higher-Order Risk Preferences University of Regensburg, Seminar, Regensburg/Germany 26 July 2022

Measuring Utility: An Application to Higher Order Risk Preferences Bocconi University, European Meeting of the Econometric Society, Milan/Italy 24 August 2022

#### 2023

Risk Preferences and Field Behavior: The Relevance of Higher-Order Risk Preferences Goethe University/SAFE, Seminar, Frankfurt/ Germany 18 January 2023

Risk Preferences and Field Behavior: The Relevance of Higher-Order Risk Preferences University of Amsterdam, Seminar, Amsterdam/Netherlands 11 May 2023 Financial Literacy, Risk and Time Preferences – Results from a Randomized Educational Intervention

NHH Bergen and Max Planck Institute for Research on Collective Goods Bonn, Workshop on Behavioral Economics, Online 23 May 2023

Financial Literacy, Risk and Time Preferences – Results from a Randomized Educational Intervention

Maastricht University, M-BEPS (Conference),

Maastricht/Netherlands

13 June 2023

## **Teaching**

Summer term 2021
University of Cologne
Advanced Behavioral Economics/Econometrics for Behavioral Economists

Summer term 2021 International Max Planck Research School 'BeSmart' – Summer School Experimental Design

Winter term 2021/2022 University of Göttingen Statistical Training (serving as project partner)

Summer term 2022 International Max Planck Research School 'BeSmart' – Summer School Machine Learning for Behavioral Research

Summer term 2023
University of Cologne
Advanced Behavioral Economics/Econometrics for Behavioral Economists

Summer term 2023 Erasmus Center for Health Economics Research, University of Rotterdam – BEHnet

Summer School
Experimental Approaches in Behavioral
Health Economics

# **Public Service**

Since 2022 Member of the Works Council of the Max Planck Institute for Research on Collective Goods

#### **Professional Activities**

#### Referee for

Econometrica, Economic Journal, European Economic Review, Experimental Economics, Games and Economic Behavior, Journal of Behavioral and Experimental Finance, Journal of Economic Behavior & Organization, Management Science, Quantitative Economics

#### **Editorial boards**

Frontiers in Behavioral Economics, Section "Health Behaviors" (Associate Editor)

#### Memberships

Since 2017 Member of Verein für Socialpolitik (VfS)

Since 2018
Member of Deutsche Mathematiker-Vereinigung (DMV)



**Contact**mail@marcelhschubert.com

https://marcelschubert.com

# Marcel H. Schubert

# **Summary Report**

From September 2017 until December 2021, I was a Research Fellow in the Behavioral Law and Economics Group with Prof. Engel at the Max Planck Institute for Research on Collective Goods. During that time, I was also a doctoral student at the Cologne Graduate School (CGS) in in Management, Economics, and Social Sciences at the University of Cologne. Since then, I have left academia for industry.

As a Research Fellow at the MPI, my research centered on the usability and boundaries of machine-learning within behavioral economics and behavioral social sciences as a whole. In particular, I investigated how machine-learning can be leveraged to overcome some of the constraints researchers face within behavioral economics when relying on traditional statistical approaches. Moreover, I focused on transparency and causality to infer how algorithmic design affects prediction outcomes, as well as its normative implications.

# Research Agenda

My research agenda can be divided into two parts.

Part one focuses on applying and leveraging machine-learning (ML) for the fields of behavioral sciences to generate new insights into known problems. I contributed to this area with two research projects. The first project focuses on the problem of patterned heterogeneity in interactive behavioral games. In such games, choices of participants are not independent, i.e., the observed outcome depends on the players' own type as well as on that of the others. Hence, it is challenging to separate the type space using traditional econometric approaches. By using unsupervised learning on multivariate time-series in a synthetic experiment, we show that it is possible to separate the player types without any ex-ante expectations. We also validated this approach in a dataset holding 16,417 observations that we collected from the literature.

The second project focuses on the area of behavioral law. Here, my co-authors and I use a supervised learning approach to show how ML can be used to expand small hand-coded datasets to increase the amount of data viable for research. To this end, we focus on the Songer database, a database holding 20,000 US Appellate Court decisions, which amounts to about 5% of all Appellate Court decisions. The database was constructed to be stratified across courts, but not political ideology, which is what most research using this database focuses on. Our ML approach enables us to label the remaining 95% of the database without the cost of manual coding, thus providing the field with the possibility of using a much richer source of data for future research.

Part two of my research focuses on the underlying normative implications and limitations of ML algorithms within social sciences, but also empirical legal studies. In order to assess the limitations when applying ML algorithms within social sciences, I design a largescale ML experiment for authorship analysis, using social-media data. In this experiment, I hold the goal of identifying author attributes, such as age or gender, consistent, while varying the underlying input features or the composition of the dataset in small, random ways. I show that such small changes already have a large impact on the feature space, which is predictive of the outcome, i.e., that the information used is mostly not causal, but correlational in nature. This has problematic implications if ML is used to predict labels and information that is then used for further econometric analysis, as causality is not guaranteed anymore. In another research project, my co-authors and I focus on the COM-

PAS algorithm, which is already used in the US to predict the recidivism of defendants in decisions involving bailing and jailing. By re-constructing the predictions of the COMPAS algorithm, we are able to show that uncommunicated normative preferences for jailing over bailing in the design of the algorithm lead to an outcome that biases against young and black defendants. Interestingly, these preferences are not communicated to the judges who use the algorithm to inform their rulings. Moreover, we introduce a correction mechanism that allows for alternative normative preferences and can thus improve the outcome of underprivileged defendants.

During my PhD, I also had the chance to visit Elliott Ash, Assistant Professor of Law, Economics, and Data Science at the ETH Zurich, for a few months in the spring of 2019. My research stay in Zurich was supported by a DFG Travel grant. During the time of this research stay, my co-authors and I focused on expanding the Songer database.

# **Publications (since 2020)**

Hausladen, C. I., Schubert, M. H., & Ash, E. (2020). Text classification of ideological direction in judicial opinions. *International Review of Law and Economics*, 62, 105903

### **Work in Progress**

Engel, C., Hausladen, C. I., & Schubert, M. H., Charting the type space – The case of linear public-good experiments

Engel, C., Linhardt L., & Schubert, M. H., Code is law: How COMPAS affects the way the judiciary handles the risk of recidivism, to artificial intelligence and law



**Contact** sood@coll.mpg.de

https://www.coll.mpg.de/saparya-sood

# Saparya Sood

# **Background**

I joined the institute in October 2022. I am a lawyer qualified in India, and I completed my Bachelor's degree in business administration and law in 2017. Prior to joining, I completed my Master's degree in European Law and Economics (EMLE) at the Universities of Hamburg, Rotterdam, and Vienna. Alongside my Master's degree, I worked as a research assistant to Professor Winfred Huck at the European Law School in Braunschweig and assisted in writing a commentary on sustainable-development goals. Before that, I worked in capital-market and corporate-governance practices at law firms in India. My expertise and interests lie in the niche and emerging field of Business and Human Rights (BHR), and I am interested in contributing to regulation and policy-making in the field through approaches grounded in 'law and economics' and experimental methods.

#### Master's Thesis

In my Master's thesis, I undertook a theoretical examination of the need to regulate and the efficiency of the design of regulations mandating companies to undertake Human Rights Due Diligence (HRDD) in France and Germany from the point of view of incentives generated for the companies (and their managers) to comply. To analyze the efficiency of different models of regulation, I applied Kaplow's (1992) theory on rules and standards to deconstruct the incentives for companies to invest proactively in due diligence efforts.

#### Research Focus

Increasingly, businesses are being made accountable for the human-rights and environmental impacts of their business activities, including in their global supply chains. International law as well as the

draft European Corporate Sustainability
Due Diligence directive refer to different
situations in which companies may be
held liable for the harms that occur in
their supply chain, such as when the
company's activities have 'caused' or
'contributed to' human-rights violations
or when there are linkages between the
human-rights harm and the company's
operations. Where companies cannot
prove that they have taken requisite
action to prevent such harm, they can be
held liable.

Building on the broad focus of my Master's thesis, I am interested in further examining critical aspects of BHR regulations, involving issues associated with the third pillar of the United Nations Guiding Principles (2011), concerning access to effective remedy for victims. Specifically, I wish to analyze issues pertaining to proving a causal link between the company's business activities and the human-rights violations, as well as the scope of liability with respect to foreseeability of the risks, from a perspective of law and economics. There has been an extensive policy debate around whether companies should be held responsible for the harm caused by activities of the direct suppliers only, or also that of indirect suppliers. I am interested in examining the effectiveness of these options from the point of view of investment in 'care' or HRDD expended by the firm. It would be interesting to test experimentally the impact of different degrees of foreseeability in monitoring incentives for the buyer firm.

In parallel, I am also working with a co-author on a research paper that we will be presenting at a conference organized by UCL, London, later in 2023 to shed light on the issues faced by litigants in pursuing cases pertaining to corporate accountability. We will be undertaking a part-quantitative and part-theoretical analysis by studying trends from case summaries on the website of Business and Human Rights

Resource Centre (a non-governmental organization).

# **Publications (since 2020)**

#### **Articles in Peer-Reviewed Journals**

Huck, W., Maaß, J., Sood, S., Benmaghnia, T., & Heß, S. M. (2022). Framework and content of energy transition in Southeast Asia with ASEAN and the EU. *The Journal of World Energy Law & Business*, 15(5), 396-408

#### **Blog Post**

Sood, S. (2023). 'Law & economics' must better inform design of business and human rights regulation, *Opiniojuris*, http://opiniojuris.org/2023/02/23/law-economics-must-better-inform-design-of-business-and-human-rights-regulation



Contact
sternberg@coll.mpg.de

https://www.coll.mpg.de/ martin-sternberg

# **Martin Sternberg**

# **Summary Report**

I am a lawyer by training and became a Research Fellow in the Behavioral Law and Economics Group in April 2018. My research in the past years has focused on antitrust law and economics, especially in digital markets. Since April 2022, I have held a part-time position as a Senior Research Fellow while completing my legal traineeship (*Rechtsreferendariat*).

My research is initially divided into the legal area of antitrust law and experimental work in the area of behavioral economics in market settings. However, my goal is to make the experimental research at the interface of antitrust law and behavioral science usable in order to integrate the results into the legal discourse. I have spent the last year mainly completing my doctoral thesis to obtain a PhD at the University of Bonn.

In September 2022, I defended my thesis on "Algorithmic Pricing and Tacit Collusion", which was published earlier this year. In Sternberg (2023), I deal with the antitrust assessment of markets in which algorithmic pricing is increasingly used. My doctoral studies were therefore driven by legal and economic research questions on the risks of algorithmic collusion. For this purpose, Hans-Theo Normann, of the Düsseldorf Institute for Competition Economics (DICE), and I provide an overview of current scientific findings in the field of algorithmic pricing and collusion in Normann and Sternberg (2021), and in a blog post in Normann and Sternberg (2022). Furthermore, with an own experimental approach, the empirical paper Normann and Sternberg (2023) investigates pricing in laboratory markets when human players interact with an algorithm. We compare the degree of competition when exclusively humans interact to the case of one firm delegating its decisions to an algorithm, an n-player generalization of tit-for-tat. Here we observe significantly higher prices when one out of three firms in a market uses an algorithm, compared to humanonly markets. The paper was published in the Journal of European Competition Law & Practice.

Overall, the analysis in my PhD thesis, based on the results of Normann and Sternberg (2023) as well as on several other experiments, comes to the conclusion that a far-reaching adjustment of the current antitrust norms or an extended interpretation of the ban on cartels does not appear to be necessary at this point in time. Nevertheless, new instruments are proposed to promote competition in digital markets and to compensate for the disadvantages of algorithmic pricing and structurally weak online markets.

I have now been completing my legal traineeship for over a year and am only employed part-time at the institute. As part of my work at the institute, I take care of the Max Planck Law as our institute's liaison officer, among other things. With regard to my scientific work, I am concerned with new forms of abuse of a dominant position in the platform economy. Digital platforms bring many advantages and efficiency gains. At the same time, platform operators have to perform their task responsibly with regard to the competitiveness of markets. Together with Konstantin Chatziathanasiou of the University of Münster, I focus on the economic effects of a very specific online tool of a platform operator that contributes to the reinforcement of information asymmetries on the upstream market between suppliers and consumers, thus negatively affecting market conditions.

In the future, I plan to continue working on antitrust law and economics, especially in digital markets. While my work with Konstantin Chatziathanasiou currently focuses on the legal analysis relating to potential abuse of a dominant

position by the platform operator, we also plan to study the economic impact of the tool in a laboratory experiment.

# **Publications (since 2020)**

**Articles in Peer-Reviewed Journals** 

Normann, H. and Sternberg, M. (2023) Human-algorithm interaction: Algorithmic pricing in hybrid laboratory markets. *European Economic Review*, 152, 104347

Normann, H. and Sternberg, M. (2021) [Economist's Note] Do machines collude better than humans? *Journal of European Competition Law & Practice*, 12(10), 765–771

#### **Books**

Sternberg, M. (2023). Algorithmische Preissetzung und tacit collusion, 319 p. Baden-Baden: Nomos

#### Other

Normann, H. and Sternberg, M. (2022) Algorithmische Preissetzung und die Folgen für den Wettbewerb. transforming-economies.de

# Lectures and Seminar Presentations (since 2020)

Hybrid Collusion: Algorithmic Pricing in Human-Computer Lab Markets On the Crossroads of Law and Economics, Rotterdam June 2022

Hybrid Collusion: Algorithmic Pricing in Human-Computer Lab Markets American Law and Economics Association's 31st Annual Meeting (ALEA), Chicago October 2021

Hybrid Collusion: Algorithmic Pricing in Human-Computer Lab Markets Competition Law and Economics European Network Workshop (Cleen), Norwich June 2021

Algorithmic Pricing and the risks of tacit collusion IMPRS BeSmart Thesis Workshop, Bonn March 2021



Contact stoelinga@coll.mpg.de

https://www.coll.mpg.de/ nicole-stoelinga

# **Nicole Stoelinga**

# **Summary Report**

I am an applied micro-economist interested in development economics and political economy, with a specific interest in conflict. I joined Matthias Sutter's Experimental Economics Group as a Senior Research Fellow in July 2023. Prior to this position I was a PhD candidate at the European University Institute in Florence, Italy.

## Research Agenda

My work focuses, first, on the effects of conflict at the individual level and, second, on the effects of conflict at an international level. The first strand of my work focuses on understanding how various forms of conflict impact micro-economic outcomes at an individual level.

# A. Ideological and Social Dimensions of Conflict

Not all effects of war and conflict are tangible: There is a new and growing field of development and conflict studies that focuses on the role of ideology and religion (Hirose et al., 2017), rebel governance (Arjona et al., 2015, among others), and social cohesion (Rubin, 2020) during conflict. The topic of my job-market paper is in line with this growing interest in the 'non-violent' aspects of conflict. In the paper "Education During Conflict: The Effect of Territorial Occupation by Insurgents on Schooling", I study the short-term and long-term effect of insurgents' occupation on school participation. I focus on the case of the temporary occupation of territory in North East Nigeria by Boko Haram as a quasi-natural experiment, comparing children exposed to the occupation and insurgency with children solely affected by the insurgency. Using a difference-in-differences approach, the results show that children exposed to Boko Haram's occupation experience significant educational losses in the

short and long run. The effects cannot be explained by well-known mechanisms found in the literature. However, I show that social-identity theory, peer effects and social pressure, and violent enforcement of anti-educational rules seem to play a role. By identifying individuals who might be most at risk of experiencing a large and persistent educational setback, this work can aid policies aimed at improving educational outcomes for children in conflict zones. In work in progress ("Religious Violence and the Spread of Ideology"), as an extension of my job-market paper and relating to the significant increase in so-called religious violence (Crisis Group, 2016; Global Terrorism Index, 2022), I examine the role between (reported) religion and exposure to violence by rebel groups that self-identify with specific religions. Specifically, the project focuses on the question whether being confronted with sets of ideas, convictions, and ideologies - such as religion - through conflict leads to alignment of (reported) individual religion with the religion of perpetrators. Such an alignment could be either due to a genuine shift in preferences or strategies, as individuals try to avoid potential retaliation. I compare violence carried out by self-representing religious militias to violence carried out by groups that do not align themselves with a religion. Using data on various countries, including the self-reported religion of respondents, I am interested in seeing whether, as in my job-market paper, social identity theory, network and peer effects, social pressure, and intimidation play a role in the transmission of ideology.

# B. Income Shocks, Fragility, and Development in Conflict Situations

Conflict can create opportunities to reap benefits for some agents, while others are negatively affected. This adds to the complexity of such situations, making it more difficult to disentangle effects empirically. For example, evidence indicates that the presence of coca in Colombian municipalities increases violence, while changes to the price of coca products can have both negative and positive effects on conflict. I address this in "Cultivation and Competition in Colombia: Disentangling the Effects of Coca Price Changes on Violence" (revise & resubmit). Using an Early-Stage Researcher (ESR) grant that I was awarded for this project, I rely on new data on local prices of coca products, production, and supply chains, to disentangle returns to employment in the agricultural and in the criminal sector, and I examine the effects of changes to these returns. I find suggestive evidence that higher income for cultivators leads to higher school-attendance rates; but increasing returns in the criminal sector lead to school-dropout rates, more violence, and increased competition among armed groups. These results show the impact that income shocks have especially on poorer, lower-income, and more fragile households. Extreme poverty is increasingly concentrated in fragile and conflict-affected situations (World Bank, 2015) and linked to food insecurity. In ongoing work ("Shocks to International Food Prices: Food Security in Sub-Saharan Africa"), I aim to exploit the international fluctuations in the prices of various food products to examine local effects on food security and violence. First, using very detailed individual-level panel data on month-by-month food security, prices in local and international markets, and household income, I examine the link between international prices of crops and food insecurity. Second, I consider the effects of food insecurity at an individual level. Do individuals from households that report (temporary) food insecurity have lower educational outcomes, are they more likely to work, or do they suffer from health consequences? As food security is often linked to violence, specific attention will be paid to the role that violence plays as a multiplier or interaction effect on these outcomes.

The second strand of my work considers conflict at an international level and,

in a broader sense of the word, within a framework of international economics and political economy.

#### A. Political Economy and Democracy

Related to my interest in the ideological and social dimensions of conflict, I am interested in the relationship between (violent) political conflict and social identity, social engagement, and support for democracy and electoral processes. With regard to this topic, there are two research projects - in early stages that I am working on. The first project, "It Was Better Back in My Day: Heterogeneity in Support of Democracy", in cooperation with Tuuli Tähtinen, focuses on explaining significant heterogeneity across age groups with regard to support for democracy and electoral participation. This project considers the extent to which (violent) protests and exposure to conflict can explain these differences. A second project focuses on the 'paradox of repression'. In this project, I consider how the outcomes of protests, and government responses to protests, vary across countries, and the role of protests as a mechanism to achieve economic, political, and social goals.

#### B. Conflict on an International Level

I examine conflict and war in the more traditional sense of the word in "Estimating the Alliance Effect: A Synthetic Control Approach" (Defence Studies, 2022). In a time of rising threats and of recurring discussions about burden-sharing within NATO, and almost twenty years after the start of the 'war on terrorism', this paper explores a novel idea in the field of alliances and defense-spending: the effect of alliance membership on defense-spending in response to a threat. I find that both large and small states display a stronger (positive) response to threat than NATO members, compared to not being part of the alliance.

# C. Conflict as a Mismatch between Beliefs, Reputation, and Types

In "Reputation Signals and Contract-Intensive Industries" (ongoing, co-authored with Mustafa Kaba), using industry-level data on exports for both high and low contract-intensive industries, we provide empirical evidence that supports the reputation trap theory (Levine, 2021). Summarizing, assume that an agent who was initially a bad type becomes a good type. The theory states that the other agents' beliefs on the type of the first agent do not change and this agent can thereby become 'trapped', unless she can send a credible signal that she is, indeed, a good type. Our preliminary results seem to support the theory. This work is related to another paper, "The Olympic Effect: Fact or Fiction?" (under review, and also co-authored with Mustafa Kaba), which focuses on explaining the use of signaling by countries to increase export levels. In the paper, we examine the puzzling historical interest in hosting the Olympic games, and the recent trend of withdrawals of countries' bids. This recent development casts doubt on the existence of the so-called Olympic effect: the positive impact of the Olympics on international trade. We show that the Olympic effect is more pronounced for countries that stand to gain from an international publicity, and present the new insight that a substantial positive Olympic effect is only associated with earlier games.

### **Publications (since 2020)**

#### Articles in Peer-Reviewed Journals

Stoelinga, N. (2022) Estimating the alliance effect: A synthetic control approach, *Defence Studies*, 22(2), 277-294

#### Revise & Resubmit

Stoelinga, N. Cultivation and competition in Colombia: Disentangling the effects of coca price changes on violence. R&R: *Journal of International Development* 

## **Work in Progress**

Stoelinga, N. & Kaba, M. (under review). The olympic effect: Fact or fiction?

Stoelinga, N. (in preparation). Education during conflict: The effect of territorial occupation by insurgents on schooling

Stoelinga, N. & Kaba, M. (in preparation). Reputation signaling and contract-intensive industries

Stoelinga, N. (in preparation). Shocks to international food prices: Food security in Sub-Saharan Africa

Stoelinga, N., & Tähtinen, T. (in preparation) It was better back in my day: Heterogeneity in support on democracy

Stoelinga, N. Religious violence and the spread of ideology. (In preparation)

## **Grants / Prizes / Honors**

2020

Early-stage research grant (European University Institute)

# **Teaching**

Winter term 2020/21 New York University International Economics

### **Professional Activities**

Referee for European Economic Review

# **Matthias Sutter**

In August 2017 I took over the position of (co)director at the MPI Bonn and then founded the Experimental Economics Group (EEG). The group's main research areas have been described in a separate section about the EEG. Naturally, there is a very strong overlap of the EEG's main research areas and my own research interests. Since founding it, I have been very pleased with the development of the EEG. Since the majority of the group is now working in the field (often in developing countries), which often requires considerable time investment to gain access to interesting subject pools, we have only started to harvest the returns from our investments in very recent years. This also holds true for my own research output.

Between 2021 and 2023, I published two top-5 papers in economics journals, I have two papers as R&R in top-5 journals, a few other R&Rs, and several working papers that look promising to me.

Concerning the top publications, the first one is Alan et al. (2023) in the Quarterly Journal of Economics. In this paper, we ran an RCT in 20 large corporations in Turkey, involving over 3,000 headquarter employees. We evaluate the impact of a training program aimed at improving the relational atmosphere in the workplace. The program encourages prosocial behavior and the use of professional language, focusing primarily on leaders' behavior and leader-subordinate interactions. We find that the treated firms have a lower likelihood of employee separation at leadership level; fewer employees lacking professional and personal help; and denser, less segregated, support networks. We also find that employees in treated corporations are less inclined to engage in toxic competition, exhibit higher reciprocity toward each other, and report higher workplace satisfaction and a more collegial environment. This paper is the first clustered RCT of that size, implemented in large corporations. It shows that tailor-made training programs can have a substantial effect on workplace climate and turnover in companies. We are currently working on a follow-up project to examine how the gender of a team leader influences workplace climate and social networks within departments.

The second top publication is Chowdhury et al. (2022) in the Journal of Political Economy. This is the first paper to classify whole families into two different clusters with respect to the economic preferences of all family members. We can show that clusters are determined by demographic background data. By simultaneously looking at time, risk preferences, and social preferences, this is the most encompassing 360-degree view of economic preferences within families that is available today. At the same time, the paper - based on data from rural villages in Bangladesh - shows very clearly that patterns of economic preferences that have been observed in rich and highly developed countries may be a very inaccurate description of patterns found in developing countries.

The paper from Bangladesh is based on a large household panel set up in Bangladesh. We are currently working on several other papers related to this panel. The most promising one, in my opinion, deals with an RCT with about 6,000 children. In this RCT, we implement the Lion's Quest "skills for growing" program in 135 schools (69 treatment schools and 66 control schools). This program is expected to have positive effects on patience and self-control and on social preferences. The novelty of our approach is that we implement the same program in different grades of primary school in order to identify what we call "sensitive periods". These periods are those where human-capital investments have the strongest returns. While previous research has practically simply asked whether a specific inter-



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#### Contact

matthias.sutter@coll.mpg.de

https://www.coll.mpg.de/matthias-sutter

vention works or not, we want to understand what is the best time in life to run the intervention (provided it works, as it does in our case). Preliminary results of this paper (Breitkopf et al., 2023) indicate that interventions in primary school should rather be done sooner than later. We believe our approach of identifying sensitive periods should be rolled out for many more interventions to increase efficiency and longevity of educational interventions.

Currently, we have an R&R at another top-5 journal (the Journal of Political Economy). In Sutter et al. (2023), we present the results of a randomized intervention to study how teaching financial literacy to 16-year-old highschool students (from Germany) affects their behavior in risk-preference and time-preference tasks. Compared to two different control treatments, we find that teaching financial literacy makes subjects behave more patiently, and they also become more time-consistent and more risk-averse. These effects persist for up to almost 5 years after our intervention. Behavior in the risk-preference and time-preference tasks is related to financial behavior outside the lab, in particular spending patterns. This shows that teaching financial literacy affects economic decision-making, which in turn is important for field behavior. We are the first to show this influence of financial-literacy training on economic preferences, and the first to follow up on students for up to almost five years to document persistent effects.

The second R&R at a top 5-journal (at American Economic Review) is Schneider and Sutter (2022). In this paper, we elicit higher-order risk preferences in a very simple way with children and teenagers. The main novelty of this paper is to relate the higher-order risk preferences of prudence and temperance (which are derived from estimated utility functions) to students' field behavior in a large variety of domains (including financial decision-making, healthy behavior, and environmental behavior). We find that prudence in particular (the

third-order derivative) is a key determinant of financial decision-making and health-related behavior. Most importantly, however, by adding prudence and temperance in the risk elicitation, it becomes clear that risk aversion, if measured by itself without higher-order risk preferences, yields largely misleading results. So, this paper is able to put previous results into a completely new perspective.

There are several other ongoing projects that I find interesting. Priyam et al. (2023) present an information intervention to reduce the consumption of arsenic-contaminated drinking water in about 2,500 households in the North-East Indian state of Bihar. We find that simple interventions can reduce the likelihood of drinking contaminated water by about 20-30 percent. Salicath and Sutter (2023) examine the influence of financial shocks on economic decision-making of almost 2,000 poor factory workers in Kenya. The main novelty is to provide an exogenous financial shock to identify cleanly how a scarcity of poor workers affects their risk, time, and competitive preferences. A longterm project for the years to come is to study the effects of international educational migration from Uganda to Germany. Together with the NGO Malengo, we randomize qualified students (who would otherwise not have chances to go from Uganda to Germany to study there) into being admitted to the program or not. By following both admitted and non-admitted students (with the latter having to stay in Uganda), as well as the families and peers of both groups of students, we will be able to uncover a very encompassing picture of the effects of international educational migration on education, labor market success, wealth, attitudes, cognitive skills, and non-cognitive skills. I look forward to presenting first results at the next evaluation of our advisory board in 2027.

To conclude, I would also like to mention that I have published a popular-science book, both in German ("Der menschliche Faktor oder worauf es im Berufsleben

ankommt. 55 verhaltensökonomische Einsichten"; Hanser Verlag 2023) and in English ("Behavioral Economics for Leaders"; Wiley publishers, 2023). The German version hit the Austrian bestseller list and was widely discussed in the German-speaking media (Spiegel, Süddeutsche Zeitung, FAZ, ZEIT, Handelsblatt, Standard, ORF, ...). I consider this publication - and many associated book presentations (e.g., at LSE in London, Prague, Oslo, Stavanger, Copenhagen, Bergen, Bozen, Vienna, Frankfurt, Düsseldorf) - as my contribution to the so-called "third mission", which means that I communicate scientific insights from behavioral economics to the general public.

# **Publications (since 2020)**

**Articles in Peer-reviewed Journals** 

Balafoutas, L., Batsaikhan, M., & Sutter, M. (forthcoming). Competitiveness of entrepreneurs and salaried workers. *Management Science* 

Bortolotti, S., Soraperra, I., Sutter, M., & Zoller, C. (forthcoming). Too lucky to be true: Fairness views under the shadow of cheating. *Review of Economics and Statistics* 

Charness, G., Feri, F., Melendez-Jimenez, M. A., & Sutter, M. (forthcoming). An experimental study on the effects of communication, credibility, and clustering in network games. *Review of Economics and Statistics* 

Fang, X., Goette, L., Rockenbach, B., Sutter, M., Tiefenbeck, V., Schoeb, S., Staake, T. (forthcoming), Complementarities in behavioral interventions: Evidence from a field experiment on resource conservations. *Journal of Public Economics* 

Praxmarer, M., Rockenbach, B., Sutter, M. (forthcoming), Cooperation and norm enforcement differ strongly across adult generations. *European Economic Review* 

Alan, S., Corekcioglu, G., & Sutter, M. (2023). Improving workplace climate in large corporations: A clustered randomized intervention. *Quarterly Journal of Economics*, 138(1), 151–203

Angerer, Silvia, Bolvashenkova, J., Glätzle-Rützler, D., Lergetporer, P., & Sutter, M. (2023). Children's patience and school-track choices several years later: Linking experimental and field data. *Journal of Public Economics*, 220, 104837

Barron, K., Harmgart, H., Huck, S., Schneider, S., & Sutter, M. (2023). Discrimination, narratives and family history: An experiment with Jordanian host and Syrian refugee children. *Review of Economics and Statistics*, 105(4), 1008–1016

Buffat, J., Praxmarer, M., & Sutter, M. (2023). The intrinsic value of decision rights: A note on team versus individual decision-making. *Journal of Economic Behavior and Organization*, 209, 560–571

Charness, G., Cobo-Reyes, R., Eyster, E., Katz, G., Sánchez, A., & Sutter, M. (2023). Improving children's food choices: Experimental evidence from the field. *European Economic Review*, 159, 104562

Gill, A., Heinz, M., Schumacher, H., & Sutter, M. (2023). Social preferences of young professionals and the financial industry. *Management Science*, 69(7), 3905–3919

Grimalda, G., Murtin, F., Pipke, D., Putterman, L., & Sutter, M. (2023). The politicized pandemic: Ideological polarization and the behavioral response to COVID-19. *European Economic Review*, 156, 104472

Kerschbamer, R., Neururer, D., & Sutter, M. (2023). Credence goods markets, online information and repair prices: A natural field experiment. *Journal of Public Economics*, 222, 104891

Stefan, M., Huber, J., Kirchler, M., Sutter, M., & Walzl, M. (2023). Monetary and social incentives in multi-tasking: The ranking substitution effect. *European Economic Review*, 156, 104458

Chowdhury, S., Sutter, M., & Zimmermann, K. F. (2022). Economic preferences across generations and family clusters: A large-scale experiment in a developing country. *Journal of Political Economy*, 130(9), 2361–2410

Romano, A., Sutter, M., Liu, J. H., Yamagishi, T., & Balliet, D. (2022). Author correction: National parochialism is ubiquitous across 42 nations around the world. *Nature Communications*. 13. 196

Sutter, M., Untertrifaller, A., & Zoller, C. (2022). Grit increases strongly in early childhood and is related to parental background. *Scientific Reports*, 12, 3561

Terrier, C., Chen, D. L., & Sutter, M. (2021). COVID-19 within families amplifies the prosociality gap between adolescents of high and low socioeconomic status. *PNAS – Proceedings of the National Academy of Sciences*, 118(46), e2110891118

Angerer, S., Glätzle-Rützler, D., Lergetporer, P., & Sutter, M. (2021). The effects of language on patience: An experimental replication study of the linguistic-savings hypothesis in Austria. *Journal of the Economic Science Association*, 7, 88–97

Bindra, C. P., Kerschbamer, R., Neururer, D., Sutter, M. (2021), On the value of second opinions: a credence goods field experiment. *Economics Letters*, 205, 109925

Glätzle-Rützler, D., Lergetporer, P., & Sutter, M. (2021). Collective intertemporal decisions and heterogeneity in groups. *Games and Economic Behavior*, 130, 131–147

Kassis, M., Schmidt, S. L., Schreyer, D., & Sutter, M. (2021). Psychological pressure and the right to determine the moves in dynamic tournaments: Evidence from a natural field experiment. *Games and Economic Behavior*, 126. 278–287

Romano, A., Bortolotti, S., Hofmann, W., Praxmarer, M., & Sutter, M. (2021). Generosity and cooperation across the life span: A Lab-in-the-field study. *Psychology and Aging*, *36*(1), 108-118

Romano, A., Sutter, M., Liu, J. H., Yamagishi, T., & Balliet, D. (2021). National parochialism is ubiquitous across 42 nations around the world. *Nature Communications*, 12, 4456

Romano, A., Sutter, M., Liu, J. H., & Balliet, D. (2021). Political ideology, cooperation, and national parochialism across 42 nations. *Philsophical Transactions of the Royal Society B: Biological Sciences*, 376, 20200146

Dertwinkel-Kalt, M., Köster, M., & Sutter, M. (2020). To buy or not to buy? Price salience in an online shopping field experiment. *European Economic Review*, 130, 103593

Heinz, M., Jeworrek, S., Mertins, V., Schuhmacher, H., & Sutter, M. (2020). Measuring the indirect effects of adverse employer behavior on worker productivity: A field experiment. *Economic Journal*, 130(632), 2546–2568

Sutter, M., Huber, J., Kirchler, M., Stefan, M., & Walzl, M. (2020). Where to look for the morals in markets? *Experimental Economics*, 23(1), 30–52

Sutter, C., Rosenberger, W., & Sutter, M. (2020). Nudging with your child's education: A field experiment on collecting municipal dues when enforcement is scant. *Economics Letters*, 191, 109116

Sutter, M., & Untertrifaller, A. (2020). Children's heterogeneity in cooperation and parental background: An experimental study. *Journal of Economic Behavior & Organization*, 171, 286–296

Current Revise-and-resubmits (as of 17 November 2023)

Kaba, M., Koyuncu, M., Schneider, S. O., & Sutter, M. (2023). Social Norms, Political Polarization, and Vaccination Attitudes: Evidence from a Survey Experiment in Turkey. European Economic Review. Revise and resubmit

Sutter, M., Weyland, M., Untertrifaller, A., Froitzheim, M., & Schneider, S. (2023), Financial literacy, experimental preference measures and field behavior – A randomized educational intervention. *Journal of Political Economy*. Revised and resubmitted

Schneider, S. O., Sutter, M. (2022), Higher order risk preferences: New experimental measures, determinants and field behavior. *American Economic Review*. Revise and resulmit

Alysandratos, T., Georganas, S., Sutter, M. (2023), Reputation vs selection effects in markets with informational asymmetries. *Review of Economics and Statistics*. Revise and resubmit

Fang, X., Goette, L., Rockenbach, B., Sutter, M., Tiefenbeck, V., Schoeb, S., Staake, T. (2020), Complementarities in behavioral interventions: Evidence from a field experiment on energy conservations. *Journal of Public Economics*. Revised and resubmitted

Glätze-Rützler, D., Sutter, M., Zoller, C. (2022), Coordination games played by children and teenagers on the influence of age group size and incentives. *Experimental Economics*, Revise and resubmit

Detlefsen, L., Friedl, A., Lima de Miranda, K., Schmidt, U., Sutter, M. (2023), Are economic preferences shaped by the family context? The impact of birth order and siblings' sex composition on economic preferences. European Economic Review. Revised and resubmitted

Working Papers (selection)

Bašić, Z., Bindra, C., Glätzle-Rützler, D., Romano, A., Sutter, M., Zoller, C. (2023), The roots of human cooperation

Bhargava, P., Chen, D., Sutter, M., Terrier, C. (2023), Homophily and transmission of behavioral traits in social networks

Breitkopf, L., Chowdhury, S., Kamhöfer, D., Schildberg-Hörisch, H., Sutter, M. (2023), The right timing matters: Sensitive periods in the formation of socio-emotional skills

Breitkopf, L., Chowdhury, S., Priyam, S., Schildberg-Hörisch, H., Sutter, M. (2023), Do economic preferences of children predict behavior?

Chowdhury, S., Schildberg-Hörisch, H., Schneider, S., Sutter, M. (2023), Information provision over the phone saves lives: An RCT to contain COVID-19 in rural Bangladesh at the pandemic's onset

Kiessling, L., Chowdhury, S., Schildberg-Hörisch, H., Sutter, M. (2023). Parental Paternalism Privam, S., Salicath, D., Sutter, M. (2022). Information intervention to promote safe water consumption: An RCT in areas affected by groundwater arsenic in India

Salicath, D., Sutter, M. (2023), Impact of financial shocks on decision-making: Experimental evidence from factory-workers in Kenya

# **Lectures and Presentations** (since 2020)

2020

Wie und warum Kooperation gelingen kann -Einsichten aus der Verhaltensökonomie Musik und Wissenschaft - Themenkonzerte. Hamburg

14 January 2020

Die Entdeckung der Geduld Caesarium, Bonn 16 January 2020

Die Kraft der Kooperation 56. Informationstagung des ÖRV, Bregenz 24 January 2020

Verhaltensökonomik - und wie man Verhalten beeinflussen kann Bezauer Kreis, Bludenz 27 January 2020

**Geduld und Unsicherheit** Behavioral Economics Academy, Gottlieg Duttweiler Institut, Rüschlikon 29 January 2020

Credence goods markets and the informational value of new media: A natural field experiment

Research Seminar Carnegie Mellon University, Pittsburgh

13 February 2020

(Higher order) risk preferences and patience predict addictive behavior among adoles-

Research Seminar George Mason University, Washington

14 February 2020

What shapes children's decisions? Experience or (selective) memory? Research Seminar Princeton University, Princeton 18 February 2020

Social preferences and selection into the financial industry Research Seminar, University of Chicago, Chicago 20 February 2020 2021

Parental paternalism and patience Keynote, BUE-EBEL Inaugural Conference, The British University of Egypt 25 February 2021

Higher order risk preferences Research Seminar, Boston University 9 March 2021

The roots of cooperation Research Seminar, University of Queensland 2 June 2021

The roots of cooperation Keynote, International Conference on Social norms and social preferences, Higher School of Economics, Moscow 22 July 2021

Improving workplace climate Research Seminar, Purdue University 21 October 2021

The roots of cooperation Keynote, ESA-North American Meeting, Tucson 30 October 2021 2022

Information interventions and health outcomes Research Seminar, Kadir Has University Istanbul 9 March 2022

Financial literacy, risk and time preferences Research Seminar, University of Göteborg 9 June 2022

Improving workplace climate Research seminar, NHH Bergen 22 June 2022 2023

Financial literacy, risk and time preferences Research Seminar, CERGE-El Prague 20 March 2023

**Behavioral Economics for Leaders** Research Seminar, London School of **Economics** 17 April 2023

**Behavioral Economics for Leaders** Research Seminar, University of Exeter 18 April 2023

Financial literacy, risk and time preferences Research Seminar, HM Treasury London 19 April 2023

Financial literacy, risk and time preferences Research Seminar, Technical University Munich 17 May 2023

Female leadership and workplace climate Research Seminar, University of Stavanger 8 June 202

#### Grants

2023-2026

World Bank grant for "Moving to Opportunity Abroad. Evidence from a Uganda-Germany College Access Program" (Co-PI)

2019-2025

German Science Foundation (DFG): Excellence Cluster "ECONtribute: Markets & Public Policy" (Co-PI)

### **Teaching**

Each year - University of Cologne - PhD Course in "Advanced Experimental Economics" (2 SWS)

- Executive MBA Course in "Social and Economic Behavior" (2 SWS)

# Diploma Theses, Dissertations, and Habilitations

**Dissertations** 

September 2020

Parampreet Christopher Bindra, University of Innsbruck: Essays in Experimental Economics: Credence Goods & Other (field) Experiments

October 2020

Patrick Bernau, University of Cologne: Learning. Giving. Teaming Up. - Essays in Economic Decision Experiments

September 2021

Shambhavi Priyam, Max Planck Institute for Research on Collective Goods: Essays in Behavioral Development Economics

December 2021

Daniel Salicath, Max Planck Institute for Research on Collective Goods: Essays in Behavioral Economics

June 2022

Sofia Monteiro, Max Planck Institute for Research on Collective Goods: The behavioural economics of interventions for healthier beliefs, choices and outcomes

### **Public Service**

Since 2020 Member of the Government of Vorarlberg's Experts' Group on COVID-19

2018-2022 Board member of the Foundation "Diligentia – Stiftung für empirische Forschung", Cologne

### **Professional Activities**

#### Memberships

Since 2019 Member of the Academia Europaea

Since 2017 Member of the scientific advisory board of the Institute for Advanced Studies (IHS), Vienna

2018–2022 Member of the scientific advisory board of the Kiel Institute for the World Economy.

#### **Editorial Board Memberships**

- Management Science Associate Editor (since 07/2011)
- Quantitative Economics Associate Editor (since 07/2021)
- Economics Letters Associate Editor (since 09/2014)
- European Economic Review Associate Editor (since 10/2012)
- Journal of the Economic Science Association Member of editorial board (since 07/2014)
- Experimental Economics Member of editorial board (07/2009-10/2018)
- Journal of the European Economic Association – Associate Editor (10/2016-12/2022)

#### Referee for (Selection)

American Economic Review, Econometrica, Journal of Political Economy, Quarterly Journal of Economics, Review of Economic Studies, Review of Economics and Statistics, Journal of the European Economic Association, Management Science, Games and Economic Behavior, ...



Contact
thopesch@coll.mpg.de

https://www.coll.mpg.de/fiona-tho-pesch

# **Fiona tho Pesch**

# **Summary Report**

I finished my dissertation on the mechanisms of prosociality and moral wiggle room in March 2023. Prosociality is essential for humans whenever they live and interact together, making it a crucial factor for civilizations at large. Unsurprisingly, then, researchers from all across the social sciences have taken an interest in studying the preconditions, constraints, and mechanisms of prosociality. Research on moral wiggle room has identified several situational factors that decrease prosocial behavior (Dana et al., 2007; Exley, 2016; Grossman & van der Weele, 2017; Matthey & Regner, 2011). Although the concept of moral wiggle room has gained considerable attention in academia, its underlying mechanisms remain unclear. In the four chapters of my dissertation, I investigated different drivers of moral wiggle room. In Chapter 1, I verbally specified the theory of moral wiggle room, introducing three different mechanistic accounts, as well as describing interindividual heterogeneity in who exploits moral wiggle room. In Chapter 2, I investigated self-image and social norms as mechanisms behind moral wiggle room by introducing attributional ambiguity into a binary donation decision. Chapter 3 utilized mouse-tracking as a measure for cognitive conflict to explore its role in moral wiggle room, specifically in willful ignorance. Chapter 4 critically investigated the proclaimed mechanism behind willful ignorance by examining the extent to which wiggling-related motivations drive willful ignorance, and whether other motivations, such as tradeoff aversion and inattention, might play a role. Understanding the drivers of moral wiggle room can provide insights into the motivational underpinnings of prosocial behavior more generally. Against this backdrop, my dissertation aimed to understand when, why, and by whom moral wiggle room is exploited, thereby investigating the motivational foundations of prosociality.

# Research Agenda

I started my postdoctoral studies at the Ecole Normale Supérieure in Paris in early April 2023. Though I am still interested in understanding prosociality, my postdoctoral studies will mainly focus on the psychology of poverty. This will represent a continuation of projects I started during my time at the Max Planck institute with collaborators from UC Berkeley on the effects of poverty on cognitive capacities. Within the next two years, I will design a scalable study protocol to investigate how the experience of (financial) adversity affects cognitive capacities, experiences, and decision-making. To this end, I will first systematically review the literature, which might result in a review paper. I will then design study protocols for two different cities, one of which will be Paris, and the second one potentially Istanbul. We will identify one neighborhood in which people experience abundance and one in which they experience adversity, comparing experiences and decision-making in the two neighborhoods. We aim at answering several independent research questions, to get a first impression of what is achievable within such a project. I will then apply for a larger grant together with my two collaborators in Paris to set up an international team of collaborators to implement data collection in additional cities worldwide. I will be able to transfer a lot of knowledge gained when studying prosociality to the domain of poverty and adversity.

# **Work in Progress**

tho Pesch, F., Fahrenwaldt, A., Fiedler, S., & Baumert, A. (2023) Under review at *Journal* for Judgement and Decision Making

tho Pesch, F. & Dana, J. (2023) Attributional ambiguity reduces charitable giving by relaxing social norms. Under review at *Journal for Experimental Social Psychology* 

tho Pesch, F., Fiedler, S., & Baumert, A. (in preparation) Who ignores – and why?

tho Pesch, F., Langenhoff, A., & Srinivasan, M. (in preparation) Reconsidering the scarcity mindset: Greater focus and attentional neglect?

tho Pesch, F. (in preparation) A mouse-tracking investigation of conflict in moral wiggle room

### **Grants / Prizes / Honors**

2020

Psychology and Economics of Poverty Initiative & Center for Effective Global Action, UC Berkeley

Grant for project "How Does Scarcity Guide our Attention?", with Antonia Langenhoff

# Lectures and Presentations (since 2020)

2020

Seeing moral transgressions Society for the Advancement of Behavioural Economics Annual Conference (online) 23 July 2020

2021

Moral Wiggle Room in Everyday Decision-Making Life Improvement Science Conference (online) 26 January 2021

2022

Attributional Ambiguity as Moral Wiggle Room University of Paderborn, Department of Managerial Economics, Germany January 2022

Reconsidering the Scarcity Mindset: Greater Focus and Attentional Neglect?
Wirtschaftsuniversität Wien, Institute for Cognition and Behavior, Austria
June 2022

## **Teaching**

Summer term 2021 University of Wuppertal Decision-making psychology

Summer term 2022 University of Wuppertal Decision-making psychology

Summer term 2023 University of Wuppertal Decision-making psychology

#### **Professional Activities**

Referee for

Social Psychology, Zeitschrift für Psychologie

Memberships

Since 2020 Member of European Association of Social Psychology

Since 2022 Member of Deutsche Gesellschaft für Psychologie



Contact
tissen@coll.mpg.de

https://www.coll.mpg.de/jana-tissen

# Jana Tissen

# **Summary Report**

In October 2022, I started my PhD at Matthias Sutter's Experimental Economics Group. I completed my BSc in Economics at the Freie Universität Berlin and my MSc in Economics at the University of Cologne. During my Masters, I learned about experimental economics and became familiar with research on economics in developing countries. I am especially interested in conducting randomized control trials in developing countries and evaluating them with machine-learning methods for causal inference. During my first year, I must complete 60 ECTS of coursework at the university. Among other things, I have attended courses in experimental methods, survey design, econometric methods for experiments, and applied econometrics.

# Research Agenda

My main research interest is development economics. Together with Manuela Puente Beccar and Sebastian Tonke, I have started a project on preventive healthcare for children in Bolivia. In the last ten years, the immunization rate among children dropped from around 95 percent to 70 percent. A conditional cash transfer incentivizes parents to bring their children to medical checkups, where they also receive necessary vaccines. Despite the incentive being high for the eligible households, only 50 percent of eligible children are signed up for this program, and far fewer complete all recommended controls. We want to investigate why parents do not take up this incentive and how we can intervene to increase the participation.

In the following years, I would like to investigate the broader question of how long-term uncertainty, such as that caused by high inflation rates or unstable political systems, affects people's decision-making. Since long-term

uncertainty is prevalent in developing countries, I would like to continue my research in these countries. I wish to include machine-learning methods in my evaluation tools, since I am convinced that they have great potential in analyzing heterogeneous treatment effects.

# **Work in Progress**

Puente Beccar, M., Tissen, J., & Tonke, S. (in preparation). Increasing the take-up of medical controls for children in Bolivia

# Lectures and Presentations (since 2020)

2023

Increasing Childhood Immunization in Bolivia

Thesis Workshop IMPRS, MPI for Research on Collective Goods, Raesfeld, Germany 28 March 2023

Increasing the Take-Up of Medical Controls for Children in Bolivia (Poster presentation) Behavioral Economics – Behind the Scenes, PhD-Course, University of Copenhagen, Denmark

12 June 2023

## **Public Service**

Since January 2023 Representative at Cologne Graduate School (CGS), member of the CGS board

# **Sebastian Tonke**

## **Summary Report**

I joined the Max Planck Institute in May 2019. Prior to joining the EEG, I completed my PhD at the University of Cologne. My research lies at the intersection of behavioral, development, and environmental economics. I study the underlying motives of economic behavior and test their policy implications in real-world settings. For my research, I mostly use large-scale randomized controlled trials (RCTs) that investigate the potential, limitations, and complementarities of different policy interventions to address environmental threats such as water scarcity or waste accumulation. The RCTs are conducted in low-income and middle-income countries, which are expected to be disproportionately affected by climate change because of their vulnerability to environmental crises and lower coping capacity. For my other lines of research, I also use lab, lab-in-the-field, survey, and online experiments, as well as quasi-experimental methods.

#### **Addressing Water Scarcity**

Water scarcity is expected to be among the most disruptive effects of climate change and already affects two-thirds of the world's population. In three large-scale RCTs in cooperation with public water utilities, I address two common problems that threaten the sustainable provision of clean water: Non-payment for water utility bills, and excessive water consumption.

In "A Large-Scale Field Experiment to Reduce Non-Payments for Water: From Diagnosis to Treatment", with B. Rockenbach and A. Weiss, we address non-payment of water utility bills in Namibia (approx. 10,000 households). Non-payment threatens the expansion and maintenance of infrastructure; yet, standard economic approaches like denial of access are difficult to enforce because water is a basic human right.

We find that most customers are principally willing to pay, but around 40% do not properly understand or even receive their invoices. Providing simplified information via text message increases payments by up to 30% in the short term and by about 10% in the long term. As the lead author of this project, I was awarded the Junior Scholar's Award at the BX 2016 conference at Harvard University.

In "Shaping Identity: Evidence from a Large-Scale Field Experiment", I use messages that make the link between the identity of being a responsible citizen and paying for public services salient. This (i) induces additional shortrun payments, (ii) leads individuals to update their self-perceptions of being a responsible citizen as a consequence of their payment behavior, and (iii) improves longer-term payments. A treatment variation asking for payments without linking behavior to identity also induces additional short-run payments, but does not change self-perception and even reduces longer-term payments. This paper shows how creating a strong identity-behavior link shapes self-perception and induces sustained behavioral change.

In "Providing Procedural Knowledge: Evidence from a Field Experiment to Encourage Water Conservation in Namibia", I use an RCT to study how to encourage water conservation effectively during a drought in Namibia (about 15,000 households). Providing a short list of very specific water-conservation strategies via text message decreases residential water consumption by 5%. Asking individuals to come up with their own ideas to save water is ineffective, suggesting that individuals lack the procedural knowledge on how to reduce water consumption effectively. This interpretation is corroborated by survey evidence that shows that most households have difficulty stating effective water-conservation strategies. This



Contact
tonke@coll.mpg.de

https://www.coll.mpg.de/sebastian-tonke

paper shows that imperfect procedural knowledge is an obstacle to efficient behavior, but can be overcome by providing low-cost information.

In "Complementarities of Price and Non-Price Interventions to Curb Resource Demand" (with Matthias Sutter), we compare the two standard economic approaches to curb water demand: price and non-price interventions. Our paper suggests important policy complementarities: First, non-price interventions are much more effective in the short term than in the long term, while the opposite is true for price interventions. Second, further price increases become ineffective at high price levels, whereas behavioral interventions remain effective even at high price levels. Third, behavioral interventions mostly affect high users, whereas price interventions mostly affect low users.

#### **Addressing Global Waste Accumulation**

Global waste accumulation is a major contributor to climate change and poses a serious threat to people and ecosystems. Insufficient waste management is particularly problematic in low- and middle-income countries, as the infrastructure for waste management is often worse than in developed countries, with large amounts of waste ending up in local dumpsites, threatening people's health and the environment. Recycling is a key element for sustainable waste and resource management.

In "Correcting Misperceptions About Trends and Norms to Address Weak Collective Action" (with Hanna Fuhrmann-Riebel, Ben D'Exelle, Kristian Lopez Vargas and Arjan Verschoor), we study how correcting people's beliefs about social norms and behavioral trends encourages collective action in a setting where the desired behavior is not yet prevalent. In a field experiment, we test whether low sign-up rates for a recycling program in urban Peru can be increased by providing information (1) that most people regard participation in the program as important, i.e., on

the "injunctive norm", (2) on an increasing recent trend in sign-up rates. We find that correcting inaccurate beliefs increases sign-up decisions significantly among people who underestimate either the injunctive norm or the positive trend. This evidence demonstrates that belief updating can be used effectively to encourage collective action where it is currently weak.

In "The Impact of Reminder Text Messages on Recycling Behavior: Evidence from a Field Experiment" (with Hanna Fuhrmann-Riebel, Ben D'Exelle, Kristian Lopez Vargas and Arjan Verschoor), we conduct a field experiment to test whether reminder text messages can improve the recycling behavior of households in a middle-class neighborhood in Peru. Over a nine-week treatment period, households are randomly assigned to one of four groups: i) an untreated control group, ii) a group that receives continuous reminders, iii) a group that receives reminders only for the first three weeks, and iv) a group that receives reminders for the first three weeks and for the last three weeks. We show that reminder messages can effectively encourage recycling behavior, with suggestive evidence that continuous reminders are most effective. Our study suggests that limited attention can be an obstacle to pro-environmental behavior, which can be mitigated through low-cost interventions.

### Research Agenda

Besides continuing my ongoing work, I plan to research in two broad areas: The first part relates to the economic design of interventions. This research area aims to develop new approaches to designing economic interventions through the use of predictive pre-intervention diagnostics. There is an urgent need for such diagnostics because several meta-studies show a high context dependency of interventions, with most interventions showing only weak or no positive effects when scaled up or implemented elsewhere. To address this

problem, I want to develop a novel, versatile, and adaptable diagnostic methodology based on a conceptual framework of human behavior that can predict the effectiveness of interventions. This innovative approach holds the potential to revolutionize the way economic interventions are designed, marking a new direction in policy design that is responsive, adaptable, and ultimately more effective in improving societal welfare.

The second research area focuses on the relationship between climate change and inequality. Specifically, I aim to investigate how one's perceived societal position regarding CO2 emissions influences support for climate policies. Low- income and middle-income countries, for example, are historically least responsible for climate change, yet suffer the gravest consequences. Hence, they demand a fair distribution of costs to combat climate change. The research aims to analyze how people's perception of their own and others' contributions to climate-change emissions affects their support for political action on climate change, and what type of information can change their policy views. Understanding the societal factors that influence people's views is crucial to fostering international support for climate policies.

### **Publications (since 2020)**

#### **Articles in Peer-Reviewed Journals**

Tonke, S. (forthcoming). Providing procedural knowledge: Evidence from a field experiment to encourage resource conservation in Namibia. *Journal of Development Economics* 

Rockenbach, R., Tonke, S., & Weiss, A. (forthcoming). A large-scale field experiment to decrease non-payment for water: From diagnosis to treatment. Review of Economics and Statistics

Rockenbach, R., Tonke, S., & Weiss, A. (2021). Self-serving behavior of the rich causes contagion effects among the poor. *Journal of Economic Behavior & Organization*, 2021, 183, 289-300

#### **Revise & Resubmit**

Tonke, S. (2023). Shaping identity: Evidence from a large-scale field experiment. Revise and resubmit to the *Journal of Political Economy Microeconomics* 

#### **Working Papers**

Fuhrmann-Riebel, H., D'Exelle, B., Lopez Vargas, K., Tonke, S., & Verschoor, A. (Working Paper). Correcting misperceived trends and norms to address weak collective action

Rockenbach, B., Schneiders, S., Tonke, S., Vollan, B., & Weiss, A. (Working Paper). Self-affirmation and productivity: Backfiring among those who could benefit the most

## **Work in Progress**

Fuhrmann-Riebel, H., D'Exelle, B., Lopez Vargas, K., Tonke, S., & Verschoor, A. (ongoing). The impact of reminder text messages on recycling behavior: Evidence from a field experiment

Puente Beccar, M., Tissen, J., & Tonke, S. (in preparation). Increasing the take-up of medical controls for children in Bolivia

Riedmiller, S., Sutter, M., & Tonke, S. (ongoing). Designing effective interventions: Anamnesis, diagnosis, and prescription

Riedmiller, S., Sutter, M., & Tonke, S. (ongoing). A meta-analysis on the long-term effects of economic interventions

Tonke, S. & Sutter, M. (ongoing). Complementarities of price and non-price interventions to curb resource demand

# Lectures and Presentations (since 2020)

#### 2020

Imperfect Procedural Knowledge: Evidence from a Field Experiment to Encourage Water Conservation

35th Annual Congress of the European Economic Association (Virtual) August 2020

Imperfect Procedural Knowledge: Evidence from a Field Experiment to Encourage Water Conservation Verein für Socialpolitik (VfS) Annual Conference (Virtual) September 2020 Shaping Identity: Evidence from a Large-Scale Field Experiment Prague University of Economics and Business (virtual) October 2020

#### 2021

Shaping Identity: Evidence from a Large-Scale Field Experiment WZB-MPI Workshop on behavioral economics (virtual) December 2021

#### 2022

Shaping Identity: Evidence from a Large-Scale Field Experiment U Stockholm-MPI Workshop on behavioral economics(virtual) March 2022

#### 2023

Research Seminar in Energy Economics Institute of Energy Economics Cologne October 2023

Shaping Identity: Evidence from a Large-Scale Field Experiment Verein für Socialpolitik Annual Meeting, Regensburg September 2023 (Scheduled),

Designing Effective Interventions: Anamnesis, Diagnosis, and Prescription
CREED-MPI Workshop, Amsterdam
May 2023

#### **Professional Activities**

#### Referee for

Environmental Research Letters
Frontiers in Behavioral Economics
(Behavioral Public Policy)
Journal of Environmental Economics and
Management
Journal of Law and Empirical Analysis
Management Science
World Development



Contact

toribio-florez@coll.mpg.de

https://www.coll.mpg.de/daniel-toribio-florez

# **Daniel Toribio-Flórez**

# **Summary Report**

In broad terms, my research examines the impact that processes of social and moral judgment have on behavior. How do people judge others and others' attitudes and behavior? What situational and psychological factors influence these judgements and people's consequent behavioral reactions? In particular, I have investigated how social and moral judgment occurs under conditions of limited (i.e., uncertainty, ambiguity) or conflicting (i.e., ambivalent) situational information, and how it translates into behavior under such circumstances.

As a PhD candidate within the Moral Courage Research Group of the Max Planck Institute for Research on Collective Goods, I specifically addressed the phenomenon of costly third-party punishment, which refers to the costly punitive reactions of third parties against the violation of moral or social norms. In collaboration with Prof. Anna Baumert and Dr. Julia Saße, I first examined whether the ambiguity often affecting the interpretation of a kind of behavior as a norm violation influenced the reaction of third parties. In different studies, we observed that ambiguity of the norm violation rendered third parties more reluctant to engage in costly punishment, especially those who experienced higher dispositional concerns for justice. Further studies suggested that, given that ambiguous norm violations entail the possibility of punishing unfairly, the hindering effect of ambiguity on costly punishment was partly driven by the third parties' concern of creating unfairness themselves (Toribio-Flórez, Saße and Baumert, 2022).

Within the context of the COVID-19 pandemic, we assumed that the irruption of the pandemic implied substantial ambiguity about the social appropriateness of certain types of behavior (e.g., use of public spaces). Under this assumption,

we guestioned whether the governmental measures regarding physical distancing helped to ameliorate this ambiguity. To address this issue, we used the case of Germany as a quasi-experimental setting. Specifically, we assessed whether the introduction of regulatory measures of physical distancing by the German government changed people's perception of social norms about this kind of behavior, as well as on people's willingness to intervene against the transgression of these norms. Although we did not observe drastic changes in the perceived ambiguity of social norms, the governmental measures seemed to affect the perception of the social norms of physical distancing. Moreover, we observed an undoubtedly robust relationship between people's personal norms and their willingness to intervene against their transgression, which highlights the importance of personal attitudes towards social norms in the explanation of third-party intervention behavior (Toribio-Flórez, Fahrenwaldt, Baumert and Saße, work in progress).

An additional factor that has been demonstrated to hinder costly thirdparty punishment is the counterreaction from the perpetrator of the norm violation (henceforth, counterpunishment). However, the underpinning sociopsychological mechanisms of this effect have not been explored yet. We aimed to fill this gap by investigating whether the effect of counterpunishment on thirdparty punishment corresponded to the third parties' aversion to engaging in an interpersonal conflict, or simply to the addition of further costs. In two studies, we observed that the same reduction of costly third-party punishment occurred under the risk of being counterpunished by the perpetrator, and under the risk of incurring further additional costs allocated by an algorithm. This finding suggested that, despite the assumed social nature of counterpunishment, its effect on third-party punishment is

mainly the effect of increasing costs (Toribio-Flórez, Cypris, Brüggemann, Şeker, and Baumert, 2022).

More recently, my postdoctoral line of research has extended to addressing the individual, interpersonal, and societal consequences of believing in conspiracy theories across multiple domains. This includes the implications conspiracy beliefs have for the social impression of those who share them (e.g., politicians; Green, Toribio-Flórez, Douglas, Brunkow, and Sutton, 2023), for the interpersonal relationships people have with conspiracy believers (Toribio-Flórez, Green, Sutton, and Douglas, 2023; Toribio-Flórez, Green, and Douglas, forthcoming), and for people's political attitudes and behavior (e.g., normative and non-normative collective action).

During my affiliation with the Max Planck Institute for Research on Collective Goods, I also had the chance to develop a genuine interest in the big challenges that have affected science in recent years, and perhaps most pronouncedly the social sciences (e.g., reproducibility crisis, fraud). Thus, since the beginning of my PhD, I have been actively involved in different Open Science-related projects. For example, I participated in different ManyLabs research projects to offer high-powered, preregistered replications (e.g., McCarthy, Gervais et al., 2021) or to address relevant research questions with global representative data (e.g., Cologna et al., 2023). Furthermore, I was an active member and co-coordinator of the Open Science working group of the Max Planck Society PhDnet, whose goal is the promotion of Open Science standards within the Max Planck Society. I led the elaboration of a large-scale survey that assessed the stance and implementation of Open Science practices by early-career researchers in the Max Planck Society (Toribio-Flórez et al., 2021). Furthermore, I contributed to organizing the relaunch of the Open Access Ambassadors program (now renamed Open Science Ambassadors), which aimed at identifying early-career researchers who

were interested in learning about and locally promoting Open Science at their respective Max Planck institute.

### **Publications (since 2020)**

#### **Articles in Peer-Reviewed Journals**

Green, R., Toribio-Flórez, D., Douglas, K. M., Brunkow, J. W., & Sutton, R. M. (2023). Making an impression: The effects of sharing conspiracy theories. *Journal of Experimental Social Psychology*, 104, 104398

Toribio-Flórez, D., Green, R., Sutton, R. M., & Douglas, K. M. (2023). Does belief in conspiracy theories affect interpersonal relationships? *The Spanish Journal of Psychology*, 26, e9

Toribio-Flórez, D., Sasse, J., & Baumert, A. (2022). "Proof under reasonable doubt": Ambiguity of the norm violation as boundary condition of third-party punishment. *Personality and Social Psychology Bulletin*. 49(3), 1–18

Toribio-Flórez, D., Anneser, L., deOliveira-Lopes, F. N., Pallandt, M., Tunn, I., & Windel, H. (2021). Where Do early-career researchers stand on Open Science practices? A Survey within the Max Planck Society. Frontiers in Research Metrics and Analytics

#### **Working Papers**

Toribio-Flórez\*, D., Fahrenwaldt\*, A., Sasse, J., & Baumert, A. (2021). The effect of governmental COVID-19 measures on physical distancing norms and intervention against deviations: A case study in Germany (\*shared first authorship)

Toribio-Flórez, D., Cypris, N., Brüggemann, M., Şeker, F., & Baumert, A. (2022). A closer look at third-party punishment under the risk of counterpunishment: An effect of additional material (and not social) costs

Toribio-Flórez, D., Green, R., & Douglas, K. M. (2023). Belief in conspiracy theories and satisfaction in interpersonal relationships

#### **Multilab Research Projects**

McCarthy, R. J., Gervais, W., ..., & Toribio-Flórez, D., et al. (2021). A multi-site collaborative study of hostile priming effects. *Collabra: Psychology* 

Cologna, V., Mede, N. G., ..., & Toribio-Flórez, D., et al. (forthcoming). Trust in scientists and their role in society: A global assessment. *Science* 

#### **Grants**

Summer Vacation Research Competition at University of Kent (2023), awarded to hire two research assistants who provided support to the project "Analyzing the Linguistic Correlates of the Spread of Conspiracy Theories in Social Media", in collaboration with Dr. Imane Khaouja

# Lectures and Presentations (since 2020)

#### 2020

Imperfect Procedural Knowledge: Evidence from a Field Experiment to Encourage Water Conservation

35th Annual Congress of the European Economic Association (Virtual) August 2020

Imperfect Procedural Knowledge: Evidence from a Field Experiment to Encourage Water Conservation

Verein für Socialpolitik (VfS) Annual Conference (Virtual) September 2020

Using Identity Appeals to Decrease Non-Payment for Water in Kosovo Research Seminar (scheduled), University of Economics, Prague October 2020

#### 2021

"Proof Under Reasonable Doubt": Ambiguity of The Norm Violation as Boundary Condition of Third-Party Punishment (with Sasse, J. & Baumert, A.)
Symposium on "Willful Ignorance" at Subjective Probability. Utility and Decision Making

Symposium on "Willful Ignorance" at Subjective Probability, Utility and Decision Making (SPUDM). University of Warwick, UK August 2021

"Proof Under Reasonable Doubt": Ambiguity of The Norm Violation as Boundary Condition of Third-Party Punishment (with Sasse, J. & Baumert, A.)
University of Paderborn, Germany
November 2021

Opening A Discussion About Open Science (with van Scherpenberg, C.)

`IT MA(T)Ters` Conference. Max Planck Institute for Marine Microbiology and Max Planck Institute for Terrestrial Microbiology, Germany April 2021

# D. Research Portraits

# **Teaching**

Winter Term 2020/2021 Getting Started with R (with N. Cypris) Technical University of Munich

2023

Winter term 2022/23 Understanding and countering misinformation and conspiracy theories University of Kent

## **Professional Activities**

Ad-hoc reviewer

Journal of Economic Psychology Journal of Personality and Social Psychology: Personality Processes and Individual Differences European Journal of Social Psychology Scientific Reports

#### Memberships

Full Member of the European Association of Social Psychology (EASP)

European Association of Decision Making (EADM)

Society for the Improvement of Psychological Science (SIPS)

# **Matthew Trail**

## **Summary Report**

I have been a Research Fellow with the Behavioral Law and Economics Research Group since October 2020. I have a J.D. from the University of Tennessee. Prior to beginning my research at the Max Planck institute, I worked as an attorney for legal-aid law firms in the US, where I managed other attorneys in a practice focusing on the direct representation of foster children. My research is about how people in the foster-care field make decisions related to the welfare of children. I am especially interested in how legal frameworks might change decision-making and in the use of algorithmic predictive models in foster care.

## Research Agenda

**Legal Framework Decision-Making** 

I have conducted a vignette survey experiment testing if different legal prompts and the stability of the child affect the support or opposition to requests from a child in the foster-care system. In this experiment, I recruited more than 1,000 people with ties to the foster-care system including foster parents, state-agency workers, foster-care alumni and guardian ad litems. Participants were also rated on a scale if they favored child safety or family preservation. I hope to see not only if legal frameworks change decision-making, but also if there are differences between these groups.

Data collection for this project was completed in July 2023, so there are no results to be shared currently, but I expect the results to be ready in the fall of 2023, and this research will be the basis for my PhD dissertation.

Judge and Attorney Decision-Making Using Predictive Risk Models

I have also conducted an experimental vignette survey of lawyers and judges in the child-welfare legal field, testing if decision-making and confidence are changed when presented with a predictive model risk score. I recruited more than 250 child-welfare and juvenile lawyers and judges for this survey. Like the prior experiment, participants were rated on a scale of family preservation and child safety. The purpose of this research is to see how these new predictive models might change legal decision-making in the child-welfare court. as the current models in use have not been presented to lawyers and judges before.

Data collection for this experiment was also completed in July 2023, and data analysis has not yet begun. I hope to have these results ready for publication by early 2024.

Intersection of Beliefs Among Evangelical Christians Regarding Foster Care and Abortion

In March and June of 2023, I conducted 31 semi-structured interviews with members of two evangelical Christian churches in Tennessee. These interviews looked at knowledge of the foster care system, beliefs about abortion, and other Conservative issues. The focus of the interviews was how the evangelical Christians viewed the change in US law regarding abortion access and how they believed it would affect the population and makeup of the foster care system. These were anonymous voice-recorded interviews that took place generally in the home or in the church.

Interview transcription has been completed, and interview coding will be done by November 2023. My coauthor and I hope to submit this for publication by January 2024.



#### Contact

trail@coll.mpg.de

https://www.coll.mpg.de/matthew-trail

# Lectures and Presentations (since 2020)

#### 2022

Algorithms and Decision-Making Rees Center, Department of Education, University of Oxford, virtual event 6 June 2022

Predictive Models in Child Welfare
US Dependency Court Researchers Network,
virtual event
16 June 2022

Algorithms and Decision-Making University of Otago, Department of Social and Community Work, Otago, New Zealand 22 November 2022

#### 2023

Algorithms in Child Welfare and Juvenile Justice National Association of Children's Counsel, virtual event 15 February 2023

Algorithms in Child Welfare and Juvenile Justice for Judges National Council of Juvenile and Family Court Judges, Dallas, TX, USA 20 March 2023

Algorithms and Decision-Making University of Middle Tennessee State University, Department of Social Work, Murfreesboro, TN, USA 5 April 2023

Best-Interest Decision-Making and Legal Frameworks Rees Center, Department of Education, University of Oxford, virtual event 18 July 2023

### **Professional Activities**

Member of the EuSARF Academy Board since July 2022

Member of US Dependency Court Researcher's Network since June 2022

# **Nghi Truong**

# **Summary Report**

I was a Research Fellow in the Research Group "Mechanisms of Normative Change" from September 2021 to June 2022. Currently, I am a faculty member at Sasin School of Management, Thailand, and a Research Fellow at INSEAD Singapore. I obtained my PhD in Business Administration from ESMT. Berlin (2022). My research resides at the intersection of strategy, organization design, and behavioral economics, with a focus on two core themes. First, I explore the influence of ML and AI on the future of work and organizations, while also examining how these advancements reshape our understanding and design of organizations. Second, I investigate how conformity and conflict manifest themselves within organizations, as well as the outcomes stemming from these dynamics.

I employ a diverse range of methods, including agent-based simulations, game-theoretic models, experiments, applied econometrics, and social-network analysis. I also employ AI algorithms and machine-learning approaches to enrich my research.

# Research Agenda

#### **Organization and Algorithms**

Within this line of research, I am currently involved in four ongoing research projects, two of which were initiated during my time at the MPI. With Matthew Bothner, Ingo Marquart, and Wonjae Lee, we develop a novel method that integrates techniques from deep neural network models (e.g., the Bidirectional Encoder Representations from Transformers – BERT) with network-based methods in order to build semantic networks representing language use within a given corpus. We apply this method to investigate the evolution of the concepts

of "leader" and "manager" over time and explore their impact on organizational culture. With Hai Anh Vu, Thanh Nguyen, Tam Nguyen, Vu Vo, Tuan Tran, and Hoang Bao Nguyen, we conduct a quasi-experimental study in Vietnam to evaluate the impact of the "Coding for Future with Google" program on the short-term and long-term outcomes of students. Our findings offer insights into a cost-efficient approach to narrowing the gap in coding knowledge for disadvantaged students in developing countries

In collaboration with Phanish Puranam and Ilia Tsetlin, we develop a graph theory-based model to explain why honest, rational actors, who are able to communicate perfectly and are motivated to cooperate like many AI tools, may nonetheless fail to convince one another of something that is true. We formalize the process of explanation as traversal across overlapping knowledge graphs, with the explainer facing an optimal stopping problem. We examine which explanation strategies are optimal conditional on the structural properties of the explainer's and the explainee's graphs. Our model offers valuable implications for how humans can effectively collaborate with Al.

With Phanish Puranam, we have built a Large Language Model-based application which can help users engage in complex design problems in management (e.g., organization design, strategy formulation, business-model generation) by adding a knowledge layer based on our research onto a standard LLM (such as GPT3.5, for instance). This application allows users to benefit from the combination of the underlying trained LLM, as well as our proprietary knowledge layer. We are using this application to study how humans use AI tools to engage in design tasks in the management context.



Contact
nghi.tct@gmail.com

#### **Conformity and Conflict**

This research line started with the paper "When Does Catalyzing Social Comparisons Cause Growth?" (with Ingo Marguart, Richard Haynes, and Matthew Bothner, in preparation for submission to Management Science), in which we focus on conformity processes in an organization. The management literature, as well managerial practice, often suggests that enacting social influences among employees will trigger social aspirations and lead to greater organizational performance. However, some studies show that social influences may reduce employee productivity due to the loss of autonomy, and thus, in some cases, unleashing individuality may be a more desirable managerial intervention. Of these two competing approaches, fostering versus limiting social influences, which design choice should a manager choose to advance firm growth?

In this paper, we develop a dynamic model in which employees form their reference-peer networks and conform to their peers' performances in response to the social-influence level prompted by the manager. Using agent-based simulations and game-theoretic analysis, we then investigate this model to examine the growth-related effects of the two opposing design choices.

Our analyses reveal that the effects of activating social influences can be either beneficial or corrupting, depending on three organizational features: (1) the skewness of the distribution of employees' initial goals concerning the effort they wish to expend; (2) the proportion of employees' social orientation toward self-improving, self-assessing, and self-enhancing when they choose their peers; and (3) employees' goal-adaptation rates, which reflect how fast employees internalize past performance into their effort goals. We find that, under right skew in the distribution of initial goals (the most highly ambitious employees constitute the right tail), enacting social influences

promotes firm growth, and organizations will receive the strongest benefit insofar as employees self-improve and adapt quickly. Under left skew (the unambitious now comprise the left tail), however, this effect reverses, but not if employees self-improve or adapt slowly: Slow adaptation "purifies" the reference peer network of otherwise corrupting stimuli, thus restoring the link between conformity and growth. Our computational experiments both cast new light on the debate surrounding the benefits of social influences in organizations and add to the behavioral theory of the firm by incorporating contextual moderators into the formal models.

The second project is a joint project with Rajshri Jayaraman and Lukas Mergele. In this study, we focus on "manterruption," a special form of gender conflict at one of the top-level political organizations of Germany, the Bundestag. Using natural language-processing models, we explore whether political opponents undermine women's voices more than men's voices by interrupting more frequently and/or aggressively during women's speeches. We then estimate econometric models to examine whether the quota policies of parties in the Bundestag - one of the standard design interventions regarding diversity - have led to significant changes in the structure of the Parliament and emboldened women's voices.

## **Publications (since 2020)**

Shipilov, A., Li, S. X., Bothner, M., & Truong, N. (forthcoming) Network Advantage: Uncontested Structural Holes and Organizational Performance in Market Crises. *Strategic Management Journal* 

#### Work in Progress

Truong, N., Marquart, I., Haynes, R., & Bothner, M. S. (2022) When does catalyzing social comparisons cause growth? Draft available, preparing for submission to management

Vu, H. A., Nguyen, T., Nguyen, T., Vo, V., Tran, T., Nguyen, H. B., & Truong, N. (2023) Preparing for the future: The impact of the "Coding for future with Google" program on students' learning outcomes coding in Vietnam. Draft available

Puranam, P., Testlin, I., & Truong, N. (2023) The limits to explainability

Truong, N. (ongoing) Human-machine collaboration

He, T., Truong, N., & Puranam, P. (2023) Can personality scores be used to optimize team composition? Results from a hidden profile task using machine learning

Truong, N., Mergele, L., & Jayaraman, R. (ongoing) Women's voices in the Bundestag

Marquart, I., Truong, N., Lee, W., & Bothner, M. S. (2023) Changing perceptions: The semantics of leadership overtime

# Lectures and Presentations (since 2020)

Introduction to the Digital Economy Invited lecture, School of Economics, UEH, Vietnam July 2021

Status Similarity and Conflict between Men and Women Academy of Management Annual Conference 2022 August 2022

#### **Professional Activities**

**Referee for**Academy of Management Annual Conference

**Book Reviewer for** Journal of Asian Studies

# Yuqi Wang

#### Overview

I joined the Max Planck Institute for Research on Collective Goods in October 2020 as a PhD candidate, within the IMPRS program in collaboration with the University of Cologne. My research lies at the intersection of economics and psychology, with a specific focus on understanding how people's memory shapes their beliefs and behavior.

Memory plays a crucial role in decision-making processes, but its limitations and selectivity can lead to systematically biased beliefs and behavior. In my first project. I investigate the selective nature of memory driven by the motivation to maintain a positive group image. Through a laboratory experiment, I establish a causal link between motivated memory and ingroup favoritism. In the second project, I develop a model that incorporates both motivated memory and associative memory to explain the selective retrieval of past information. Bringing these two mechanisms together yields new predictions that can be tested through a modified bookbag-and-poker-chip experiment. The third project explores the formation of a memory-based norm that serves as an initial anchor for beliefs and subsequently guides adjustments. This norm can emerge both endogenously, by achieving personal self-esteem equilibria, and exogenously, based on the similarity between memory traces and an environmental cue. Collectively, these projects contribute to the expanding economic literature on memory, both empirically and theoretically.

#### **Ongoing Projects**

Motivated Memory and Ingroup Favoritism

Motivated memory, characterized by the selective recollection of past experiences driven by self-serving criteria, serves as an important supply-side mechanism for motivated reasoning. Just as individuals strive to enhance their self-image, people also tend to bolster the image of the group they belong to and identify with. This motivation can result in ingroup favoritism by selectively recalling group-dependent information. Specifically, people tend to over-remember generous allocations and under-remember selfish ones from their ingroup members, while the opposite pattern can occur for outgroup members.

To test the hypotheses empirically, I design an experiment that initiates by presenting participants with noisy signals regarding the actual behavior of others in a dictator game. Subsequently, an unexpected memory task is introduced, requiring participants to recall these signals. A 2x2 Diff-in-Diff design is the key to establishing causal identification. On one dimension, participants perform the memory task either immediately after observing the signals or with a delay. The first difference can isolate the effect of the memory channel from alternative factors associated with information acquisition and processing. On the other dimension, participants are randomly assigned to conditions where they receive noisy signals either with or without group affiliation. Therefore, the second difference can disentangle the memory effect due to group-image concerns from potential memory errors and cognitive limitations.

To my knowledge, this study is the first empirical economic research investigating motivated memory in an intergroup context. Moreover, it enriches comprehension regarding the heterogeneity in stereotyped beliefs and group behavior through the lens of history-dependent memories.

#### **Investor Selective Memory**

Previous economic research has separately examined motivated and non-mo-



**Contact**wang@coll.mpg.de

https://www.coll.mpg.de/yuqi-wang

#### D. Research Portraits

tivated memory, with limited overlap. In my second project, I aim to bridge this gap by investigating both mechanisms simultaneously in a financial-market experiment. Investors can experience two types of selective memory: motivated memory, which leads to a biased recollection of investment outcomes in a self-serving manner, and associative memory, which enhances the recollection of past signals similar to the current one.

I extend Enke et al.'s (2022) model by introducing a "motivated boost" that increases the probability of recalling a past positive signal when an investor actively invests in the stock. The generalized model generates two additional predictions: For an actively invested stock, (i) people tend to exhibit a greater overreaction to a current negative signal compared to a positive one; (ii) a positive signal has a more persistent effect on beliefs than a negative one. The theory-driven experiment builds upon Enke et al.'s (2022) framework with one modification: participants make an initial investment decision by choosing between a stock with risky outcomes or a bond with known safe outcomes. This modification facilitates the manifestation of motivated memory. Furthermore, regardless of their initial choice, all participants observe signals generated from the stock and update their beliefs about it accordingly. Overall, the paper highlights the importance of selective memory for the explanation of several stylized facts in finance, including overreaction to news, the repurchase effect, and the high trading volume.

# Memory-Based Norm: A Theoretical Model

Continuing my research, the third project aims further to bridge motivated and non-motivated memory studies, specifically investigating the formation of memory-based norms. Within the strand of non-motivated memory literature, Bordalo et al. (2020) present a theory in which each experience stored in the memory database is activated to

different degrees based on its similarity to an environmental cue, resulting in a cued norm that represents the similarity-weighted average. However, memory-based norms can emerge even in the absence of a cue. This assumption draws inspiration from Kőszegi et al. (2021), where a reciprocal interdependence between motivated beliefs and retrieved memories leads people to reach a self-esteem equilibrium. By integrating similarity-based recall with the notion of personal equilibrium, this project seeks to enhance the understanding of how memory-based norms form both exogenously and endogenously.

#### Carl Christian von Weizsäcker

# Macroeconomics and Capital Theory

After having published my book with Hagen Krämer in 2019 in German, we worked on an English-language version, which appeared in 2021 under the title "Saving and Investment in the 21st Century". It is not just a translation, but we expanded it in several places. In particular, we inserted a section on the consequences of COVID-19, concerning the induced shift towards people working more from home. Here we argue that the ensuing speed-up of work digitalization is likely to reduce land rents in agglomerations, due to greater location flexibility. In this context, I also added a long section in my capital-theory manuscript on the concept of the marginal productivity of capital; here, I introduce the distinction between offensive and defensive investments in real capital. which so far has been neglected in macroeconomic model-building. In the meantime, our book has received favorable comments, in particular by Olivier Blanchard in his own book on the real rate of interest.

Hagen Krämer and I planning a second edition of the book, which should appear in 2024. Based on my capital-theory manuscript, I hope to produce a further book once my book on adaptive preferences has been published.

#### **Adaptive Preferences**

Throughout the year 2022 and the first half of 2023, my main research effort was the book project "Freedom and Adaptive Preferences". In this book, I return to earlier work, which had been interrupted by my work on macroeconomics and capital theory. Based on my Schumpeter Lectures at the University of Graz in 2011, I wrote and distributed a manuscript in 2013, entitled "Freedom, Wealth and Adaptive Preferences". Now I have returned to that manuscript in

order to revise and to complete it. In November 2022, I sent a draft manuscript to quite a few fellow economists – and I did get quite useful comments and criticism. At several academic places, I was able to present the central ideas of the book in lectures. I hope to finish the book manuscript in the summer of 2023. The main aim of the book is to establish foundations of a theory of the "normative co-evolution of the market economy and democracy" (which is the title of the Hayek Lecture I gave at the University of Freiburg in 2015).

#### **Publications (since 2020)**

**Articles in Peer-Reviewed Journals** 

Krämer, H. & von Weizsäcker, C. C. (2023). Schuldentragfähigkeit mit impliziten Staatsschulden: Replik und Erwiderung auf Jan Priewe. *Wirtschaftsdienst*, 103(5), 341–351

Krämer, H. & von Weizsäcker, C. C. (2022). Ursachen und Folgen der "Großen Divergenz": Replik auf Christoph Deutschmann. *Leviathan*, 50(2), 356–371

von Weizsäcker, C. C. & Kemfert, C. (2022). Pro & Contra: Kernenergie. *Wirtschaftsdienst*, 102, 814–815

von Weizsäcker, C. C. & Krämer, H. (2021). On capital, saving, and investment in the twenty-first century: A reply to Hein. European *Journal of Economics and Economic Policies: Intervention*, 18(3), 303–309

von Weizsäcker, C. C. (2020). Böhm-Bawerk and Hicks modernized. European *Journal* of *Economics and Economic Policies*, 17(2), 208–219

von Weizsäcker, C. C. (2020). Ende der Kapitalknappheit und neuer Protektionismus. *Wirtschaftsdienst*, 100(1), 25–28

von Weizsäcker, C. C. & Krämer, H. (2020). Sparen und Investieren im 21. Jahrhundert: Das Ende der Kapitalknappheit. *Wirtschaftsdienst*, 100(8), 569–572

von Weizsäcker, C. C., & Krämer, H. (2020). Zum Verhältnis von Zinssatz und Wachstumsrate: Theorie und empirische Evidenz. *Wirtschaftsdienst*, 100(9), 674–686



#### **Contact**

weizsaecker@coll.mpg.de

https://www.coll.mpg.de/ von-weizsaecker

#### Journal Articles (not peer-reviewed)

von Weizsäcker, C. C. (2021), Säkulare Entwicklungen und die Staatsfinanzen. Zeitschrift für Politik, 68(2), 193-207

#### Book

von Weizsäcker, C. C., & Krämer, H. (2021). Saving and investment in the twenty-first century, 344 p. Cham, Switzerland: Springer

#### **Book Chapters**

von Weizsäcker, C. C. (2021). Die optimale Staatsschuld. In H. Krämer & J. Schmidt (Eds.), Wirtschaftspolitische Beratung in der Krise, 149-215. Marburg: Metropolis

von Weizsäcker, C. C. (2021). Sparen, Investieren und Staatskredit im 21. Jahrhundert. In R. Sturn & U. Klüh (Eds.), Der Staat in der Großen Transformation, B19 des Jahrbuchs Normative und institutionelle Grundfragen der Ökonomik, 19, 131-170. Marburg: Metropolis

von Weizsäcker, C. C. (2021). Wirtschaft (Artikel). In Staatslexikon, 8th ed., 6, 283-298. Herder Verlag

von Weizsäcker, C. C. (2020). Böhm-Bawerks temporale Kapitaltheorie: ihre Modernisierung und ihre heutige Aktualität. In H.-M. Trautwein (Ed.), Studien zur Entwicklung der ökonomischen Theorie, 19-40. Berlin: Duncker und Humblot

#### Lectures and Presentations (since 2020)

#### 2020

Book launch with Hagen Krämer: Saving and Investing in the 21st Century - The Great Divergence

DIW (Deutsches Institut für Wirtschaftsforschung)

9 January 2020

Book launch with Hagen Krämer: Saving and Investing in the 21st Century - The Great Divergence

Annual Meeting of German Keynes Society, "Optimal Public Debt" 18 February 2020

Book launch with Hagen Krämer, "Saving and Investing in the 21st Century - The Great Divergence", and discussion with a panel of academic economists

University of Frankfurt, Center for Financial Studies (CFS)

27 February 2020

Book launch with Hagen Krämer, "Saving and Investing in the 21st Century - The Great Divergence"

Evangelische Akademie Tutzing, Conference on "The Role of the State in the Great Transformation"

4 March 2020

**COVID-19 and Public Finance** Video meeting, Arbeitskreis II of the parliamentary group of the Free Democrats (FDP), German Bundestag 16 June 2020

COVID-19 and Public Finance Video meeting of the parliamentary group of the FDP, chaired by Christian Lindner. Discussion with Lars Feld (Chairman of the German Council of Economic Experts) 30 June 2020

#### 2021

The End of Capital Scarcity (video presentation)

Scottish Economic Society Annual Conference, Glasgow 27 April 2021

History of Economic Thought - "The Cambridge/Cambridge Controversy in Capital Theory" (video presentation) Stanford University 24 June 2021

The Future of the 'Schuldenbremse' Bonn, Free Democratic Party, Local Group, 26 October 2021

Saving and Investment in the 21st Century University of Osnabrück 3 November 2021

Remarks on Wolfgang Streeck's 'Between Globalism and Democracy' Max Planck Institute for the Study of Societies, Conference Celebration of Wolfgang Streeck's 75th birthday 4 November 21

Inflation, Growth, and Competition - Equilibrium Constellations in the 21st Century (video presentation) 70th Monetary Workshop Darmstadt 4 December 2021

#### 2022

Discussion with Professor Paul Kirchhof on "Foreign Exchange Policy and Price Stability" University of Heidelberg, Institut für Finanzund Steuerrecht 31 May 2022

Böhm-Bawerk applied to the Present Crisis (by video)

25th Annual Conference of the European Society for the History of Economic Thought at the University of Padova 9 June 2022

Freedom and Adaptive Preferences and Comments on Presentation by Malte Dold University of Freiburg, Ordoliberalism Work-

7 July 2022

The Capital Theory of Walter Eucken University of Freiburg, Walter Eucken Institute. 26 October 2022

#### 2023

Freedom and Adaptive Preferences University of Bonn, Law Faculty, Law and Economics Group 19 January 2023

Freedom and Adaptive Preferences Max Planck Institute for Research on Collective Goods, Bonn 23 January 2023

**Freedom and Adaptive Preferences** Annual Meeting of the Economic Policy Section of the Verein für Socialpolitik, Düsseldorf, 8 March 2023

Freedom and Adaptive Preferences University of Freiburg, Walter Eucken Institute 24 April 2023

Freedom and Adaptive Preferences University of Siegen and Aktionsgemeinschaft Soziale Marktwirtschaft 3 May 2023

Freedom, Progress and Adaptive Prefer-

Annual Meeting of the Section on Evolutionary Economics of the Verein für Socialpolitik, Kassel

7 July 2023

## **Nan Zhang**

#### **Summary Report**

I was as a Senior Research Fellow in the Research Group "Mechanisms of Normative Change" from September 2016 to August 2021, and a visiting researcher for one year thereafter. Currently, I am leading the Emmy-Noether Junior Research Group "Making Diversity Work" at the Mannheim Centre for European Social Research, University of Mannheim. I obtained my PhD in Political Science from Stanford University (2014), and I also hold a JD from Stanford Law School (2011). My research lies primarily at the intersection of Political Science and Sociology, and my work since 2020 has focused on two main topics: (i) immigration, ethnic diversity, and social cohesion; and (ii) nationalism, political development, and state-society interaction.

#### Research Agenda

Immigration, Ethnic Diversity, and Social Cohesion

My research uses experimental and quasi-experimental methods to investigate interethnic relations across a range of settings. At the MPI, I have conducted several field experiments that study discrimination in "everyday interactions" (e.g., helping a stranger in need). The paper by Zhang, Gereke and Baldassarri (2022) provides a recent example of this work. We randomly expose commuters in the Milan subway to the presence of immigrants and measure whether immigrants are physically avoided. Results from two waves of data collection show greater aversion to physical contact with African confederates (compared against a native "baseline"), but no discrimination against Asian confederates.

Since leaving the MPI, I have extended this line of research to study how discrimination varies across geographic contexts, using a "lost letter" design implemented across over 100 neighborhoods in 14 German cities (Zhang and Kommol, nd). Relatedly, a field experiment measuring how the ethnicized portrayal of immigrants as welfare recipients affects public support for welfare policies in Denmark is in the planning stages (Gereke, Schaeffer and Zhang, nd). By merging field-experimental data with contextual information from the population register, we can study how "welfare chauvinism" varies across our intervention sites.

My interest in welfare chauvinism was spawned by my participation (during my time at the MPI) in a large-scale replication project of a well-known paper on the topic. This has already resulted in one publication (Breznau et al. 2022) and another paper in R&R (Breznau et al., nd). A separate replication project on classroom ethnic composition and adolescent friendship formation has also been accepted at the *American Journal of Sociology* (Kretschmer et al., nd).

Finally, in collaboration with my former MPI colleagues, Alvarez-Benjumea, Winter, and Zhang (nd) explore how social norms surrounding racially insensitive speech ("micro-aggressions") changed as a result of the 2020 election in the US. Our results show that norms did indeed change, but in different ways, depending on whether respondents predicted a Biden or a Trump victory.

Since 2021, I have pursued my broad interest in the areas of immigration, ethnic diversity, and social cohesion in several new directions. First, Zhang and Kommol (nd1) explore how cross-cutting cleaves (e.g., similarity in age or marital status) between "native" Germans and refugees shape interethnic contact. Exploiting the exogenous allocation of refugees across German counties, we find that refugees living amongst a greater share of "similar" natives report higher contact. A field experiment following up on these results in currently in



#### Contact

zhang@coll.mpg.de

https://www.coll.mpg.de/nan-zhang

the planning stages (Zhang and Kommol (nd2)).

A second line of work explores more cognitive processes of ethnic / racial categorization. Gereke et al. (2022) examine whether priming information about the demographic decline of the "native" German population affects the classification of phenotypically ambiguous individuals. Zhang and Baldassarri (nd) investigate how the performance of minority players on the English national football team affects whether minorities in England are classified along racial vs. national lines.

A final project addresses questions about Muslim minorities in Europe (Hellyer et al. nd). A growing literature argues that Muslims are disliked because they are perceived to be highly religious. At the same time, religious individuals are generally seen as more trustworthy. We embed a survey experiment in the German Internet Panel to test whether this religious "trust bonus" also extends to Muslims.

Nationalism, Political Development, and State-Society Interaction

How can states incorporate peripheral groups into the national "core"? How do states create unity out of diversity? These questions are addressed in this second main line of research.

Zhang and Lee (2020) explore the process of linguistic harmonization in 19th-century France (this paper also won the 2020 Best Article Prize awarded by the European Politics and Society Section of the American Political Science Association. Lee, Zhang and Herchenröder (2023) study the relationship between American state-building and the development of a national identity. Using text as data methods, we document systematic shifts in how American spoke about the "United States" during the 19th century. Our results point to the importance of the Civil War in creating a unitary national identity, but for the Northern section of the country

only. This work has been published in the flagship *American Political Science Review*.

Other research has utilized historical census data to study processes of assimilation and incorporation. Zhang and Abascal (nd) explore changes in Mexican-American naming patterns following the demographic upheavals precipitated by the California Gold Rush. This project served as the basis for my job talk for a full professorship in evidence-based political research at the University of Mannheim. Zhang and Lee (nd) use the Vietnam-era draft lotteries to explore the causal effects of military service on immigrants' integration outcomes. Finally, Lee and Zhang (nd) study the "Americanization" of naming patterns amongst Chinese- Americans and Japanese-Americans in the aftermath of Pearl Harbor.

#### **Other Research**

Poertner and Zhang (2023) study civic reactions to corruption by leveraging natural experiments from Argentina and Costa Rica, involving the unprecedented sentencing of two former presidents on corruption charges. Exploiting the coincidence in timing between these cases and fieldwork on nationally representative surveys, we show that high-profile efforts to punish corrupt actors paradoxically eroded trust in institutions and produced "resigned citizens", who expressed a lower willingness to vote or join in collective demonstrations.

#### **Publications (since 2020)**

#### Articles in Peer-Reviewed Journals

Kretschmer, D., Gereke, J., Winter, F., & Zhang, N. (forthcoming). No differential effects of classroom ethnic composition on native and immigrant friendship segregation: A comment on Smith et al. 2016. *American Journal of Sociology* 

Zhang, N., Lee, M., & Herchenröder, T. (2023). From *Pluribus* to *Unum*: Statebuilding and the imagined community in 19th century America. *American Political Science Review* 

Poertner, M. & Zhang, N. (2023). The paradoxical effects of combating corruption on political engagement: Evidence from two natural experiments. *Political Science Research and Methods* 

Breznau, N., Rinke, E. M., Wuttke, A., Hung H.V. Nguyen...Zhang, N. and (160 others). (2022). Observing Many researchers using the same data and hypothesis reveals a hidden universe of uncertainty. *Proceedings of the National Academy of Sciences*, 119(44):e2203150119

Gereke, J., Hellyer, J., Behnert, J., Exner, S., Herbel, A., Jäger, F., Lajic, D., Mezenský, Š., Ngoc Anh, V., Ogłaza, T., Schabinger, J., Sokolova, A., Szafran, D., Tirolf, N., Veit, S., & Zhang, N. (2022). Demographic change and group boundaries in Germany: The effect of projected demographic decline on perceptions of who has a migration background. *Sociological Science*, 9(9):206–220

Zhang, N., Gereke, J., & Baldassarri, D. (2022). Everyday discrimination in public spaces: A field experiment in the Milan metro. *European Sociological Review*, 38(5):679–693

Zhang, N. & Lee, M. (2020). Literacy and state-society interactions in 19th century France. *American Journal of Political Science*, 64(4): 1001–1016

#### Work in Progress

Zhang, N. & Abascal, M. (R&R). Cultural adaptation and demographic change: Evidence from Mexican-American naming patterns during the California gold rush

Zhang, N. & Lee, M. (ongoing). Military service and immigrants' assimilation: Evidence from the Vietnam draft lotteries

Lee, M. & Zhang, N. (ongoing). Anticipated discrimination and immigrants' assimilation: Evidence from Pearl Harbor

Zhang, N. & Baldassarri, D. (ongoing). When you win, you're English. When you lose, you're black? How performance in sport shapes social categorization

Zhang, N. & Kommol, A. (ongoing). Ethnic diversity and cooperation: Evidence from a lost letter experiment

Kommol, A. & Zhang, N. (in preparation). Cross-cutting cleavages and native-refugee contact: Quasi-experimental evidence from Germany

Kommol, A. and Zhang, N. (ongoing). Age similarity and native-refugee contact: A field experiment on language tandem partnerships

Alvarez-Benjumea, A., Zhang, N., & Winter, F. (in preparation). Updating social norms after the US 2020 election

Gereke, J., Schaeffer, M., & Zhang, N. (ongoing). How ethnic framing affects political support for welfare policies: A field experiment in greater Copenhagen

Breznau, N., Rinke, E. M., Wuttke, A., Nguyen, H.H.V., Zhang, N., & 160 others. (R&R). How Many replicators does it take to achieve reliability? Investigating researcher variability in a crowdsourced replication

Hellyer, J., Fadavi Asghari, Y., Gereke, J., & Zhang, N. (ongoing). Religion, religiosity and perceived trustworthiness

#### **Grants / Prizes / Honors**

2020

Best Article Prize Award, European Politics and Society Section, American Political Science Association

German Research Foundation (DFG) Emmy Noether Program

Research in the Humanities and Social Sciences Grant, Princeton University

Winner of the 2020 European Sociological Review Best Article Prize for "Prosocial Behavior in Interethnic Encounters"

# Lectures and Presentations (since 2020)

2020

All engagements cancelled due to Covid.

2021

Discussant comments for "The Demographic Context of Hiring Discrimination: Evidence from a Field Experiment in 50 Metropolitan Statistical Areas"

LSE Workshop on Experimental Sociology, Online

25 June 2021

Cultural Adaptation and Demographic Change: Evidence from Mexican-American Naming Patterns During the California Gold Rush

Annual Conference on Experimental Sociology, Ascona, Switzerland 15-17 September 2021

Cultural Adaptation and Demographic Change: Evidence from Mexican-American Naming Patterns During the California Gold

Workshop Analytical Sociology: Theory and Empirical Applications, Venice, Italy 10 November 2021 Cultural Adaptation and Demographic Change: Evidence from Mexican-American Naming Patterns During the California Gold Rush

Collegio Carlo Alberto, Turin, Italy 11 November 2021

2022

Ethnic Diversity and Cooperation: Evidence from a Lost Letter Experiment Annual Conference on Experimental Sociology, Utrecht, Netherlands 31 August - 2 September 2022

When You Win, You're English. When You Lose, You're Black? How Performance in Sport Shapes Social Categorization WZB, Berlin, Germany 26 October 2022

When You Win, You're English. When You Lose, You're Black? How Performance in Sport Shapes Social Categorization University of Duisburg-Essen, Duisburg, Germany 27 October 2022

2023

Discussant comments for "Can Pro-Social Bystander Interventions Mitigate Toxic Behavior?"

LSE Workshop on Experimental Sociology, Online

11 May 2023

Military Service and Immigrants' Integration: Evidence from the Vietnam War Draft Lotteries

WZB, Berlin, Germany 14 June 2023

Military Service and Immigrants' Integration: Evidence from the Vietnam War Draft Lotteries

European Political Science Association Annual Conference, Glasgow, Scotland 21-23 June 2023

Panel discussant: Understanding Support for Diversity

MPLMMC Cättingen Cormany

MPI-MMG, Göttingen, Germany 28 June 2023

Military Service and Immigrants' Integration: Evidence from the Vietnam War Draft Lotteries

Annual Conference on Experimental Sociology, Madrid, Spain 30 August – 2 September 2023

#### **Teaching**

Spring/Summer term 2022 University of Mannheim Conducting a Field Experiment: A Hands-On Introduction

Fall/Winter term 2022/2023 University of Mannheim Ethnic Diversity and Social Cohesion

Spring/Summer term 2023 University of Mannheim Field Experiments: A Practice-Based Seminar

Fall/Winter term 2023/2024 University of Mannheim Research Design

#### **Professional Activities**

#### Referee for

American Political Science Review, American Journal of Political Science, American Sociological Review, Journal of Politics, World Politics, Comparative Political Studies, Journal of Experimental Political Science, Quarterly Journal of Political Science, Nature Scientific Reports, Proceedings of the National Academy of Sciences, European Sociological Review, Journal of Ethnic and Migration Studies, Diligentia Foundation, Vienna Science and Technology Fund



**Contact** zufall@coll.mpg.de

https://www.coll.mpg.de/ frederike-zufall

#### Frederike Zufall

Following the completion of my doctoral studies in law at the Humboldt University of Berlin in 2015, I worked as an assistant professor at Waseda University, Tokyo, for three years. After one more year at the Research Group on Law Science Technology & Society (LSTS), Free University Brussels, I joined the institute in September 2020. As of 1 June 2023, I was appointed tenure-track Professor at the Karlsruhe Institute of Technology (KIT), Department of Informatics, and am currently affiliated to the institute as a quest researcher.

As a trained lawyer with a long-standing affinity with computer science, I work at the intersection of law and computer science. Through my interdisciplinary research projects, with both computer scientists and mathematicians, I explore how legal concepts can be carried over to technology. Building on this applied work, my legal habilitation thesis seeks to elucidate theoretical foundations of computational systems of law.

#### **Summary Report**

I have several research cooperations with computer scientists. One key focus is my ongoing cooperation with Prof. Dr.-ing. Torsten Zesch (Natural Language Processing) from the University of Hagen (Germany). We pursue the operationalization of legal concepts into computational systems. Specifically, we investigate how machine-learning and large language models can be used for the creation of explainable classification systems. Our research has yielded further fruit, as we are active contributors to the Federal Criminal Police Office's (BKA) research project KISTRA ("Einsatz von KI zur Früherkennung von Straftaten"), advising and working on automatic detection systems for criminal offenses (i.e., "hate speech"). Our papers were accepted at the Annual Conference of the North American Chapter of the Association for Computational

Linguistics (NAACL) and the Conference of Empirical Methods in Natural Language Processing 2022 (EMNLP) in Abu Dhabi, where we obtained a Best Presentation Award.

Furthermore, I have initiated an interdisciplinary research project with mathematicians from Waseda University. We work on applied mathematics, namely how legal dogmatics can be translated into mathematical models. Our project aims to contribute further to the foundations of AI and law: While most current approaches focus on machine-learning (including my NLP research, described above), the extent to which mathematical models - as a more abstract and less data-driven approach - could stand in for legal concepts has rarely been investigated. Advantages lie in a higher degree of explainability and transparency, but come at the price of higher abstraction and simplification. Our paper tries to demonstrate this based on the concept of balancing competing interests, namely the conflict between access to information and the rights to the protection of personal data and to privacy, as applied by the European Court of Justice's Google Spain decision. This work was not only accepted at the International Conference on Artificial Intelligence and Law (ICAIL '21), but also by Artificial Intelligence and Law both the top venues internationally for research on AI and law.

Another recent interdisciplinary project had been realised with computer scientists from the Max Planck Institute for Security and Privacy. We performed an empirical study on deceptive designs used to obtain justification for data-processing. Our work found that the legal ground of "legitimate interests" is not only used in violation of the GDPR, but also contradicts user expectations – a lack of enforcement due to the open texture of the term. Our research paper was recently accepted at the Conference on

Human Factors in Computing Systems (CHI '23).

Finally, computer scientists from the **University of Southern California (USC)** working on machine-learning, Robin Jia and Johnny Wei, approached me and suggested collaborative work on machine-learning metrics as a requirement for legal regulation. We found that the notion of "accuracy" in the new EU Digital Services Act is severely underspecified, but would ultimately, in the envisaged context of content moderation regulation, translate into measuring the recall of a machine-learning classifier. We suggested "stratified sampling" to report on the obligations of content moderation, a method that would achieve a balance between the legislator's interest in fighting discriminatory content and the users' freedom of speech, without disproportionately interfering with the right of social-media providers to conduct business.

#### Research Agenda

Building on these interdisciplinary and applied projects, my legal habilitation thesis addresses theoretical foundations of computational systems of law. Starting with formalizations suggested by Leibniz in the 16th century, to recent predictions with large language models, a variety of approaches have been suggested to model law. How have they conceived the application of law throughout legal systems? And to which extent may we infer a general concept of computational systems of law from these approaches?

While logic-based models appear easier to understand and closer to the continental European idea of statutory law, machine-learning approaches have been branded as opaque, albeit promising, solutions given the increasing amount of available data on legal decisions. My thesis explores potential demarcations arising from technical operationalizability and foundational conceptions in our legal systems. The need to address

algorithmic regulation not just on a legal level, but also on the level of technical implementation, and ultimately how these are intertwined, is a precondition for assessing and ultimately formulating a decision on whether we will want to implement "legal AI" into our legal systems. Connected research questions would, for instance, concern the possibility of legal redress as prescribed by the rule of law, but also the role of participation in administrative procedure. How do we define and understand the substance of legal procedure, due process, and ultimately the application of law? We might have to rethink existing legal mechanisms and to adapt them while still maintaining the fundamental concepts on which our legal systems were built.

#### **Publications (since 2020)**

#### **Articles in Peer-Reviewed Journals**

Kyi, L., Shivakumar, S. A., Roesner, F., Santos, C., Zufall, F., & Biega, A. (2023). Investigating deceptive design in GDPR's legitimate interest. In CHI '23: Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems, 1–16. New York: ACM

Zufall, F., Hamacher, M., Kloppenborg, K., & Zesch, Torsten. (2022). A legal approach to hate speech: Operationalizing the EU's legal framework against the expression of hatred as an NLP task. Proceedings of the Natural Legal Language Processing Workshop 2022. Association for Computational Linguistics (Hybrid), 53–64. Abu Dhabi, United Arab Emirates

Zufall, F., Kimura, R., & Peng, L. (2022). Towards a simple mathematical model for the legal concept of balancing of interests. *Artificial Intelligence and Law*. Springer nature

Zufall, F., Kimura, R., & Peng, L. (2021). A simple mathematical model for the legal concept of balancing of interests. In *ICAIL '21: Proceedings of the Eighteenth International Conference on Artificial Intelligence and Law*, 270–271. New York: ACM

#### **Book chapter**

Zufall, F., & Zingg, R. (2021). Data portability in a data-driven world. In S. Peng, C.-F. Lin, & T. Streinz (Eds.), *Data regulation as artificial intelligence regulation*, 215–234

#### Commentary

Zufall, F. (2023). Artikel 50 DSGVO ("Art. 50 General Data Protection Regulation (GDPR)"), in: Eßer/Kramer/v.Lewinski (Hrsg.), DSGVO/BDSG, 5th ed. 2017, 6th ed. 2018, 7th ed. 2020, 8th ed. 2023

#### **Under Review**

Wei, J., Zufall, F., & Jia, R. (under review). Operationalizing content moderation "accuracy" in the Digital Services Act, AAAI International Conference on Weblogs and Social Media (ICWSM), confidential

#### **Work in Progress**

Habilitation thesis: "On computational systems of law"

#### **Grants / Prizes / Honors**

2022

Best Presentation Award
Empirical Methods in Natural Language Processing (EMNLP), Natural Legal Language
Processing Workshop 2022.
Association for Computational Linguistics,
Abu Dhabi, United Arab Emirates

# Lectures and Presentations (since 2021)

Towards an Automated Legal Assessment of Criminal Offenses: Challenges and Findings University of Rotterdam 3 December 2021

Konzeption einer algorithmisierten Rechtsanwendung University of Bonn, Department of Law 19 November 2021

Automated Criminal Law: A Concept for the Future?

Max Planck Law Annual Conference, Berlin 26 October 2021

Operationalizing Legal Assessment: Approaches and Lessons from an NLP Perspective Max Planck Law Curriculum, online 22 July 2021

Operationalisierung des Rechts, Implikationen algorithmisierten Rechts Karlsruher Institut für Technologie (KIT) 16 July 2021

#### **Teaching**

Summer term 2021 EBS Law School

- Kolloquium zur Künstlichen Intelligenz

Winter term 2023/24

Karlsruhe Institute of Technology (KIT)

- Öffentliches Recht I
- EU Digital Regulatory Framework

#### **Public service**

Since 2022

Head organizer: Max Planck Law Tech Society Initiative

#### **Professional Activities**

#### Referee for

Association for Computational Linguistics (ACL)
Management Science
International Conference on Business Informatics and Information Systems
Recht und Technik

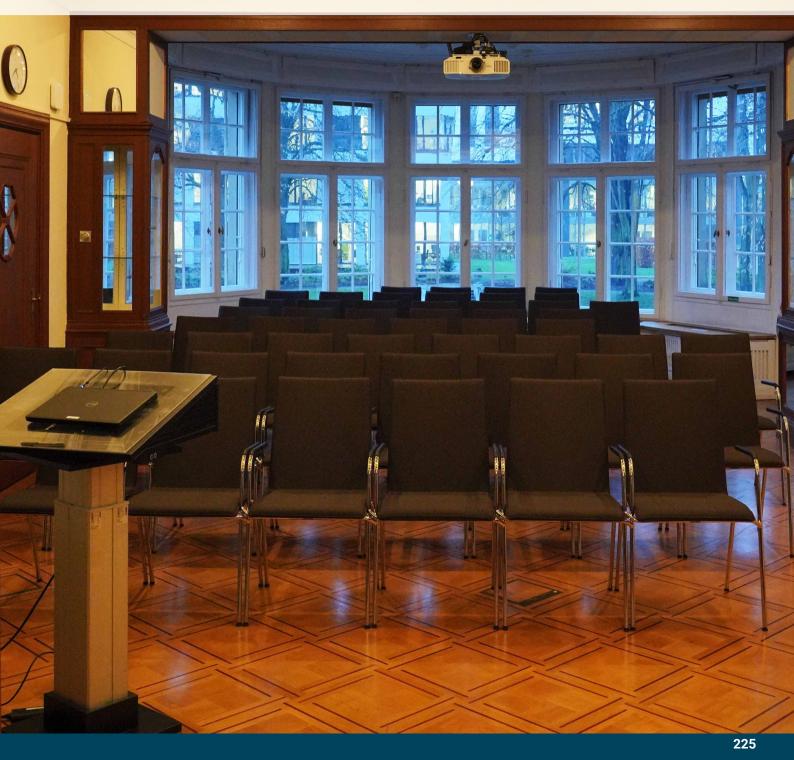
#### Memberships

Since 2022 Association for Computational Linguistics (ACL)

Since 2021
Association of Computing Machinery (ACM)

Since 2011
Deutsch-Japanische Juristenvereinigung (DJJV)

# E. Conferences & Workshops



# E. Conferences & Workshops organized by the Max Planck Institute for Research on Collective Goods

#### 2020

Workshop with the Cologne School of Journalism Max Planck Institute for Research on Collective Goods, Bonn 16 January 2020

All further conferences and workshops were cancelled due to the  ${
m COVID}\mbox{-}19$  pandemic.

#### 2021

Workshop with Cologne School for Journalism (online) 13 January 2021

Workshop on the economics of mental health (online) 3 March 2021

Workshop with UCSB (online) 14 April 2021

Workshop with FAIR from NHH Bergen (online) 27 April 2021

Workshop with UCSD - Rady School of Management (online) 5 May 2021

Workshop on Social Norms and Image Concerns (online) 11 May 2021

Workshop with University of Lyon and University of Gothenburg (online)
19 May 2021

Workshop with WZB Berlin (online) 9 December 2021

#### 2022

Workshop with Cologne School for Journalism (online) 19 January 2022

Workshop with University of Stockholm (online) 30 March 2022

Workshop with NHH Bergen (online) 9 May 2022

#### 2023

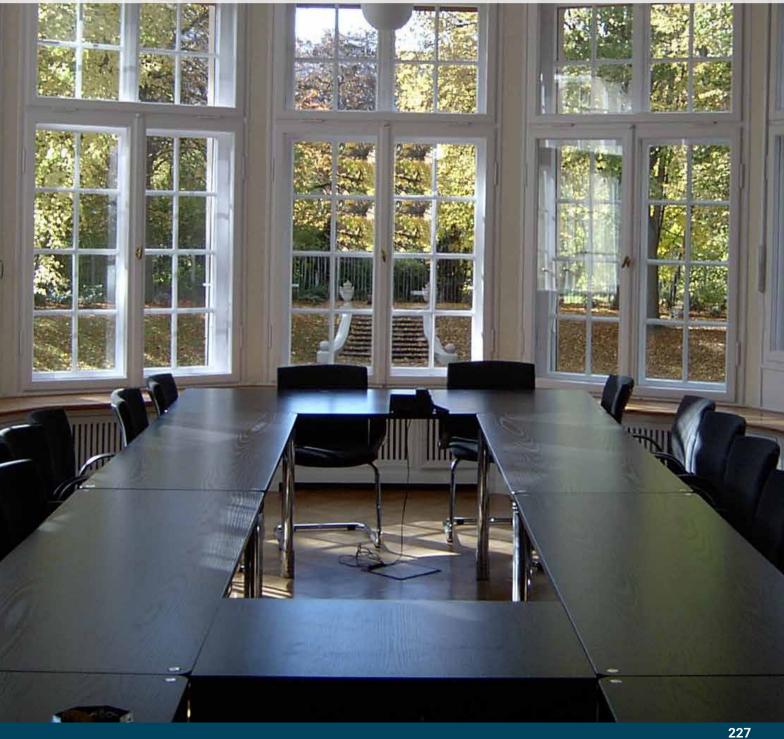
Workshop with Cologne School for Journalism 23 January 2023

Worskhop with NHH Bergen (online) 23 May 2023

Workshop with CREED from University of Amsterdam 26 May 2023

EEG Workshop on Behavioral Economics 4 July 2023

# Research Seminars



# F.I External Speakers in our Research Seminars

#### 2020

#### Jens C. Dammann

University of Texas, School of Law, Austin, USA "Fee-Shifting Bylaws and Shareholder Wealth. An Empirical Analysis" 7 January 2020

#### Helga Fehr-Duda

University of Zurich, Switzerland "Risk in Time: The Intertwined Nature of Risk-Taking and Time-Discounting" 8 January 2020

#### Marie-Claire Villeval

GATE Lyon, France

"Teaching Norms in the Street"

8 January 2020

#### Rima-Maria Rahal

Tilburg University, Netherlands

"Glowing with Joy or Stricken by Guilt? Assessing Affective Processes in Prosocial Behavior via Thermal Imaging."

13 January 2020

#### John Dylan Haynes

Berlin Center for Advanced Neuroimaging – Bernstein Center for Computational Neuroscience, Germany "What Does Brain Science Tell Us About Free Will?" 13 January 2020

#### Katja Langenbucher

House of Finance, Goethe University, Frankfurt, Germany "Responsible A.I. Credit Scoring" 20 January 2020

#### Daniela Sele

ETH Zurich, Switzerland "Algorithmic Explanations in the Field" 20 January 2020"

#### **Urs Fischbacher**

University of Konstanz, Germany "Cooperation, Bribery, and the Rule of Law" 22 January 2020

#### Franz Reimer

University of Gießen, Germany

"Aufgaben und Herausforderungen einer Theorie des Umweltrechts" 27 January 2019

#### Martin Kocher

Institut für höhere Studien, Vienna, Austria "Increase Children's Interest in STEM: A Field Experiment in Austria" 5 February 2020

#### Daniele Nosenzo

University of Nottingham, UK "Law and Norms: Empirical Evidence" 5 February 2020

#### Klaus-Robert Müller

TU Berlin, Germany "Toward Explainable AI" 17 February 2020

#### Norbert Paulo

University of Salzburg, Austria "Thought Experiments in Ethics and Law" 2 March 2020

#### Erik Kimbrough and Alexander Vostroknutov

Chapman University, Orange, CA, USA "A Theory of Injunctive Norms" 23 March 2020

#### Ulrike Hahn (online)

Birkbeck University of London, UK "The Problem of Testimony" 20 April 2020

#### Mona Garvert (online)

MPI for Human Cognitive and Brain Sciences, Leipzig, Germany "How the Brain Represents the World to Guide (Adaptive?) Decisions" 11 May 2020

#### Oliver Kirchkamp (online)

(joint with Wladislaw Mill)
University of Jena, Germany
"Conditional Cooperation and the Effect of Punishment"
18 May 2020

#### Elliott Ash (online)

(joint with Sergio Galletta and Tommaso Giommoni)

ETH Zurich, Switzerland

"A Machine-Learning Approach to Analyzing Corruption in Local Public Finances"

29 June 2020

#### Erin Krupka (online)

(joint with Steve Leider and Ming Jian) School of Information, University of Michigan "Renegotiation Behavior and Promise-Keeping Norms" 13 July 2020

#### Jonathan Koehler (online)

Northwestern University Pritzker School of Law, Chicago, USA "Forensics or Fauxrensics? Testing and Error in the Forensic Sciences" 19 October 2020

#### F.I External Speakers in our Research Seminars

Erik Kimbrough (online)

(joint with Alexander Vostroknutov) Chapman University, Orange, USA

"A Theory of Injunctive Norms"

2 November 2020

Henry E. Smith (online)

Harvard Law School, Cambridge, USA

"Property as a Complex System"

9 November 2020

Martin Bichler (online)

Technische Universität München, Germany

"Trading Fishery Access Rights"

16 November 2020

**Scott Kominers (online)** 

Harvard University, Cambridge, USA

"Redistribution through Markets" and "Redistributive Allocation Mech-

anisms"

23 November 2020

David G. Rand (online)

MIT Management Sloan School, USA

"How to Combat Fake News"

30 November 2020

Gabriele Bellucci (online)

MPI for Neurological Cybernetics, Tübingen, Germany

"Neuropsychological and Computational Mechanisms of Loneliness"

7 December 2020

Cristina Bicchieri (online)

Pennsylvania University, USA

"Norm nudges and social inferences"

7 December 2020

#### 2021

Viviana Ponce de Léon Sollis (online)

Universidad Austral de Chile, Valdivia, Chile

"Welfare implications of nudging on disadvantaged groups"

25 January 2021

Michael Livermore (online)

(joint with Vladimir Eidelman and Onyi Lam)

Virginia Law School, USA

"Political Shifts and Public Responses to Agency Action: A Text

Analytic Approach"

26 January 2021

**Eugen Dimant (online)** 

University of Pennsylvania, USA

"Hate Trumps Love: The Impact of Political Polarization on Social

Preferences"

1 February 2021

Elissa Redmiles (online)

MPI Saarbrücken, Germany

 $\hbox{$^{\prime\prime}$ Learning from the People: From normative to descriptive solutions to}\\$ 

aligning technology with human values"

8 February 2021

Eric Talley (online)

(Joint with Jens Frankenreiter, Cathy Hwang & Yaron Nili)

Columbia Law School, USA

"Cleaning Corporate Governance"

1 March 2021

Omri Ben-Shahar (online)

University of Chicago Law School, USA

"Personalized Law"

8 March 2021

Anna Schulze Tilling (online)

University of Bonn, Germany

"The role of warm glow in moral licensing"

15 March 2021

**Kevin Tobia (online)** 

Georgetown Law, Washington DC, USA

"Statutory Interpretation from the Outside."

15 March 2021

James Everett (online)

University of Kent, UK

"Aggression, fast and slow: Intuition also favors defensive aggression"

29 March 2021

Paul Grünke (online)

Karlsruher Institut für Technologie, Germany

"Opacity in Machine Learning"

19 April 2021

Carl Bergstrom (online)

University of Washington, Seattle, USA

"Misinformation and the stewardship of social media"

19 April 2021

Gabriel Lima (online)

KAIST and IBS, Daejeon, South Korea

"Exploring Laypeople's Perceptions on the Legal Personhood of Al and

Robots"

26 April 2021

Iyad Rahwan (online)

MPI for Human Development, Berlin, Germany

"How to Trust a Machine?"

26 April 2021

**Arthur Dyevre (online)** 

(Joint with Timothy Yu-Cheong Yeung and Michal Ovádek)

KU Leuven, The Netherlands

"Friend or Foe? The Effect of Bilateral Trade Relations on Third Party

Submissions in International Legal Disputes"

17 May 2021

Rachael Hinkle (online)

University of Buffalo, USA

"Invisible Losers: The Fate of "Have-nots" in the U.S. Courts of Ap-

peals"

7 June 2021

Andrew Selbst (online)

UCLA School of Law, USA

"An Institutional View of Algorithmic Impact Assessments"

21 June 2021

#### F. Research Seminars

Michal Shur-Ofrv (online) (Joint with Ofer Malcai)

Hebrew University of Jerusalem, Israe"I

Using Complexity to Calibrate Legal Response to Covid-19" 21 June 2021

**Berkeley Dietvorst (online)** 

Chicago Boost, USA

"People Reject Algorithms in Uncertain Decision Domains Because They Have Diminishing Sensitivity to Forecasting Error" 5 July 2021

Andreas Engert (online)

FU Berlin, Germany

"The inefficiency of efficient breach"

12 July 2021

Stefano Fiorin (online)

Bocconi University, Italy

"Reporting Peers' Wrongdoing: Experimental Evidence on the Effect of Financial Incentives on Morally Controversial Behavior"

1 October 2021

Frank Schilbach (online)

Massachusetts Institute of Technology, USA

"The long run impacts of psychotherapy on depression, beliefs and preferences"

6 October 2021

Shubhangi Roy (online)

University of Münster, Germany

"Identifying the 'people' in 'What will people say': Incorporating social identity within Law and Norms discourse"

18 October 2021

Philipp Eisenberg (online)

University of Bonn, Germany

"Robust decision-making under risk and ambiguity"

18 October 2021

Gautam Rao (online)

Harvard University, USA

"Learning in the household"

20 October 2021

Sebastian Kasper (online)

University of Passau, Germany

"Human Behaviour in European Capital Markets Law -Efficiency, Harmonisation, and Interpretation"

8 November 2021

**Doron Teichmann (online)** 

(Joint with Eyal Zamir)

"The Exponential Growth Bias: Mathematics, Psychology, and The Law"

8 November 2021

Suanna Oh

Paris School of Economics, France "Does Identity Affect Labor Supply?"

10 November 2021

Robert Metcalfe (online)

University of Southern California, USA

"The Value of Waiting Time in the United States: Estimates from Nationwide Natural Field Experiments"

17 November 2021

Tom Tyler (online)

Yale Law School, USA

"Promoting online civility through platform architecture: Testing a procedural justice approach"

29 November 2021

Ryan Bubb (online)

New York University, USA

"Differentiation through Substantive Legal Uncertainty"

6 December

Christine Exlev (online)

Harvard Business School, USA

"The Gender Gap in Self-Promotion"

15 December 2021

#### 2022

Stephan Meier (online)

Columbia University, USA

"The Gender Gap in Meaningful Work: Drivers and Implications"

19 January 2022

Johanna Wolff (online)

Freie Universität Berlin, Germany

"Staatliche Verhaltensempfehlungen, Appelle und Informationen als Herausforderung für die verwaltungsrechtliche Handlungsformenleh-

24 January 2022

Eric de Kwaadsteniet (online)

Leiden University, The Netherlands

"Psychological Perspective on Bargaining about Complementary

A "More is Better" Heuristic"

31 January 2022

Yngwie Asbjørn Nielsen (online)

Aarhus University, Denmark

"Sharing money with humans versus computers"

7 Feburary 2022

Oliver Kirchkamp (online)

University of Jena, Germany

"Discussion of: Abadie, Diamond, Hainmueller. Synth: An R Package

for Synthetic Control Methods in Comparative Case Studies"

14 February 2022

Ryan Oprea (online)

University of California Santa Barbara, USA

"On the Complexity of Forming Mental Models"

14 February 2022

Michal Barzuza (online)

University of Virginia, USA

"The Millennial Corporation: Strong Stakeholders, Weak Managers"

28 February 2022

Nicholson Price (online)

University of Michigan, USA

"Humans in the Loop"

14 March 2022

Lena Song (online)

New York University, USA

"Digital Addiction"

30 March 2022

#### F.I External Speakers in our Research Seminars

Inga Haarland (online)

University of Bergen, Norway

"Misperceived Returns to Active Investing: Evidence From a Field Experiment Among Retail Investors"

6 April 2022

Luca Braghieri (online)

University of Munich

"Political Correctness, Social Image, and Information Transmission" 27 April 2022

Jon Choi (online)

University of Minnesota Law School, USA

"Computational Corpus Linguistics"

9 May 2022

Fabio Römeis (online)

University of Wuerzburg, Germany

The Effect of Framing on when Choices are Mistakes

16 May 2022

**Netta Barak Corren (online)** 

(Joint with Yoav Kan-Tor and Nelson Tebbe)

The Hebrew University of Jerusalem, Israel

Examining the Effects of Antidiscrimination Laws on Child Welfare:

Law on the Books

16 May 2022

Michal Bauer (online)

**CERGE-EI Prague** 

"Spreading consensus: Correcting misperceptions about the views of the medical community has lasting impacts on Covid-19 vaccine take-up"

. 18 May 2022

Marta Serra-Garcia (online)

UC San Diego, USA

"Can machine learning (ML) help people predict behavior in highstakes prisoner's dilemmas?"

25 May 2022

Daniel Nagin, Carnegie Mellon University / Ashique KhudaBukhsh, Rochester Institute of Technology, USA (online)

A Murder and Protests, the Capitol Riot, and the Chauvin Trial: Estimat-

ing Disparate News Media Stance

30 May 2022

Michael Kosfeld

University of Frankfurt

"Groupy opinion formation"

31 May 2022

Judd Kessler (online)

Wharton School of the University of Pennsylvania, USA

"Equity Concerns are Narrowly Framed"

1 June 2022

Silvia Saccardo (online)

Carnegie Mellon University, USA

"Assessing Nudge Scalability: Two Lessons from Large-Scale RCTs "

8 June 2022

Björn Bartling (online)

University of Zurich

"Free to Fail? Paternalistic Preferences in the United States"

15 June 2022

Aaron Schein (online)

Columbia University, Chicago, USA

Large-scale Digital Field Experiments on Friend-to-friend Organizing in

**US Elections** 

20 June 2022

Carsten Dolle (online)

University of Göttingen

"Childrens' Non-Cognitive Skills in Bangladesh - A Spatial Analysis"

20 June 2022

Julian Nyarko (online)

Standford Law School, California, USA

A Statistical Test for Legal Interpretation: Theory and Applications

27 June 2022

**Fabian Kosse** 

University of Munich

"Prosociality and competition: Evidence from a long-run field experi-

ment"

6 July 2022

Konstantin Offer (online)

Max Planck School of Cognition, Germany

Deliberate Ignorance of Inequality to Avoid Costly Punishment in the

Ultimatum Game

11 July 2022

Simon Gächter

University of Nottingham

"Why people follow rules"

26 September 2022

Alexander Hellgardt (online)

University of Regensburg, Germany

Expressive Function of Environmental Regulatory Instruments

10 October 2022

**Dmitry Taubinski (online)** 

UC Berkeley, USA

"Dynamic Preference "Reversals" and Time Inconsistency"

12 Oktober 2022

Stefanie Stantcheva (online)

Harvard University, USA

"Fighting Climate Change: International Attitudes Toward Climate

Policies"

21 Oktober 2022

Max Grossmann (hybrid)

University of Cologne, Germany

Are NIMBYs the Most Paretian Ones of All? A Positive Study of Prop-

erty Rights

24 October 2022

Marin Coerts (hybrid)

VU Amsterdam, The Netherlands

Performance Obligations: An Empirical Legal Study of Governmental

Interferences in Markets with a Public Interest"

31 October 2022

Aileen Nielsen (hybrid)

ETH Zurich, Switzerland The Too Accurate Algorithm

31 October 2022

#### F. Research Seminars

Weiwei Zhena (hvbrid)

European University Institute, Fiesole, Italy

Suggested versus Extended Gifts: How Alternative Market Institutions

Mitigate Moral Hazard

31 October 2022

Giovanni Mastrobuoni (hybrid)

(Joint with David A. Rivers)

Collegio Carlo Alberto, University of Turin, Italy

"Criminal Discount Factors and Deterrence"

7 November 2022

Karen Levy (hybrid)

Cornell University, Ithaca, New York, USA

"RoboTruckers: The Double Threat of Al for Low-Wage Work"

7 November 2022

Keren Weinshall (hybrid)

(Joint with Tamar Kricheli-Katz)

The Hebrew University of Jerusalem, Israel

"Judging Fast or Slow: The Effects of Reduced Caseload on Gender-

and Ethnic-Based Disparities in Case Outcomes"

14 November 2022

**Dietmar Fehr** 

University of Heidelberg

"Status, Control Beliefs, and Risk Taking"

16 November 2022

Florian Zimmermann

brig & University of Bonn

"Stories, Statistics, and Memory"

16 November 2022

**Christina Felfe** 

University of Würzburg

"Changing Gender Norms - The Impact of Paternity Leave on the Next

Generation"

17 November 2022

David Yanagizawa-Drott

University of Zurich

"Perceived Gender Norms: Global Evidence"

18 November

Nina Varsava (hybrid)

University of Wisconsin Law School

"Publication Disparities at the Federal Courts of Appeals"

5 December 2022

Mengcheng Dong (online)

(Joint with h Rebecca Conway, Jean-François Bonnefon, Azim Shar-

iff, and Iyad Rahwan)

MPI for Human Development, Berlin, Germany

"Fears about Artificial Intelligence across 20 countries and 6 domains

of application"

12 December 2022

John Shahar Dillbary (online)

(Joint with Cherie Metcalf and Brock Stoddard)

The University of Alabama, Law School, Tuscaloosa, Alabama, USA

"Liability Reconsidered: Experimental Evidence"

12 December 2022

#### 2023

Asia Biega (online)

MPI for Security and Privacy, Bochum, Germany

"Operationalizing data protection principles in data-driven systems"

16 January 2023

Tim Barnum (online)

MPI for the Study of Crime, Security and Law, Freiburg, Germany

"Towards a decision-making theory of guardianship: Examining the motivations to serve as a guardian among a sample of young adults from the Zurich Project on the Social Development of Children and

Youth (z-proso)." 23 January 2023

Nuna Garoupa (online)

(Joint with Pedro C. Magalhães)

George Mason University, Fairfax, USA

"Populism, Judicial Independence, and Public Trust in the Courts"

30 January 2023

Dan Nagin (in person)

Carnegie Mellon University, Pittsburgh, USA

"Cohort Bias in Predictive Risk Assessments and Future Criminal

Justice Involvement"

2 March 2023

Piotr Bystranowski (online)

Jagiellonian University in Krakow, Poland

"Ignorance of Law: A study in Experimental Jurisprudence"

6 February 2023

King King Li (in person)

Shenzhen Audencia Business School, China

"Does Ethnic Minority Group Have Lower Willingness to Compete than

Ethnic Majority Group? Experimental Evidence from China"

6 February 2023

Giuseppe Dari-Mattiacci (online)

(Joint with Giovanni Immordino and Francesco F. Russo)

University of Amsterdam, The Netherlands

"Fines for Unequal Societies"

6 February 2023

Paige Skiba (online)

Vanderbilt University Law School, USA

"The Role of Adjudication Procedures in Judicial Timeliness: Quasi-Ex-

perimental Evidence"

13 February 2023

**Teodora Boneva** 

University of Bonn

"Beliefs about Maternal Labor Supply"

22 February 2023

Anu Bradford (online)

Columbia Law School, New York, USA

"Digital Empires: The Global Battle to Regulate Technology"

6 March 2023

**Charles Cameron (online)** 

Princeton University, New Jersey, USA

"Making the Supreme Court: The Politics of Appointments 1930-2020"

13 March 2023

#### F.I External Speakers in our Research Seminars

Benedict Herrmann and Jens Heumann (in person)

(Joint with Christoph Engel)

(European Union, Brussels, and University of Zurich, Switzerland "No windows broken – Escalation of antisocial behavior on New Year's Eve 2015/16 in Cologne"

20 March 2023

Sonja Starr (online)

University of Chicago, USA

"Employer Neighborhoods and Racial Discrimination" 20 March 2023

Erin Krupka

University of Michigan, USA

"The MECHANISMS Study: Learning about norms from lab-in-the-field interventions targeting adolescent smoking prevention"

30 March 2023

Katrine Vellesen-Loken (online)

NHH Bergen, Norway

"Generational Persistence in the Effects of an Early Childhood Health Intervention"

31 March 2023

Stephan Tontrup (online)

(Joint with Christopher Jon Sprigman)

New York University, USA

"Privacy Decisions are Not Private: How the Notice and Choice Regime Induces us to Ignore Collective Privacy Risks and What Regulation Should Do About It"

4 April 2023

Joël van der Weele

University of Amsterdam, The Netherlands "Anticipatory Anxiety and Wishful Thinking" 13 April 2023

Ulf Zölitz

University of Zurich, Switzerland

"Do Same-Sex Teachers Affect Test Scores and Job Preferences? A Super-Study and a Meta-Analysis on Role-Model Effects in Education" 13 April 2023

Isabel Thielmann (online)

MPI CSL, Freiburg, Germany

"How Individuals Manage to Feel Moral but Still Profit from Lying" 24 April 2023

Ahana Basistha

"Design Pitch: Urban Sanitation in India: Targeting Behavioural Interventions"

Indian Statistical Institute, Delhi

27 April 2023

Lennart Rönneburg (online)

University of Hamburg, Germany

"Analysis of a Legal Decision Corpus Using Methods of Network Science and Language Technology"

8 May 2023

Clara Bersch (online)

MPI for Human Development, Berlin, Germany

"Talking to GAIA - the Impact of Engaging with an Environmental Chatbot"

8 May 2023

Christopher J. Sprigman and Stefan Tontrup (online)

New York University, USA

"Privacy Decisions are not Private: How the Notice and Choice Regime Induces us to Ignore Collective Privacy Risks and what Regulation Should Do About It"

8 May 2023

Susan Dynarski

Harvard University, USA

"The Power of Certainty: Experimental Evidence on the Effective

Design of Free Tuition Programs"

9 May 2023

**Eric Bettinger (online)** 

Stanford University School of Education, USA

"The Psychological Effects of Poverty on Investments in Children's

Human Capital"

10 May 2023

Muhammad Satti (online)

Max Planck School of Cognition, Leipzig, Germany

"Effects of Anxiety on Learning under Uncertainty and Varying Levels of Threat"

15 May 2023

Jacob Goldin (online)

(Joint with six co-authors)

University of Chicago, USA

"Measuring and Mitigating Racial Disparities in Tax Audits"

15 May 2023

James Konow

Loyola Marymount University, USA

"Moral Salience and Conditional Altruism: Reconciling Jekyll and Hyde

Paradoxes"

23 May 2023

Adam Badawi (online)

(Joint with Elisabeth de Fontenay and Julian Nyarko)

University of California, Berkeley Law School, USA

"Text Analysis on Merger Agreements"

22 May

**Daniel Schunk** 

University of Mainz, Germany

"Feeling guilty, afraid or still hopeful? The role of distinct emotions in

climate engagement behavior"

24 May 2023

**Konstantin Offer (online)** 

Max Planck School of Cognition, Leipzig, Germany

"Exploiting Knowledge Gaps on Pay Gaps: Deliberate Ignorance of Pay

Discrimination"

5 June 2023

Monika Leszczynska (online)

Columbia Law School, New York University

"Measuring the Unacceptability of Online Marketing Practices: Is

Threat to Autonomy Alone Enough, or Must Negative Consequences

Result from Affected Decisions?"

5 June 2023

Michael Gilbert (online)

University of Virginia School of Law, Charlottesville, USA

"Enforcement Signals under Rules and Standards"

5 June 2023

#### F. Research Seminars

Peter Lewisch (in person)
University of Vienna, Austria
"Beyond Preponderance of the Evidence: Rules of Evidence in Criminal
and Civil Procedure Reconsidered"
12 June 2023

Jens Frankenreiter (in person) Washington University at St. Louis, USA "Incomplete Contacts and Future Data Usage" 26 June 2023

Yun-chien Chang (in person)
(Joint with Han-wei Ho, Patrick Huang, Nuno Garoupa, Martin Wells and Tom Ginsburg)
Academia Sinica, Taipei, Taiwan, and Cornell Law School, USA "Machine-Learning Human Rights"
3 July 2023

Lion Schulz (Joint with Peter Dayan) Max Planck School of Cognition "Emergent deception, skepticism, and paranoia via theory of mind" 10 July 2023

Julie Chytilova CERGE-EI, Prague, Czech Republic "Youngism: Experimental Evidence" 11 July 2023

Sebastian Nagl (hybrid)
Technical University Munich, Germany
"Touching 3.0 - Exploring the representation of judical decisions in
discriminative and generative algorithms"
17 July 2023

# F.II Internal Speakers in our Research Seminars

#### 2020

Laurence O'Hara and Victoria Barnes

"Does the Fundamental Transformation Deter Trade?" 20 January 2020

Yoan Hermstrüwer und Pascal Langenbach

"Governing with Humans and Computers: An Experimental Investigation"

27 January 2020

Pascal Langenbach and Cornelius Schneider

"Public Opinion and Courts"

10 February 2020

**Christoph Engel** 

"Does the Fundamental Transformation Deter Trade?"

17 February 2020

Yoan Hermstrüwer and Pascal Langenbach

"Governing with Humans and Computers: An Experimental Investiga-

17 February 2020

**Christoph Engel** 

"Does the Fundamental Transformation Deter Trade?"

17 February 2020

**Christoph Engel** 

"Judicial Tech"

2 March 2020

Maj-Britt Sterba (online)

"Lost Control: Personal Experience during the Corona Pandemic and

Preferences for Redistribution"

20 April 2020

Lukas Kiessling (online)

"Peers and Mental Health"

21 April 2020

Marcel Schubert (online)

"Vectorizing Social Cues"

27 April 2020

Ali Seyhun Saral (online)

"Social Choice for Social Production: Voluntary Provision and Aggre-

gation of Information Goods"

27 April 2020

Sofia Monteiro (online)

"Selection Neglect and Training in Bayesian Reasoning"

28 April 2020

Stefan Schmidt (online)

"Shared Attention"

28 April 2020

Pascal Langenbach (online)

(Joint with Tim Friehe and Murat Mungan)

"Event Significance Influences Belief Formation: Experimental

Evidence from a Taking Game"

4 May 2020

**Daniel Toribio-Florez (online)** 

"From the MPS to our MPI: A Common Discussion about Open

Science'

4 May 2020

Sebastian Schneider (online)

"Tell Me the Truth if It Fits my Agenda: Experiments on Information

Avoidance to Justify (the Abstinence from) Actions

5 May 2020

Ali Seyhun Saral (online)

"Social Choice for Social Production: Aggregation of Voluntarily

Provided Information Goods"

5 May 2020

Cornelius Schneider (online)

(Joint with Wladyslaw Mill)

"Less Enforcement, Higher Revenues? An Empirical Investigation of

Germany Tax Enforcement"

11 May 2020

Rima-Maria Rahal (online)

(Joint with Lawrence O'Hara)

"Context Dependence of Normative Judgments - Evidence from a

Survey Study During the COVID-19 Epidemic?"

11 May 2020

Nathan Maddix (online)

"When the Workplace is Home: Experimental Evidence on Remote

Work Productivity"

13 May 2020

Daniel Salicath (online)

"Decision-Making under Scarcity for the Poor"

13 May 2020

Shu Chen (online)

(Joint with Sebastian Kube and Matthias Wibral)

"How Communication Moderates Intergroup Vicarious Retribution:

An Online Experiment Design"

18 May 2020

Yoan Hermstrüwer (online)

(Joint with Claudia Cerrone and Onur Kesten)

"School Choice with Consent: An Experiment"

18 May 2020

Eriselda Danaj (online)

(Joint with Susan Fiedler)

"The Consistency of Counterproductive Work Behavior"

25 May 2020

#### F. Research Seminars

Alina Fahrenwaldt (online)

(Joint with Daniel Toribio-Flórez)

"Do Governmental Covid-19 Measures Affect Social Distancing Norms and Intervention Behavior? Data from Germany" 25 May 2020

Alina Fahrenwaldt (online)

"Bott, K. M., Cappelen, A. W., Sørensen, E. Ø., & Tungodden, B. (2019). You've Got Mail: A Randomized Field Experiment on Tax Evasion. Management Science"

8 June 2020

Maj-Britt Sterba (online)

"Lost Control and Preferences for Redistribution – Results" 15 June 2020

Nathan Maddix (online)

"Opt-Out Defaults and Active Choices: Expertise, Choice, and Projective Paternalism"

16 June 2020

Claudia Cerrone (online)

"Estimating Present Bias and Sophistication. Testing 'Doing it Now or Later"

22 June 2020

Eugenio Verrina (online)

"Personal Norms, Social Norms, and Image Concerns" 22 June 2020

Laurence O'Hara (online)

(Joint with Rima-Maria Rahal)

"Compliance Given Incentives to Free-Ride"

29 June 2020

Carina Hausladen (online)

(Joint with Martin Fochmann and Peter Mohr)

"Predicting (Dis-)Honesty: Leveraging Text Classification for

Behavioral Experimental Research"

6 July 2020

**Christoph Engel (online)** 

(Joint with Eyal Zamir)

"Sunlight is the Best Disinfectant. Or Is It?"

6 July 2020

Lisa Lenz (online)

"The Impact of Inclusive Social Policies on Economic Types of

Discrimination"

13 July 2020

Nina Grgić-Hlača

"Dimensions of Diversity in Human Perceptions of Algorithmic

Fairness" 13 July 2020

13 July 2020

Zvonimir Bašić (online)

"Social Norms, Personal Norms, and Image Concerns" 13 July 2020

Sebastian Schneider (online)

"Higher-Order Risk Preferences: New Experimental Measures,

Determinants, and Related Field Behavior"

13 July 2020

Lukas Kiessling (online)

"The Long-Run Effects of Peers on Mental Health"

13 July 2020

Ali Sevhun Saral (online)

"Evolution of Conditional Cooperation in Prisoner's Dilemmas"

7 October 2020

Sebastian Schneider (online)

"Addressing Validity and Generalizability Concerns in Field Experiments"

7 October 2020

Lukas Kiessling (online)

"Parental Paternalism"

7 October 2020

Nathan Maddix (online)

"The Mountain, the Hills, and the Plateau: Enhanced Choices in Fi-

nance, Energy, and Health Domains"

7 October 2020

2020

Carina Hausladen (online)

(Joint with Martin Fochmann and Peter Mohr)

"Predicting (dis-)honesty: Leveraging text classification for behavioral

experimental research"

6 July 2020

**Christoph Engel (online)** 

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"Sunlight is the Best Disinfectant - Or Is It?"

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ments"

7 October 2020

Lukas Kiessling (online)

"Parental Paternalism"

7 October 2020

#### F.II Internal Speakers in our Research Seminars

Nathan Maddix (online)

"The mountain, the hills, and the plateau: Enhanced choices in finance, energy, and health domains"

7 October 2020

Frederike Zufall (online)

"The psychological effects of basic income"

19 October 2020

Dana Burchardt (online)

"How Rational Should Judges Be?"

19 October 2020

Jerome Olsen (online)

"Beyond risky: The cognitive and affective processes of tax evasion"

26 October 2020

Nina Grgic-Hlaca (online)

"Machine Advice with a Warning about Machine Limitations: Experimentally Testing the Solution Mandated by the Wisconsin Supreme

Court"

26 October 2020

Yoan Hermstrüwer (online)

(Joint with Jens Frankenreiter)

"Privacy's Great Shock"

2 November 2020

Sebastian Tonke (online)

"Identity Appeals: Evidence from a Field Experiment in Kosovo to

Decrease Non-Payment for Water"

4 November 2020

Susann Fiedler (online)

"The psychological effects of basic income"

9 November 2020

Sebastian Schneider (online)

"Nudging or Paying? Evaluating the Effectiveness of Measures to Contain COVID-19 in Rural Bangladesh in a Randomized Controlled Trial"

11 November 2020

**Christoph Engel (online)** 

(Joint with Shaheen Rana and Klaus Heine)

"Law in the Books"

16 November 2020

Martin Sternberg (online)

"Hybrid Collusion: An experiment on algorithmic pricing in Hu-

man-Computer Laboratory Markets"

23 November 2020

Svenja Hippel, University of Würzburg (online)

(Joint with Adrian Hillenbrand)

"Strategic Inattention in Product Search"

30 November 2020

Maj-Britt Sterba (online)

(Joint with Sören Harms)

"Polarized or Unied? -Solidarity and Fairness Views of Liberals and

Conservatives during COVID-19"

7 December 2020

Shambhavi Priyam (online)

"Expectations and Trust in Government during COVID-19"

9 December 2020

Jerome Olsen (online)

(Joint with Susan Fiedler and Ziga Puklavec)

"Moral Judgments in the Time of Covid-19"

14 December 2020

Pascal Langenbach (online)

(Joint with Florian Baumann and Tim Friehe)

"Costly third-party punishment: The influence of the strength of social

norms and the purpose of punishment

14 December 2020

#### 2021

Ranveig Falch (online)

"The Development of Social Preferences: Experimental Evidence from

China and Norway OR is it morally acceptable to be selfish?"

20 January 2021

Yoan Hermstrüwer (online)

"School Choice with and without Consent"

25 January 2021

Bettina Rockenbach (online)

"Gender Differences Across Economic Games: Expectations, Norms

and Behavior"

27 January 2021

Mahdi Khesali (online)

"How are moral principles reflected in constitutions?"

1 February 2021

Marcel Schubert (online)

"Put Behind Bars by the Machine -Why are Algorithmic Predictions of

Recidivism so Often False?"

8 February 2021

Martin Sternberg (online)

(Presented for Philippe Aghion, Stefan Bechtold, Lea Cassar, Holger

Herz)

"The Causal Effects of Competition on Innovation: Experimental

Evidence"

22 February 2021

Rima Rahal (online)

(Joint with Frederik Schulze Spüntrup)

"Ethical decision making under risk: Studying Covid-19 vaccine strat-

egies"

1 March 2021

Yoan Hermstrüwer and Pascal Langenbach (online)

"Governing with Humans and Machines"

1 March 2021

Nina Grgić-Hlača (online)

(Joint with Markus Langer)

"Effects of Terminology on People's Perceptions of Automated Sys-

tems"

8 March 2021

Mustafa Kaba (online)

"Leadership, Social Networks and Corporate Climate Through a Gen-

der Lens"

18 March 2021

Ali Seyhun Saral (online)

"Online Experiments: Challenges and Tips"

22 March 2021

#### F. Research Seminars

Christoph Engel (online) "Word Happiness Report" 29 March 2021

Christoph Engel and Rima Rahal (online)

"What the Judge Says is not What the Judge Thinks. Eye Tracking Evidence about the Normative Weight of Conflicting Concerns in a Torts Case" 12 April 2021

Marcel Schubert (online) "Feature Stability and Causality" 19 April 2021

Johannes Rottmann (online)

"The reception of legal opinion -What is the influence of a disclosed (potential) conflict of interest?" 3 May 2021

Nina Grgić-Hlača (online) "Liability in machine-assisted decision-making" 3 May 2021

Rima Rahal (online) "Transparency, Robustness and Openness" 10 May 2021

Johannes Rottmann (online)

"Social Preferences and Self-Selection into Legal Professions - A Survey-Experiment with Legal Trainees' 31 May 2021

Niclas Höhle (online) "Negotiorum Gestio and altruism" 31 May 2021

Christoph Engel/Nina Grgic-Hlaca (online) "Partnering with a Machine under the Shadow of Liability" 28 June 2021

**Christopher Roth** 

"Worker Beliefs about Rents and Outside Options" 3 November 2021

Matthew Trail (online)

"Child Welfare Decision Making and Predictive Modeling" 8 November 2021

Ioana Sendroiu (online)

"Who gets to 'dream big'? The cost of high expectations in low quality neighborhoods'

15 November 2021

Alina Fahrenwaldt (online)

"Intuitive Deontology? A meta-analysis" 15 November 2021

Rima-Maria Rahal and Nina Grgic-Hlaca (online)

"Conjoint analysis" 22 November 2022

Matthew Trail (online)

"Predictive Modeling in Child Welfare" 29 November 2021

Rima-Maria Rahal (online)

"Conjoint Analysis Pt. 2: AMCE Correlation with Eye Gaze" 29 November 2021

Johannes Haushofer (online)

"The Comparative Impact of Cash Transfers and a Psychotherapy Program on Psychological and Economic Well-being" 1 December 2021

Mustafa Kaba (online)

Social Identity and Policy Preferences

6 December 2021

Rima-Maria Rahal (online)

(Joint with Michael Schulte-Mecklenbeck)

Telling more about "telling more than we can know": Inferences from mouse tracking and introspective reports"

6 December 2021

Fiona tho Pesch (online)

(Joint with Anna Baumert & Susann Fiedler)

"Who ignores -and why?" 6 December 2021

2022

Mahdi Khesali (online)

"Functions of constitution: constitution as mission statement" 10 January 2022

Pascal Langenbach (online)

(Joint with Tim Friehe)

Can You Read the Signs? People Infer the Level of the Conviction Probability from the Sanction Magnitude"

17 January 2022

**Christoph Engel (online)** 

(Joint with Oliver Hart, David Frydlinger and Christian Zehnder) "Contracting the Uncontractible: Experimentally Testing the Power of Stipulating Loyalty as a Precaution for Incompleteness" 24 January 2022

Stefan Schmidt

Social Identity and Systematic Biases 28 January 2022

Pascal Langenbach (online)

(Joint with Florian Baumann and Tim Friehe)

"Fines Versus Damage: Experimental Evidence on Care Investments" 31 January 2022

Johannes Rottmann (online)

(Joint with Leonhard Grabe, Matthias Heinz und Heiner Schuhmacher) "Self-Selection into Legal Professions: (Social) Preferences of Job Market Entrants"

21 February 2022

Alina Fahrenwaldt (online)

"Institutional signals in the lab - the relevance of being in an echo chamber (with yourself)"

28 February 2022

Matthew Trail (online)

"Judge and Attorney Perceptions of Predictive Models in Child Welfare"

11 April 2022

Dorothee Mischkowski (online)

"Social Preferences and Envy: Linking the concept of benign and malicious envy with social value orientation"

2 May 2022

#### F.II Internal Speakers in our Research Seminars

Mahdi Khesali (online)

"Democracy versus Morality: An Experiment"

9 May 2022

Pascal Langenbach (online)

(Joint with Cornelius Schneider)

"Public Opinion and Human Rights Courts in the European Multilevel

Court System: Experimental Evidence"

30 May 2022

Dorothee Mischkowski (online)

"On the relation between low- and high-cost cooperation: Assessing

the moderating influence of (opportunity) costs"

30 May 2022

Mahdi Khesali (online)

"Moral foundations in Arab constitutions: An exploratory look"

27 June 2022

Sebastian Schneider

"Elicitation and Empirical Relevance of Higher Order Risk

Preferences"

4 July 2022

Mahdi Khesali (online)

"When a democratic result contradicts a moral norm"

11 July 2022

Mustafa Kaba (online)

"Takeover of Local Governments, Public Procurement Performance,

and Public Service Delivery"

9 November 2022

Matthew Trail (hybrid)

(Joint with Danielle Pullan)

"Evaluating the intersection of attitudes on foster care and abortion

among US American evangelicals"

28 November 2022

Rima-Maria Rahal (hybrid)

"Cognitive Processes of Criminal Behavior"

28 November 2022

Pascal Langenbach (hybrid)

(Joint with Tim Friehe)

"Can You Read the Signs? How People Infer the Detection Probability

from the Sanction Magnitude"

5 December 2022

Daniel Salicath (online)

"Impact of Scarcity on Decision-Making and Economic Preferences:

Experimental Evidence from Kenya"

7 December 2022

Yoan Hermstrüwer (hybrid)

(Joint with Mark Wilson and Rupert Freeman)

"Fairness Through Order Symmetry"

12 December 2022

2023

Zvonimir Bašić (hybrid)

"Personal norms – and not only social norms – shape economic

behavior"

12 January 2023

Carl Christian von Weizsäcker (in person)

"Freedom and adaptive Preferences" (Book Draft)

23 January 2023

Johannes Rottmann (hybrid)

"How do law school review classes perform against commercial cram

courses - Evidence from Germany"

30 January 2023

Pascal Langenbach (hybrid)

(Joint with Cornelius Schneider)

"Public Opinion and Human Rights Courts in the European Multilevel

Court System: Experimental Evidence"

13 February 2023

Rima-Maria Rahal (hybrid)

"Cognitive processes across the globe: Webcam-based eye-tracking

analysis of ingroup bias"

23 January 2023

**Christoph Engel (in person)** 

"Coding with ChatGPT"

13 March 2023

Rima-Maria Rahal (in person)

(Joint with Christoph Engel)

"Ignoring Inadmissible Evidence"

3 April 2023

Thomas Holzhausen (in person)

(Joint with Christoph Engel and Dorothee Mischkowski)

"The legislator speaks, and nobody listens – How does legislative change translate into a change in behavior if legal rules are followed

change translate into a change in behavior if legal rules are followed by routine?"

17 April 2023

Dorothee Mischkowski (in person)

"Negotiation designs through the lens of situational affordances – A person-situation perspective on negotiation behavior in public good

settings"

24 April 2023

Mahdi Khesali (in person)

"Contract as a Mirror of Your Image"

15 May 2023

Pascal Langenbach (I person)

(Joint with Eugenio Verrina)

"Solving Social Dilemmas through Elected Policy Makers"

12 June 2023

Pascal Langenbach (in person)

(Joint with Lukas Haffert and Tobias Rommel)

"The Trilemma of Mixed-Member Proportionality"

19 June 2023

Stefan Schmidt

"A flag to wave: status seeking behavior in groups"

19 June 2023

Fabian Jäkel (in person)

"Barriers to Mental Health Help-Seeking Among German students"

26 June 2023

Alexander Egberts (in person)

"Digital Manipulation and Market Mechanisms (or lack thereof): A

Longitudinal Study of Dark Pattern Prevalence in the EU"

26 June 2023

## F. Research Seminars

Dorothee Mischkowski (hybrid)
Towards a generalized framework of low-cost decisions and its application to (pro-)social decision making
17 July 2023

# G. VisitingScholars

# **G.** Visiting Scholars

#### **Affiliates**

Anne Van Aaken 1 July 2007 31 March 2024 Stefan Bechthold 1 January 2009 31 March 2024 Stefan Magen 1 October 2010 31 March 2024 Felix Bierbrauer 1 April 2011 31 March 2024 Sebastian 1 October 2012 31 March 2024 Goerg Lilia Zhurakhovska 1 July 2013 31 March 2024 Petersen 1 April 2015 31 March 2024 Niels Michael Kurschilgen 1 November 2015 31 March 2024 Emanuel Towfigh 31 March 2017 31 March 2024 Burchardt 30 September 2023 Dana 1 January 2021 Yoan Hermstrüwer 31 January 2023 31 August 2025

#### **Visiting Researchers**

Carl Christian since 1 April 2004 von Weizsäcker Alexander Schneeberger 1 October 2016 31 December 2023 Konstantin Chatziathanasiou 1 October 2018 31 December 2023 Eriselda Danaj 1 October 2019 31 January 2021 Stefania Bortolotti 26 November 2019 31 December 2022 31 March 2021 Johanna Gereke 1 December 2020 Maj-Britt Sterba 1 January 2021 30 June 2021 Oda Kristine Storstad Sund 15 January 2021 15 July 2021 Ranveig Falch 1 February 2021 31 July 2021 Höhle Niclas 1 June 2021 30 September 2021 24 June 2021 Astrid Kunze 23 July 2021 Hoeft 1 July 2021 31 December 2022 Leonard Adrian Hillenbrand 1 August 2021 30 June 2022 Nan Zhang 1 September 2021 30 June 2022 Michael Weyland 1 October 2021 31 March 2022 Fiona Tho Pesch 1 October 2021 30 April 2022 Niklas 1 October 2021 30 April 2022 Cypris Hanjo Hamann 1 April 2022 31 August 2025 Konstantin Offer 2 May 2022 15 July 2022 Morten **Broberg** 1 July 2022 31 August 2023 Winter 1 July 2022 31 December 2024 Fabian Brinker 1 October 2022 30 September 2025 Tom Sophia Hornberger 1 October 2022 30 September 2025 Marin Coerts 17 October 2022 2 December 2022 Fiedler 1 January 2023 31 August 2025 Susann De Santis Gianmarco 13 March 2023 11 June 2023 Frederike Zufall 1 June 2023 31 August 2025 Ritwik Baneriee 8 July 2023 3 August 2023

(in the order of starting date)

# H. Institutional Research Cooperations

## H. Institutional Research Cooperations

#### **ECONtribute Law & Economics Workshop**

University of Bonn, since 2006

Stefanie Egidy and Yoan Hermstrüwer are co-organizers

The ECONtribute Law & Economics Workshop is a bi-weekly interdisciplinary workshop that brings together social scientists and legal scholars whose research focuses on Law & Economics. It is jointly organized by the Graduate School of Economics, the Law Facult, and the Max-Planck-Institute for Research on Collective Goods. Past presenters include Kathryn Spier, Jeff Rachlinsky, Roberta Romano, Ted Eisenberg, Katharina Pistor, Henry Hansmann, Eric Talley, Alan Schwartz, Jen Arlen, Lewis Kornhauser, and many others (https://www.jura.uni-bonn.de/castle/econtribute-law-and-econ-workshop).

#### **Erasmus University Rotterdam**

Christoph Engel has held the part-time chair in Experimental Law & Economics (2013–2023).

# **European Network "Competition Law and Economics"**

joint with

- the Centre for Competition Policy (CCP) at the University of East Anglia
- the Amsterdam Center for Law and Economics (ACLE) at the University of Amsterdam
- the European University Institute, in particular the Robert Schuman Centre and the Florence School of Regulation
- the Bergen Center for Competition Law and Economics (BECCLE) at the Norwegian School of Economics and the University of Bergen
- the Mannheim Centre for Competition and Innovation (MaCCI) at the ZEW Centre for European Economic Research and the University of Mannheim
- The institute organized a two-day workshop on "Experimental Comparative Law" on 23-24 May 2019 for the network

#### **Institute for Advanced Studies (IHS)**

Matthias Sutter has been appointed member of the scientific advisory board of the Institute for Advanced Studies (IHS) in Vienna (2018–2025).

# International Max Planck Research School on Behaviorally Smart Institutions (IMPRS BeSmart) (see C.IV)

#### Partners:

- Christoph Engel, MPI Bonn, Behavioral Law and Economics
- Matthias Sutter, MPI Bonn, Experimental Economics
- Felix Bierbrauer, University of Cologne, Faculty of Management, Economics and Social Sciences
- Daniel Zimmer, University of Bonn, Faculty of Law
- Uri Gneezy, UC San Diego, Rady School of Management
- Bertil Tungodden, Norwegian School of Economics
- Stefan Bechtold, ETH Zurich, Center for Law and Economics
- Eyal Zamir, Hebrew University, Law School

Chair: Christoph Engel

#### **Kadir Has University**

Cooperation between the MPI and Kadir Has University for the project "Corporate Culture and Employee Productivity: A Randomized Informational Intervention on Multiple Corporations" (2019–2023).

# **Toulouse School of Economics & University of Lausanne**

Cooperation between all three institutions for the project "Cognitive and Non-Cognitive Skills in Adolescents" (2019–2024).

#### **University of Innsbruck**

Matthias Sutter has held a part-time chair in Experimental Economics since 2006.

#### **University of Cape Town**

Cooperation between MPI and UCT for the project "The Effect of Technology-Assisted Behavioral Interventions in Type-2 Diabetics" (until 2024)

# Max Planck Law Research Fellow: Daniel S. Nagin

Daniel S. Nagin is one of the most visible criminologists, with a keen interest in rational choice and behavioral approaches to the understanding, and to combatting, crime. He has widely published in the top journals in criminology, sociology, economics, statistics, psychology, and law. In August 2021, he was appointed Max Planck Law Fellow by the Max Planck Institute for the Study of Crime, Security and Law in Freiburg, and the Max Planck Institute for Research on Collective Goods in Bonn.

Daniel S. Nagin is the Teresa and H. John Heinz III University Professor of Public Policy and Statistics (Carnegie Mellon University) and since 2006 has served as the college's Associate Dean of Faculty. He received his Ph.D. in 1976 from what is now the Heinz College of Information Systems and Public Policy. He chaired the National Research Council's Committee on Deterrence and the Death Penalty, and served as Deputy Secretary for Fiscal Policy and Analysis in the Pennsylvania Department of Revenue from 1981 to 1986. He is an elected Fellow of the American Society of Criminology, American Association for the Advancement of Science, and American Academy of Political and Social Science and the recipient of the American Society of Criminology's Edwin H Sutherland Award in 2006, the Stockholm Prize in Criminology in 2014, Carnegie Mellon University's Alumni Distinguished Achievement Award in 2015, and the National Academy of Science Award for Scientific Reviewing in 2017. His research focuses on the evolution of criminal and antisocial behaviors over the life course, the deterrent effect of criminal and non-criminal penalties on illegal behaviors, and the development of statistical methods for analyzing longitudinal data.

Н.	Institutiona	Researc	h Cooperations	
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