

SPUDM 2019

Subjective Probability, Utility, and Decision Making

18 – 22 August 2019

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**The Research Priority Area Behavioral
Economics, University of Amsterdam**



European Research Council



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SPUDM 2019 CONFERENCE MASTER SCHEDULE

Sun. 18 August – Tropen Institute

15.00 – 16.00	Welcoming and registration
16.00 – 17.00	Presidential Address by Ido Erev, Technion
17.00 – 19.00	Reception

Mon. 19 August – Roetersstraat 18, REC A, UvA

8.00 – 9.00	Coffee and registration
9.00 – 10.00	Parallel Session 1 (see locations below)
10.30 – 11.00	Coffee Break
11.00 – 11.15	Welcoming. Han van Dissel, Dean Faculty of Economics & Business (A0.01)
11.15 – 12.15	Keynote Address Christina Bicchieri, University of Pennsylvania (A0.01)
12.15 – 14.00	Lunch Break
14.00 – 15.30	Parallel Session 2 (see locations below)
15.30 – 16.00	Coffee Break
16.00 – 17.30	Parallel Session 3 (see locations below)
17.30 – 20.00	Young Scientists event (A0.01)

Tue. 20 August – Roetersstraat 18, REC A, UvA

8.00 – 9.00	Coffee and registration
9.00 – 10.30	Parallel Session 4 (see locations below)
10.30 – 11.00	Coffee Break
11.00 – 12.00	Keynote Address Nina Mazar, Boston University (A0.01)
12.00 – 13.00	Lunch Break
13.00 – 14.00	EADM General Assembly (A0.01)
14.00 – 15.30	Parallel Session 5 (see locations below)
15.30 – 16.00	Coffee Break
16.00 – 17.30	Panel discussion (A0.01)
17.30 – 22.00	Social event, <i>boat trip from the conference location to a dinner at I-dock. Boat trip is included in the conference fee, dinner requires registration and additional payment. From the restaurant, it is easy to reach the center of Amsterdam.</i>

Wed. 21 August – Roetersstraat 18, REC A, UvA

8.00 – 9.00	Coffee and registration
9.00 – 10.30	Parallel Session 6 (see locations below)
10.30 – 11.00	Coffee Break
11.00 – 12.00	Keynote Address Anna Dreber Almenberg, Stockholm School of Economics (A0.01)
12.00 – 13.00	Lunch Break
13.00 – 14.30	Parallel Session 7 (see locations below)
14.30 – 15.00	Coffee Break
15.00 – 18.00	Poster Session including drinks and snacks
17.00 – 18.00	Open Science meeting (A2.11)

Thu. 22 August – Roetersstraat 18, REC A, UvA

8.00 – 9.00	Coffee and registration
9.00 – 10.30	De Finetti Award and Jane Beattie Award presentations (A0.01)
10.30 – 11.00	Coffee Break
11.00 – 12.30	Parallel Session 8 (see locations below)
12.30 – 14.00	Farewell lunch

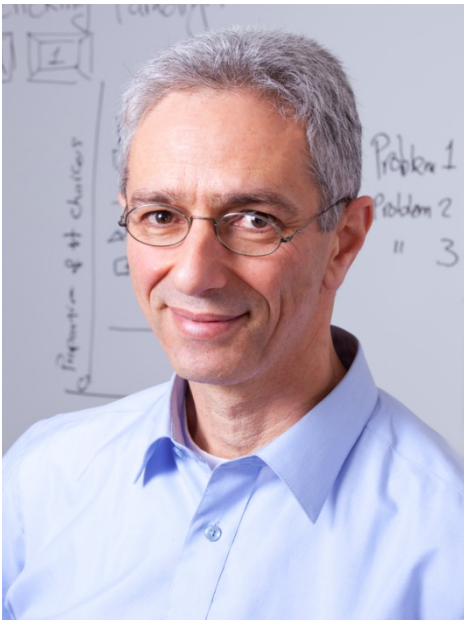
Time	Sunday, 18 August	Monday, 19 August	Tuesday, 20 August	Wednesday, 21 August	Thursday, 22 August
8.00 - 9.00		Coffee & Registration	Coffee & Registration	Coffee & Registration	Coffee & Registration
9.00 - 10.00		Parallel session 1	Parallel session 4	Parallel session 6	Awards
10.00 - 11.00		Coffee break	Coffee break	Coffee break	Coffee break
11.00 - 12.00		Welcome to Uva	Keynote: Mazar	Keynote: Dreber	Parallel session 8
		Keynote: Bicchieri			
12.00 - 13.00		Lunch break	Lunch break	Lunch break	
					Farewell lunch
13.00 - 14.00		Lunch break	EADM general assembly	Parallel session 7	
14.00 - 15.00		Parallel session 2	Parallel session 5		
15.00 - 16.00	Welcoming & Registration	Coffee break	Coffee break	Poster session including reception	
16.00 - 17.00		Parallel session 3	Panel discussion		
17.00 - 18.00	Reception	Young scientists event	Social event	Open Science Meeting	
18.00 - 19.00					
19.00 - 20.00					
20.00 - 21.00					
21.00 - 22.00					

Welcome by Han van Dissel



Han van Dissel is Dean of the Faculty of Economics and Business at the University of Amsterdam, where he is a professor of business administration. He was previously the Director-General of CEDEP and Dean of the Rotterdam School of Management. His research and teaching focuses on the management of information.

Presidential address by Ido Erev



Ido Erev is the American Technion Society Women's Division Professor of Behavioral Science at the Technion. His work focuses on the impact of economics incentives on choice behavior. It suggests that the initial reaction to a description of the incentive structure reflects overweighting of rare events, but experience reverses this bias.

KEYNOTE SPEAKERS

Cristina Bicchieri
University of Pennsylvania



MONDAY 19 AUG.
11.15-12.15

Cristina Bicchieri is the SJP Harvie Professor of Social Thought and Comparative Ethics at the University of Pennsylvania, and director of the Philosophy, Politics and Economics program.

She is a foremost scholar of rational choice and philosophy of social science, and a leader in behavioral ethics.

Nina Mazar
Boston University



TUESDAY 20 AUG.
11.00-12.00

Nina Mazar is a Professor of Marketing (Behavioral Science) and the co-director of the Susilo Institute for Ethics in the Global Economy at the Boston University Questrom School of Business.

She studies when and how individual behavioral patterns deviate from standard economic assumptions and what the marketing implications are. Currently, she is the president of the Society for Judgment and Decision Making.

Anna Dreber
Stockholm School of Economics



WEDNESDAY 21 AUG.
11.00-12.00

Anna Dreber is the Johan Björkman professor of economics at the Stockholm School of Economics doing behavioral economics.

Right now she is mainly interested in replications and predicting replication outcomes and also working on large hormone administration projects like her contraceptive pill paper in Management Science.

Monday, August 19
Roetersstraat 18, REC A, University of Amsterdam

Session 1	Symposium: Impact of Truncated Information Sampling (Fiedler) (A0.01)	Negotiation & Trade (A1.02)	Nudges & Heuristics I (A1.03)	Crowds & Groups (A2.07)	Decision from Experience (A2.09)	Emotions I (A2.11)
9.00 - 10.30	Klaus Fiedler Vicissitudes of truncated information sampling	Margarita Leib Precision-in-Context Theory: In a Seller's	David Hagmann The Hidden Cost of Soft Paternalism	Lisheng He The Wisdom of Model Crowds	Ori Plonski Best to be last: Serial position effects in legal	Lina Koppel Willingness to pain: Risk taking and probability
	Johannes Prager Self-determined versus externally determined	Rodolfo Sejas Portillo Inattention in the Housing Market:	Barbara Fasolo Domain matters: A comparative study of	Andrea Taylor Exploring public responses to impact-	Feibai Zhu Confidence in Risky Choice with	Ronit Montal-Rosenberg Seeking less efficient help: Exploring
	Linda McCaughey Truncation of Information Sampling as Cost	Merle van den Akker Can you remember your contactless?	Cong Peng Money is sweet when it says love	Tong Wang Follow the Money: Bayesian Markets to	Dirk Wulff Declarative sample representations in	Bernd Figner Stress decreases adolescent patience in
	Mandy Hütter A Sampling Approach to Evaluative Conditioning	Karlijn Hoyer The effect of dispositional greed on	Doron Cohen Outcome Ranking Nudges: Influencing	Limor Sahar Wisdom of the crowd or people like me?	Taly Bonder Complexity and simplification in	Marijke Leliveld When the Face of Need Backfires: The Impact
		Adi Amit Indications for biased valuations and mental	Wenjia Zhao Towards a space of behavioral	Benjamin Tereick The Wisdom of Self-Aggregating Crowds	Chris Harris Biased preferences through exploitation:	Lotte van Dillen Disgust at the crime scene. Disgust shapes
		Franklin Shaddy When and Why People Prefer Markets Versus	Chris Donkin Bringing nudges into the lab: Using evidence	David Budescu The Wisdom of Forecasting Teams	Ralph Hertwig The Role of Beliefs and Complexity of	Wandi Bruine de Bruin Age differences in anticipated emotions

Session 2	Symposium: Innovations in Judgment Research using Brunswik's Lens Model (Dhami & Kaufmann) (A0.01)	Ethics & Morality I (A1.02)	Nudges & Heuristics II (A1.03)	Consumer behavior I (A2.07)	Equity & Equality (A2.09)	Prospect & Framing (A2.11)
14.00 - 15.30	Arndt Bröder Metamemory viewed through Brunswik's lens	Nigel Harvey Ethical decision making: Effects of	Eyal Pe'er Nudge me right: Personalizing online	Natasha Gandhi Associative cues underpinning	Tom Gordon-Hecker It Wasn't Me: Having a default increases	Michael DeKay Meta-studies (multitudes of tiny
	Elizaveta Konovalova A Brunswikian take on Information Sampling.	Christoph Kogler Timing of Audit Feedback Affects Tax	Leonidas Spiliopoulos Heuristics can withstand	Aurelien Baillion A behavioral decomposition of	Frieder Neunhoffer The Inequality Trap: How High Stakes Fuel	Nathaniel Ashby The consistency of visual attention to
	Claudia Gonzalez-Vallejo Testing the benefits of nutrition labels using	Nils Kobis Social norms of corruption in the field –	Erika Kirgios Choice Bracketing and Its Implications for	Anne-Kathrin Klesse Using Language to Promote Sustainable	Arvid Erlandsson You are equally valuable, but I will not	Erik Løhre The effect of frames on perceived expert
	Esther Kaufmann On the Acceptance of Computerized Expert	Štěpán Bahník Selection effects on dishonest behavior: Do	Eduard Brandstätter How Good are Choice Heuristics?	Aysegül Kanay Making the carbon basket count: Enabling	Cathrin Schödler How the influence of power and social	Vulnet Sejdiu St. Petersburg Paradox vs. Allais Paradox: How
		Fiona tho Pesch Seeing Moral Transgressions	Eugen Dimant When a Nudge Backfires: Using	Susanne Täuber Consumers' inconsistency about	Ellen Evers Arbitrary Fairness	Philip Millroth The Decision Paradoxes Motivating
		Guy Hochman Revenge is not blind – Testing the ability of	Robert Böhm How Defaults Shape War and Peace	Eyal Ert Could Product Experience Change	Yaakov Kareev Myopic reactivity in repeated choice: The	Eldad Yechiam The debatable origins of loss aversion

Session 3	Symposium: Mouse-tracking in JDM: a three course meal + dessert (Schulte-Mecklenbeck) (A0.01)	Ethics & Morality II (A1.02)	Nudges & Heuristics III (A1.03)	Ambiguity (A2.07)	Risk I (A2.09)	Emotions II (A2.11)
16.00 - 17.30	Pascal Kieslich Uncovering judgment and decision-making	Anat Halevy A spillover effect of altruistic cheating:	Amélie Gourdon-Kanhukamwe Boundary conditions of acceptability of nudges	Ayşe Onculer The Future Ambiguity Effect: How Narrow	Alex Markle Risky Sure Things	Joël van der Weele Anticipatory Anxiety and Wishful Thinking
	Martin Schoemann Back to the future: Toward a gold standard for	Denton Hatch From Unethical Behavior to Pro-social	Andrea Isoni Tainted Nudge	Celia Gaertig Why (and When) Are Uncertain Price	Luxi Shen Risk Averse In Prospect, Risk	Dawn Liu The role of affect and inference in attribute
	Michael Schulte-Mecklenbeck Higher or lower than 2315 meters? Anchoring effects	Nurit Hod Judging those you cheat: Consumers'	Miroslav Sirota Shaping the public's expectations for	Iris Ikink The role of time ambiguity in	Renato Frey Identifying robust correlates of risk	Sebastian Hafenbrädl The business case for CSR: A trump card
	Dirk Wulff Discussant	Karolina Scigata Who deals with the devil?	Volker Thomas Central preference of consumer items and	Han Bleachrodt Measuring Beliefs under Ambiguity	Alina Gutovera Risky Choice from	Selin Goksel Embarrassment Inhibits Medical Advice
		Isabel Thielmann Utility Matters: On the Role of Objective and	Lim Leong When defaults backfire: Switching	Chen Li Social and Strategic Ambiguity versus	Irwin Levin The Risky Decision Making Processes of	Paolo Crosetto The rise and fall of the attraction effect
		Shoham Choshen-Hillel Lying to Appear Honest	Peter Robinson A theoretical and experimental study of	Peter Wakker Measuring Ambiguity Attitudes under Time	Gretchen Chapman Wanting it vs. working for it: Risk	Gaëlle Vallée-Tourangeau Can you take a break if you have work to do?

Tuesday, August 20
Roetersstraat 18, REC A, University of Amsterdam

Session 4	Symposium: The Role of Emotions in Social Decision Making (Engelmann) (A0.01)	Donations & Sharing (A1.02)	Nudges & Heuristics IV (A1.03)	Cooperation & punishment (A2.07)	Confidence & Forecasting (A2.09)	Automation & Algorithm choice (A2.11)
9.00 – 10.30	Jeroen van de Ven The Strategic Display of Emotions	Yaniv Shani Gift-Giving Motivations at Social	Stephan Dickert Decisions to accept refugees: Using graphs	Andrew Colman Cooperation does not decay when the	Mark Himmelstein Identifying Skilled Forecasters:	Qizhang Sun Unpacking the Privacy Paradox for the
	Alan Sanfey Social affective motivations in choice:	Shirley Shlefer Feeling good about doing good: The role	Catalina Estrada-Mejia Choice architecture engages norms to	Ori Weisel The complementarity of centralized and	Marko Tesic Explaining away: probability	Klaus Wertenbroch When Algorithmic Predictions of
	Carsten de Dreu The neural correlates of attack and defence	Alexandra Gheondea-Eladi Friendship in the ultimatum game A	Mario Herberz Choice architecture in environmental car	Leonard Wolk Constrained contributions to public	David Comerford From Gut Feelings to Considered	Alvaro Chacon Algorithm aversion or appreciation? A diary
	Jan Engelmann The neural circuitry of affect-induced distortions	Nazli Okutur Allocating Money to Multiple Charities	Rui Zheng “Us” versus “them”? Promoting pro-	Rainer Rilke Peer selection, cooperation, and	Katharina Lima de Miranda Overconfidence and hygiene compliance	Tobias Gesche Human Bias in Algorithmic Choice
		Gizem Yalcin When Disadvantage is an Advantage:	Eyal Gamliel Effects of task form on chosen heuristics:	Jörg Gross Individual Solutions to Shared Problems	Henrik Olsson Predicting the 2018 US House of	Emir Efendic Asking an Algorithm (compared to a
		Tehila Kogut Sharing and belonging: The recipient’s group	Michael Sobolev Personalized Digital Nudge for Digital	Andreas Glöckner A Multi-national Investigation of Cross-	Uriel Haran Functional overconfidence:	Joachim Meyer Theoretical, measured and subjective

Session 5	Symposium: Nudging Health Behavior (Li) (A0.01)	Ethics & Morality III (A1.03)	Perception (A2.06)	Consumer behavior II (A2.07)	Statistical thinking & Expertise (A2.09)	Intuition & Deliberation (A2.11)
14.00 - 15.30	Peggy Policastro Tasting with Your Eyes: Sensory Description	Ivan Soraperra Shooting the messenger. Supply	Tyler MacDonald Perceptions of Numeric Magnitude &	Kelly Saporta-Sorozon The Effect of Similarity Between A Product's	Maren Baars Being an Expert when there are no	Eliran Halali Trust your gut: Intuitive mindset
	Meng Li Nudging 3-5-year-olds towards fruit and	Rima-Maria Rahal Eyes on Morals: Investigating the	Alice Moon Self-Other Biases in the Perception of	Hilla Schupak Cognitive ability as a moderation to the	Christin Schulze Smart Babies, Stupid Adults? A	Thomás Lejarraga The Intuitive Statistician Lives: How
	Helen Colby Provision of Original Cost Information as a Nudge	Valeria Burdea Communication with sucker and lying	Marta Mangiarulo The effect of evidential impact on	Martina Vacondio The compromise effect for prosocial	Michał Biatek Inducing feelings of ignorance makes	Hagai Rabinovitch The intuitive weighting of “irrelevant”
	Ellen Peters The functions of affect and cigarette warnings	Silvia Sonderegger It's not a lie if you believe it: Lying and	Pardis Fallahzadeh Decision-Making Behaviour and	Astrid Kause Consumers' perceptions of rules	Jinan Allan Decision Making Skill Redefines Human	Roxanne van Giesen Switching health insurance (or not):
		Łukasz Markiewicz Morality's role in cheating behavior	Marina Motsenok Weak Alone, Strong Together? The Effect	Charlotte Ringdal Household consumption	Daniel Read Age brings patience to the rich but	Fabio Del Missier Insights from a Longitudinal Study on Decision-making Competence in Older Adults: a Rosier View
		Shahar Ayal The shared misery effect: When more	Karl Halvor Teigen Do people think of	Peter Ayton Seeing red: How the Colour Red Affects	Robin Hogarth Regression toward the mean: What do	

Wednesday, August 21
Roetersstraat 18, REC A, University of Amsterdam

Session 6	Symposium: Risk, Uncertainty, and Experiential Decision Making (Konstantinidis) (A0.01)	Morality & pro-social behavior (A1.02)	Social behavior (A1.03)	Consumer behavior III (A2.07)	Risk II (A2.09)	Scientific challenges (A2.11)
9.00 - 10.30	Emmanouil Konstantinidis Expected Value Insight Learning: A	Amos Schurr The morality of swerving in	Merav Weiss-Sidi Who Does Good to Feel Good? Cross	Jeremiah Iyamabo Price-Denomination Effect	Charlotte Borsboom What makes a price path risky?	Garston Liang Replicating the disaster information
	Hrvoje Stojic It's new, but is it good? How generalization and	Thomas Schlösser "He that has plenty of goods shall have	Gert-Jan Lelieveld Explaining reluctance to benefit	Daniel Navarro-Martinez The Endowment Effect in the Future:	Lau Lilleholt Jensen Cognitive Ability and Risk Aversion:	Adam Harris Challenges for the measurement of
	Konstantinos Tsetos Attentional selection mediates risk	Ming-Hui Li Prosociality increases in harsh	Mandeep Dhami Criminal Punishment by Preferred	Paul Smeets Get Real! Individuals Prefer More	Paweł Niszczoła The foreign language effect and	Vinod Venkatraman Does mental number line training work?.
	Lukasz Walasek Why do decision makers reject mixed gambles?	Shir Etgar White-collar Crime in Academia: Trends	Ofer Azar Do fixed payments affect effort?	Reto Odermatt Psychological Opportunity Costs:	Lei Zhou Similarity in processes of risky	Jan Woike How to deal with insufficient attention
		Petra Filkukova Truth is in the eyes of the beholder:	Kinga Barrafreem Mental coding of outcomes in	Sangsuk Yoon Choosing versus rejecting: The effect	Christina Leuker When money talks: Judging risk and	Vladimíra Čavojová Why should we think like scientists?The
		Ro'i Zultan An Experimental Approach to	Susann Fiedler The cost of imperfect memory in social	Benjamin Hilbig What if we studied real choices? A	Rebecca McDonald Comparison-specific	Gilad Feldman Mass pre-registered replications project

Session 7	Symposium: Theory Integration in Decision Making (Pachur) (A0.01)	Numbers (A1.02)	Losses & Uncertainty (A1.03)	Pro-social behavior (A2.07)	Risk III (A2.09)	Scarce resources (A2.11)
13.00 - 14.30	Veronika Zilker Linking algebraic and process models of risky	Juanyang Guo On the prominence of number: Using very	Nuria Rodriguez-Priego Does losses loom greater than gains in	Danae Arroyos-Calvera Good reputation moderates	Kelly Wolfe Age differences in risk-taking	Dennie van Dolder Gender and Competitiveness in a
	Thorsten Pachur Cognitive reflections in prospect theory	Anna Krisztina Trendl A zero attraction effect in naturalistic	Aba Szollosi What do people learn under uncertainty?	Konrad Rudnicki Does gossiping promote making	Natalie van der Wal Risky Decisions and Risk	Adi Amit Indications for biased valuations
	Dan Schley Competing theories of multialternative,	Florian Artinger Recency: Prediction with one data point	Regina Weilbacher Memory as uncertainty: the	Shereen Chaudry Thanking, Apologizing,	Joanna Sokolowska Risk preferences in bull and bear	Piero Ronzani Psychology of poverty, financial
	Lisheng He An ontology of decision models	Jan Müller-Dethard Portfolio Composition and	Orestis Kopsacheilis A "horse race" between elicitation	Sebastian Gluth Comparing dynamic models of altruistic	Patrycja Sleboda The inverse relation between	Marie Juanchich Effect of the directionality of
		Par Bjälkebring Objective Numeracy and Life Satisfaction:	Arthur Attema QALYs for you and me: A comparison of	Felix Gaisbauer Using social information in dealing with dilemmas in disguise	Kirsten Rohde Social risk attitudes for health	Marc Wyszynski Do I care about you? The effect of
		Philip Newall Gambling innovation	Jan Krause Hyperopic Loss Aversion		Eric Stone Do people decide differently for	Lara Vomfell Officer encounters and stop and search

Thursday, August 22
Roetersstraat 18, REC A, University of Amsterdam

Session 8	Symposium: What's in a parameter? Common issues in parameter estimation and interpretation (Krefeld-Schwalb) (A0.01)	Information (A1.02)	Process tracing (A1.03)	Well being (A2.07)	Time & Timing (A2.09)	Expectations & Judgment (A2.11)
11.00 – 12.30	Antonia Krefeld-Schwalb Structural Dependencies Between Parameters in	Alice Liefgreen A psychological account of human	Thomas Langer The Processing of Weight and Strength	Yasmina Okan Using the Short Graph Literacy scale to	Barbara Summers The effects of time pressure on	Anke Woudstra Replicating the disaster information
	Neil Stewart Psychological Parameters Have Units: Fixing	Li Shi Tan Excessive Selectivity Bias in Decision	Crystal Reeck Search Strategies Moderate Patience in	Alistair Thorpe Action bias and inappropriate	Moshe Glickman Time varying boundaries in	Stefan Lipman Challenges for the measurement of
	Stephen Broomell A Numerical Investigation of parameter correlations in choice models	Nico Gradwohl Probability matching and avoiding to share:	Sophie Scharf Coherence Effects on Information Search:	Hagit Sabato Pleasure or meaning: Subjective well-being	Xiao Yu Better early than late: Effects of	Tjasa Omerzu Does mental number line training work? The
	Eric Johnson Cognitively Optimized Measurement and Recovery of Time Preferences	Anke Woudstra Development and pilot-testing of a C	Li-Lin Rao The timing of the gaze-contingent	Marine Hainguerlot Physicians' precautionary belief	Nicolò Bertani Fast and simple elicitations using an	Briony Pulford How to deal with insufficient attention
		Itay Sisso Psychological Opportunity Costs:	Kinneret Teodorescu Exploring the effects of practice on	Kevin Tiede When does presenting incremental risks	Christoph Ungemach How much to pay the piper? The effects of	Laura Zimmerman Why should we think like scientists?The role
					Tim Rakow Do decision makers' valuations of time	

LIST OF POSTERS

REC A-Hall 21 August 17.00-19.00

Number	Presenter		Title
1.	Athanasios	Polyportis	"I'm not impatient; - I got suspicious." On the effect of suspicion on predicted utility and information search.
2.	Rod	O'Connor	'Simple hidden things': A model to identify what is needed for making better big decisions
3.	Eriselda	Danaj	"I don't have enough time to be honest: time constraints and cheating behavior"
4.	Rui	Zheng	"Us" versus "them"? Promoting pro-environmental behaviors by enhancing connection to future others
5.	Lena	Wollschlaeger	A "psychophysical" preferential choice paradigm with real consequences
6.	Pavlo	Blavatskyy	A Decomposable Measure of Ambiguity
7.	Christiane	Baumann	A Linear Threshold Model for Optimal Stopping Problems
8.	Jingyi	Lu	A Relational Mindset: Choosing for Others Increases Weight of Comparative Utility
9.	Takashi	Tsuzuki	A Time-series Saccades Analysis of the Attraction and Compromise Effects Based on the Final Decision in Multi-alternative Decision Making
10.	Anna	Trendl	A zero attraction effect in naturalistic choice
11.	Kelly	Wolfe	Age differences in risk-taking behaviour: a matter of risk-attitude or decision-quality?
12.	Alvaro	Chacon	Algorithm aversion or appreciation? A diary study
13.	Femke	de Boer	Always Coca-Cola? Nudging beverage choice in a realistic virtual supermarket environment
14.	Nicolò	Bertani	Ambiguity and depletion in environmental choices.
15.	Nuria	Rodriguez	An intuitive Laffer's Curve? Results from an experiment on taxation
16.	Eva	Krockow	Antimicrobial resistance: a social dilemma problem?
17.	Mark	Himmelstein	Anxiety and the Framing Effect: Intolerance of Uncertainty Predicts Frame Consistent Choice Patterns
18.	Marie	Juanchich	Are two heads better than one in social care?
19.	Tim	Mullett	Attention and Evidence Accumulation – Diverging effects in simple vs complex choice
20.	Ann	Nicholson	BARD: A structured technique for group elicitation of Bayesian networks to support analytic reasoning
21.	Tillmann	Nett	Bayesian analysis of information used during decision making
22.	Elisheva	Rotman Argaman	Becoming Pollyanna: Positivity and negativity biases in memory depend on event mixing
23.	Xiao	Yu	Better early than late: Effects of interventions to change last-moment submitting behaviour
24.	Volker	Thoma	Brain stimulation of right dorso-lateral prefrontal cortex increases cognitive reflection performance
25.	Jieyu	LV	Can empathy promote dyadic cooperation with strangers, when there is inequality of resources involved.
26.	Anton	Kühberger	Can you hear me? An excursion into decision making based on speech
27.	Sandra	Andraszewicz	Challenges of the past and future directions for eliciting risk preferences in finance

28.	Leonardo	Weiss-Cohen	Chasing past experiences: Biases in mutual fund selections using decisions from experience
29.	Lou Marie	Haux	Chimpanzees' information acquisition and risky decision-making in the social and non-social domain
30.	Hamutal	Kreiner	COGNITIVE MECHANISMS UNDERLYING ATTRIBUTE FRAMING BIAS: THE CONTRIBUTION OF ATTENTION BIAS AND ASSOCIATION VALENCE
31.	Anine	Riege	Communicating scientific disagreement in health policy decisions and its effect on public perception
32.	Gael	Le Mens	Conceptual Ambiguity Systematically Affects Evaluative Judgments
33.	Alain	Starke	Crafting normative messages to promote energy conservation in a recommender system
34.	Jinan	Allan	Decision Making Skill Redefines Human Intelligence: A Comprehensive Model of Decision Making and the Structure of Human Cognitive Abilities
35.	Takashi	Ideno	Decision style and time perspective in multi-attribute choice
36.	Jorge	López	Decision-making about organ donation of a bereaved relative: results of an empirical study in real settings
37.	Pardis	Fallahzadeh	Decision-Making Behaviour and Minimal Social Condition: New Insights from Joint Perception
38.	Ravit	Rubinstein-Levi	Decision-Making in Defined Contribution Pension Plans
39.	Jozef	Bavolar	Decision-making styles in the goal-attainment process
40.	Zhu-Yuang	Liang	Descriptive social norms promote Chinese college students' walking behaviour: Evidence based on smartphone social media
41.	Danae	Arroyos-Calvera	Discounting Conditional Risk Sequences: An Experiment
42.	Constantinos	Hadjichristidis	Diversity effects in probability judgment
43.	Sabina	Kołodziej	Do we need good justifications to evade taxes?
44.	York	Hagmayer	Does biomedical knowledge improve diagnostic decision making - a systematic review
45.	Jakub	Traczyk	Does fear increase search effort in more numerate people? A study investigating information acquisition in a decision from experience task
46.	Gabriella	Eriksson	Drivers' decision to speed: Perceived risk factors and reasons for and against speeding
47.	Lena	Schäfer	Dynamic Processes in the 'Hot' Columbia Card Task
48.	Yonatan	Vanunu	Elucidating the differential impact of extreme-outcomes in perceptual and preferential choice.
49.	Jieyu	LV	Empathizing towards the Collective Increases Laboratory Cooperation and Tax Compliance Behavior
50.	Kazuhisa	Takemura	Escaping from bad decisions: Computer simulation and experimental study of two phased decision strategies
51.	Yuki	Tamari	Estimating decision strategies by using topic model and computer simulation
52.	Divya	Aggarwal	Examining the Influence of Ambiguity on Preferences Made by Individuals and in Groups: An Experimental Approach
53.	Shosh	Shahrabani	Factors influencing the decision of older adults in Israel to undergo routine dental examinations and treatments
54.	Ulrich	Schmidt	First Food, Then Morals - The Impact of Food Deprivation on Social Behavior
55.	Jantsje	Mol	Flood risk misperceptions in The Netherlands

56.	Katya	Tentori	Forecasting accuracy: From formal models to human intuitions and back
57.	Farnaz	Mosannenzadeh	Functional Brain Connectivity in Decision-Making Under Probability Versus Time-Ambiguity
58.	Manabu	Akiyama	Gaze patterns on a default option in decision-making processes
59.	Michelle	McDowell	How do people judge a variety of everyday risks? A study of six European countries.
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62.	Nicole	Cruz	If Oswald had not killed Kennedy, would someone else have? Dynamic reasoning with indicatives and counterfactuals
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72.	Thomas	Woiczuk	Language and Punishment
73.	Adele	Diederich	Mach Score and Public Good contribution: On how information is used to trust another person.
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75.	Ryoko	Wada	Making an ambiguous box affects parameter of ambiguity aversion
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98.	Annika	Nieper	Organizational ethics, narratives and social dysfunctions
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112.	Tom	Gordon-Hecker	Randomizing the tracks: A robust preference for randomization over inaction and directed-action in moral dilemmas
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115.	Marc	Jekel	Relation between Parameters of the Parallel Constraint Satisfaction Network Model of Decision Making and Other Individual Differences
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127.	Uri Zak	The Effects of Rankings and Ratings on Performance: What Can We Learn From Chess Tournaments?
128.	Dionysius Ang	The Effects of Various Return Policies on Return Intentions
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133.	Shosh Shahrabani	The Impact of Prior Combat Military Service on Israeli Women's Self-Efficacy and Risk Attitudes
134.	Tjits van Lent	The influence of collaborating with an ingroup or outgroup member on dishonest behaviour
135.	Zhou Yuan	The influence of prior- reputation on the human trust
136.	René Schlegelmilch	The influence of reward magnitude on stimulus memory and stimulus generalization in categorization decisions
137.	Helena Palumbo	THE INFLUENCE OF SELF-OBJECTIFICATION ON MORAL JUDGEMENTS AND DECISION MAKING
138.	Shaked Shuster	The link between aspiring to feel pride versus joy and the type of help we choose to provide.
139.	Zohar Rusou	The Psychology of task management: The Small Tasks Trap
140.	Joanna Rachubik	The representativeness heuristic and the choice of lottery tickets: A field experiment
141.	Tina Venema	The sweet taste of nudge effectiveness: Working with existing habits.
142.	Li-Lin Rao	The timing of the gaze-contingent decision prompts influences risky choices
143.	Andrea Fariña	Theory of Mind and Cognitive Control in prosociality: a large-scale

		assessment of the neural correlates of social value orientation
144.	Finja Marten	Therapists' Decisions to use Empirically Supported Treatments: The Impact of Attitudes
145.	Rafał Muda	Thinking in a foreign language decreases the accuracy of logical thinking
146.	Yan Xu	Top-Flop Betting: An incentive mechanism to elicit unverifiable truths
147.	Anna Macko	Trust dynamics after an apology: gender differences
148.	Sebastian Neumann-Böhme	Trust me; I know what I am doing Does specialist training reduce preference reversals in decision making for others?
149.	Shari de Baets	Trusting forecasts
150.	Tim Rakow	Using a handful of possible futures to communicate distributional information
151.	Ashley Luckman	Using response times to distinguish between attribute-wise and alternate-wise inter-temporal choice processes.
152.	Olga Damman	Using upward social comparison information to influence people's intuitive appraisals of cardiovascular risk information
153.	Wiebke Eberhardt	Well Raised: Teaching Children about Finance
154.	Michael Yeomans	What the Heck are we Talking About? Topic Selection in Conversation
155.	Jingnan Chen	When do men shy away from competition? An experiment on unethical conduct and competitive (dis)advantage
156.	Itay Sisso	When in Rome: The Effects of Activity in Financial Markets on Maximizing Tendencies
157.	Elzbieta Kubinska	Why we let ourselves be seduced by toxic derivatives?
158.	Lina Koppel	Willingness to pain: Risk taking and probability sensitivity in decisions involving painful and monetary outcomes
159.	Shu Li	Worth-based Choice: Giving an offered smaller pear an even greater fictional value
160.	Anat Hoss	Human Territoriality
161.	Daniel Read	Tainted Nudge

Short abstracts of papers and posters

Please note that paper and poster presentations are combined in this list and presented in alphabetical order.

A

Aggarwal, Divya

“Examining the Influence of Ambiguity on Preferences Made by Individuals and in Groups: An Experimental Approach”

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While Ellsberg (1961) definition of ambiguity was restricted to ambiguity in probabilities of a defined outcome, scholars over the years have advocated to expand the construct of ambiguity beyond probability (Ho, Keller, & Keltyka, 2002). Even though empirically examined in different contexts, myriad research studies have not been able to reach a consensus to generalize ambiguity attitudes as they are found to be highly context dependent. This study aims to contribute towards a growing literature concerning ambiguity preferences with respect to situational, individual and social factors influencing decision making under ambiguity. While situational factors refer to source (Outcome Ambiguity Vs Probability Ambiguity), domain (gains Vs losses) and boundary effects of probability of an event happening (High Vs Medium Vs Low), individual factors refer to an individual's own tolerance towards ambiguity. Tolerance towards ambiguity developed by Budner (1962) and the concept of ambiguity as defined in Ellsberg paradox (1961) have been studied in different contexts. This study also explores both conceptualizations in the same context to understand the relationship between them. Social factors refer to influence of group members on decisions made under ambiguity. Understanding the aversion or preference to ambiguity due to probability ambiguity or outcome ambiguity along with group influence, can help in advancing the theory of decision making. This study has applications in several real life scenarios like stock markets, insurance, litigation and corporate finance where the likelihood of success as well as the magnitude of success remains ambiguous.

Akiyama, Manabu

“Gaze patterns on a default option in decision-making processes”

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This research examined gaze patterns on a default option in decision-making processes. The results showed participants who selected the default option didn't gaze at the default longer than the alternative. This result indicated the default regarded as an instant endowment.

Algermissen, Johannes

"Neural circuitry of valence-dependent decision heuristics"

E-mail: j.algermissen@donders.ru.nl

One of the most pervasive decision heuristics is invigorating responding in face of rewards, but holding back in face of punishments. Using computational modelling and combined EEG-fMRI, we investigate the neural mechanisms of these motivational biases in learning and choice.

Allan, Jinan

"Decision Making Skill Redefines Human Intelligence: A Comprehensive Model of Decision Making and the Structure of Human Cognitive Abilities"

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For nearly 150 years, psychological research and theory has documented a link between general intelligence and decision making performance. This suggests that individual differences in decision making (and other life outcomes – e.g., health, wealth, and happiness) may primarily follow from individual differences in heritable and relatively stable general cognitive capacities (e.g., fluid intelligence). However, over the past 40 years there have been great developments in decision making measurement and theory. These developments allow for more precise and comprehensive assessments of essential judgment and decision making tasks, which have traditionally been neglected in general intelligence research. Recent research further indicates that the influence of statistical numeracy (i.e., practical probabilistic math skills) on decision making skill tends to be far greater than that of fluid intelligence or other general cognitive abilities (Cokely et al., 2012; Ghazal, 2014). Here we report results from one of the most comprehensive studies of cognitive abilities and decision making skill, including data from 300 participants who completed a five hour assessment battery. Using confirmatory factor analysis and structural equation modeling, we present a new model of general decision making skill where numeracy mediates the relationship between intelligence and decision making skill. Discussion focuses on implications for a refined factor structure of human cognitive abilities and related applications (e.g., adaptive training, risk communications). Decision making assessments have often been neglected in models of intelligence and life outcomes. The present results indicate numeracy fully mediates the relationship between intelligence and general decision-making skill. Discussion focuses on a refined cognitive abilities factor structure and its implications.

Amit, Adi

"Indications for biased valuations and mental accounting in multi-issue negotiation agreements?"

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Subjective valuation of objective outcomes is often biased in human judgment. In two studies we investigate and show biased valuation of negotiated agreements with multiple issues. First, we find that achievements on less important issues cannot compensate for a loss on important issues, despite equivalent objective value. This is replicated in a second study,

where we furthermore show that individuals classify issues based on importance, creating separate mental accounts for important and less important issues. Trades within the same account (concessions on important issues and compensation on other important issues or concessions on less important issues and compensation on less important issues) are valued more favorably than trades across accounts (conceding on an important issue for several less important ones of equal value or vice versa). Thus, mental accounting can explain the reluctance to accept compensations for a loss on an important issue, and re-categorizing mental accounts can potentially eliminate this valuation bias.

Andersson, Per

“Observing me or my decision: Explicit reputation concerns in prosocial and moral behavior”

E-mail: per.a.andersson@liu.se

Keeping constant the presence of others, we experimentally manipulate the public reveal of decisions to examine three reputation-related outcomes. We investigate cooperation in a Public Goods Game, utilitarian preferences in moral dilemmas, and donations to charity.

Andersson, Per

“Observing me or my decision: Explicit reputation concerns in prosocial and moral behavior”

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Keeping constant the presence of others, we experimentally manipulate the public reveal of decisions to examine three reputation-related outcomes. We investigate cooperation in a Public Goods Game, utilitarian preferences in moral dilemmas, and donations to charity.

Andraszewicz, Sandra

“Challenges of the past and future directions for eliciting risk preferences in finance”

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A plethora of methods assess people's individual risk preferences in risky decision making. Two types of elicitation methods can be distinguished: behavioral- and self-report measures. Behavioral measures offer to estimate risk parameters of economic theories, but show low retest reliability and external validity. At the same time, because of practical reasons, it is important that a risk elicitation measure requires a short completion time and is easy to comprehend. With the aim of evaluating risk elicitation measures for the financial domain, we tested three prominent behavioral risk elicitation measures. Further, we contrasted these measures against a self-reported measure of risk taking from the German socio-economic panel, which has been shown to have a very high test-retest reliability, as well as against two personality measures: sensation seeking and impulsivity. Additionally, we proposed a way of eliciting risk preferences in finance, stemming from both, behavioral and self-reported measures. We test this new method against the well-established measures. Based on two experiments with test-retest data collection separated by one month, we infer that accounting for losses is an important aspect to estimate a person's risk appetite. Also, embedding numerical tasks in real-life situations improves test-retest reliability and correlation with self-reported measures.

Ang, Dionysius

"The Effects of Various Return Policies on Return Intentions"

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Return policies such as product exchanges, and returns with postage costs allow individuals to reverse their decisions. We show that various return policies not only differ in perceptions of decision reversibility but also have differing effects on satisfaction and returns.

Arroyos-Calvera, Danae

"Good reputation moderates unfairness judgments, but only if you are a woman"

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Kahneman, Knetsch and Thaler (1986) showed that consumers may deem firms' rational, profit-maximising actions to be unfair, which can negatively impact profits. We have seen a rise in firm's efforts to portray themselves as good. An important question then is whether having a good reputation can moderate people's perceptions of a firm or individual when they engaged in an economic behaviour that is generally regarded as unfair?

Our experimental manipulation relies on the dual processing model of moral decision making (Greene et al, 2004; Greene & Haidt, 2002). The description of the agent as good or bad should induce an emotional reaction that we hypothesise will moderate how fair or unfair actions are judged to be. We also explore whether this differs depending on the gender of the agent (the person performing the action) and the judge (the participant).

We conducted a between-subjects online study (n = 1658). Each participant was presented with a situation involving an economic exchange and was asked to judge, on a 7-point scale, how fair or unfair they thought it was. We manipulated whether or not participants read a description of the agent. If they did, we varied whether or not this description was positive, and the gender of the agent (Laura vs. Paul).

Describing the agent had an effect on people's judgements of their actions, but only if the agent was a woman described as a good person (p -value $< .05$). On average, their actions were considered 0.533 points fairer, compared to the no-description group. Actions by all male, and bad female agents were not judged significantly differently than those by non-described agents. Further, we found no interaction effects of the genders of the judge and the agent.

Arroyos-Calvera, Danae

"Discounting Conditional Risk Sequences: An Experiment"

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Time discounting for monetary outcomes (e.g. Frederick et al., 2002) and non-monetary outcomes such as health (e.g. Irvine and Van der Pol 2018) has received considerable attention. In both of these literatures, the outcome in the future will typically materialise with certainty or will be determined by a one-time only uncertainty resolution. Less is known about discounting when receiving the outcomes depends on a series of conditional

probabilities that extend into the future. This type of future conditional risk distribution underlies some important policy applications, including the generation of increases in life expectancy through reductions in air pollution, or increased road safety. In such cases, the benefits are accrued sequentially, through increased conditional probability of survival in each period. That is, the improvement in life expectancy resulting from increased chances of survival in one's sixties can only be enjoyed if one has survived up to that period. Another example would be success in university courses where success in stage 3 is conditional on passing stages 1 and 2.

We have designed an experiment where participants will face a distribution of conditional probabilities of winning a monetary prize on 4 different occasions over 12 weeks. We will offer improvements to this probability distribution with the same gain in expected value but through different perturbations of the conditional risk distributions. Following Nielsen et al. (2010), we will elicit participants' preferences between the different perturbations. The data will reveal how people discount the potential outcomes: their preferences over the distributions, their discount rates, the functional form of the discount function, and the relationship between these three. We study time discounting for outcomes that depend on a sequence of conditional probabilities. Our participants make repeated choices, spaced in real time, over conditional probabilities of winning money, mirroring the temporal structure of some important real world probability distributions.

Artinger, Florian

"Recency: Prediction with one data point"

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Since the early 1910s, managers have used a simple recency-based decision strategy, the hiatus heuristic, to identify valuable customers. This study analyses the predictive power of this heuristic using a library of 60 data sets from business and other areas including weather, sports and medicine. We find that the heuristic can outperform complex statistical algorithms such as random forest, linear regression and stochastic models in many of these environments. Moreover, including further variables apart from recency in complex models does not improve their aggregate performance enough to beat the heuristic. We analyze factors affecting the relative accuracy of these methods and show that the results are not so much driven by limited sample sizes rather than by the dominant role that recency plays in most of the environments.

Ashby, Nathaniel

"The consistency of visual attention to losses and loss sensitivity across valuation and choice"

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Sensitivity to losses has been found to vary greatly across individuals. One explanation for this variability is that for some losses garner more visual attention and are subsequently given more weight in decision making processes. In three studies we examined whether biases in visual attention towards potential losses during valuation and choice were related to loss-sensitivity, as well as the valuations provided and the choices made. In all studies we find a positive relationship between estimated loss-sensitivity and attention to losses for

valuation, with increased attention to losses predicting decreased valuations. For choices, however, there was no robust relationship between attention and loss-sensitivity or the choices made. In addition, preferences were not strongly consistent across tasks (i.e., valuations and choices did not robustly align), nor was the distribution of attention robustly related across tasks. Study 3 involved testing across separate sessions and found significant consistency in loss-sensitivity and attention to losses across sessions for both choice and valuation. In sum, it appears that loss-sensitivity varies across individuals, is differentially related to attention across tasks, and shows some consistency across time. Attention to losses also shows consistency across time, and its relationship with valuations appears much more robust than with choices; patterns of results which add to research suggesting that different cognitive processes underlie valuations and choices.

Attema, Arthur

"QALYs for you and me: A comparison of individual and collective decision making for standard gamble and time trade-off"

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Quality-Adjusted Life-Years (QALYs) are typically derived from individual preferences over health episodes. This paper reports the first empirical investigation into the effects of collective decision making on health valuations, using both time trade-off (TTO) and standard gamble (SG) tasks. We investigated collective decision making in dyads, by means of a mixed-subjects design where we control for learning effects. Our data suggest that collective decision-making has little effect on decision quality, as no effects were observed on decision consistency and monotonicity for both methods. Furthermore, QALY weights remained similar between individual and collective decisions, and the typical difference in elicited utilities between TTO and SG was not affected. These findings suggest that consulting with others has little effect on health state valuation, although learning may have. Additionally, our findings add to the literature of the de-biasing effect of collective decision-making, suggesting that no such effect occurs for TTO and SG.

Ayal, Shahar

"The shared misery effect: When more harm is judged to be less harmful"

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This study explores a bias in moral judgment in which the perceived severity of harm is reduced merely by knowing there are other victims, even when no actual benefits are embedded in their existence. This effect, termed the "shared-misery effect" is found in judgments of uninvolved parties as well as the victims themselves. In three experimental studies, we report this effect across several types of harm and point to the role of perceiving the harm as personally-targeted in explaining this bias. In one study using the Cyber-ball paradigm, the participants experienced one of two ostracizing conditions: either alone, or with another 'player'. After the game, their severity judgment of the ostracism and their interpretation of the ostracism were measured. A single ostracized victim was associated with harsher judgment (compared to two such victims), and this judgment was fully mediated by perceiving the act as personally targeted. In the other two studies, we illustrate

the heuristic nature of the process of harm judgment, by showing that when (other) relevant information is accessible to the judge, the shared-misery effect is eliminated or even reversed.

Ayton, Peter

“Seeing red: How the Colour Red Affects Economic Evaluations”

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The so-called “red-effect” refers to the observation that the colour red induces a different affective response than other colours – e.g. people are perceived as more attractive when wearing red. Red is also associated with heightened anxiety. Across a range of sports, wearing red is associated with a higher probability of winning. The colour red also has an effect on willingness-to-pay in auctions and negotiations. Published studies show that a red (vs. blue) background elicits higher bid jumps in eBay auctions. By contrast, red (vs. blue) backgrounds decreases price offers in negotiations.

In two studies we find effects of the colour red on economic evaluations. Following Rottenstreich and Hsee’s (2004) observation that, when emotionally primed, people show reduced scope sensitivity when valuing varying numbers of items, we hypothesised that the presence of the colour red will similarly reduce scope sensitivity when compared to other colours. This experiment confirmed the hypothesis – for example, the price difference for a set of six teacups and saucers compared to a set of twelve teacups and saucers was significantly smaller when the teacups and saucers were shown on a red background compared to other colours.

We also report a field study of economic decisions in “Bargain Hunt” – a TV game show where two pairs of contestants compete to make the greatest profit in an auction room for antiques. The winning team is the one making the most profit (or least loss). One team is always dressed in red the other team is always dressed in blue. We found that the red team achieved significantly higher profits.

We conclude that the colour red has an effect on economic decisions via increased emotional arousal.

Azar, Ofer

“Do fixed payments affect effort? Examining relative thinking in mixed compensation schemes”

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Several earlier studies have shown that people exhibit “relative thinking”: they consider relative price differences even when only absolute price differences are relevant. The article examines whether relative thinking exists when people face mixed compensation schemes that include both fixed and pay-for-performance components. Such compensation schemes are prevalent in many occupations (e.g., salespeople and managers) and therefore are an important practical issue. Surprisingly, the ratio between the pay-for-performance and the fixed compensation does not affect effort, meaning that no relative thinking is found. Another experiment shows that this is not due to reciprocity that cancels out relative thinking. In a

third experiment subjects make similar decisions without incentives and the results suggest that the different context (compensation schemes instead of price comparisons) and not the introduction of financial incentives (which were not used in previous studies) is the reason that relative thinking disappears. The results have implications for designing incentive schemes in firms and for designing experiments.

Azar, Ofer

“Relative thinking with substitute goods: Does it exist with real choices?”

E-mail: azar@som.bgu.ac.il

This research examines whether in the context of product differentiation people exhibit "relative thinking," i.e., are affected by relative price differences even when only absolute price differences are relevant. This research is important because people frequently compare prices of alternative goods, and therefore their comparison behavior has important implications for economic theory, advertising, marketing, pricing, etc.

Subjects were asked (in an incentivized manner) to indicate for 11 different pairs of goods, given the price of one good, what is the maximal price of the other good for which they would prefer the latter. In two between-subject treatments, the reference prices of the good differed. If subjects exhibit relative thinking, then those who receive a higher good's price will also be willing to pay more (or require a higher discount) for the constant quality difference between the goods. In addition, in each pair of goods, some subjects received the price of the low-quality good ("willingness to pay" (WTP) treatment) whereas some received the price of the high-quality good ("willingness to accept" (WTA) treatment).

In the WTP version, no relative thinking was detected. In the WTA version, relative thinking was documented in all cases. The suggested explanation for this pattern is that people are affected by two biases:

1. Relative thinking. They are willing to pay more for a constant improvement in quality when the product's price is higher because they consider the addition also in percentage of the price. This is stronger when the goods are more similar.

B

Baars, Maren

“The Processing of Weight and Strength in Different Information Environments”

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Experimental evidence by Griffin and Tversky (1992) shows that subjects tend to underreact towards information weight while they focus too much on information strength. We show that this finding crucially depends on the specific decision setting and does not universally apply to other reasonable information environments. First, we theoretically derive that the setting of Griffin and Tversky (1992) can be considered as an extreme case with respect to the normative relevance of weight and strength. Second, we conduct an experimental analysis in which we vary the information environment to explore how it influences the pattern of

over- and underreaction towards information. Our results point out that there is no general weight-strength bias. Instead, subjects show both over- and underreaction towards information weight as well as towards information strength, depending on the specific information environment. Given that many real world information environments do not resemble the information scenario considered by Griffin and Tversky (1992), our findings caution against an indiscriminate transfer of their findings to a broad set of real world applications.

Bago d'Uva, Teresa

“A new decomposition of accuracy of subjective probabilities with an application to longevity expectations”

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Subjective probabilities of future life events such as survival to a particular age (SSP) are now elicited in many population surveys, such as the Health and Retirement Study in the US (HRS) but very little is known about their accuracy. In a previous paper, we showed high degrees of inaccuracy, particularly for the lower educated and less cognitively able.

We now introduce a new method that decomposes the mean squared error - Brier score - into: i) bias, ii) discrimination, iii) outcome uncertainty, iv) pure noise, v) inappropriate weighting of observed cues and vi) private information on unobserved cues. We explain differences in accuracy of SSP by educational attainment in the US, by comparing subjective probabilities of survival to 75 with the actual outcome. We find great inaccuracy - Brier score larger than 0.25, worse than if everyone reported a fifty-fifty chance - and more so for the least educated. This is partly due their facing greater uncertainty, because of higher mortality rates. But it is also because their predictions are much noisier, suggesting lower ability to form beliefs.

SSP have some, but low, discriminatory power - the average subjective probability of survivors is 10 pp higher than that of the deceased - partly due to inappropriate weighting of (insufficient responsiveness to) cues, including disease (cancer, lung, stroke, etc.), smoking and body mass index. The higher educated underestimate mortality risks but the lower educated do so by about twice as much.

While containing valuable private information, SSP are much less accurate than predictions obtained by regressing them on the cues. This is because the gain from reduced noise is much greater than the loss of private information - for all groups but especially for the lower educated.

Bahník, Štěpán

“Selection effects on dishonest behavior: Do experiments on dishonesty have external validity?”

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Most experimental studies of dishonesty examine factors that influence the rate of dishonest behavior. In the real world, people differ not only in the tendency to behave dishonestly when given a chance, but also in the tendency to seek opportunities for

dishonesty. Self-selection of dishonest people ensures that in an environment that allows cheating, individuals will usually cheat to the maximum, even if the rate of cheating appeared lower in an experiment with a random assignment of participants. In a laboratory experiment, we examined the effect of the possibility of selection of a task giving an opportunity to cheat to earn additional money on the rate of cheating.

Participants (N = 315) earned money when they correctly predicted whether the outcome of a fair die roll would be odd or even. In one version of the game no cheating was possible while in the other version participants could cheat to gain money. After going through both version of the game, a half of the participants was randomly assigned one of the versions for the third round. The remaining participants chose if they wanted to play the last round in one of the versions, or if they wanted to have one of the versions assigned to them at random.

The participants who chose the version enabling cheating (26 %) cheated more than those who were assigned it at random. Furthermore, they cheated more than other participants even during the first time they went through the task and they cheated even more after the choice.

The results suggest that the existing studies of dishonesty might underestimate the rate of cheating in the real world, where people can usually choose not only whether to cheat when they have an opportunity, but they might also choose to actively seek the opportunity.

Baillon, Aurelien

“A behavioral decomposition of willingness to pay for health insurance”

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Despite widespread exposure to substantial medical expenditure risk in low-income populations, health insurance enrollment is typically low. This is puzzling from the perspective of expected utility theory. To explain it, this paper introduces a decomposition of the stated willingness to pay (WTP) for insurance into its fair price and three behavioral deviations from that price due to risk perceptions and risk preferences consistent with prospect theory, plus a residual. To apply this approach, we elicit WTP, subjective distributions of medical expenditures and risk preferences (utility curvature and probability weighting) from Filipino households in a nationwide survey. We find that the mean stated WTP of the uninsured is less than both the actuarially fair price and the subsidized price at which public insurance is offered. This is not explained by downwardly biased beliefs: both the mean and the median subjective expectation are greater than the subsidized price. Convex utility in the domain of losses and the transformation of probabilities into decision weights both push mean WTP below the fair price and the subsidized price. WTP is reduced further by factors other than risk perceptions and preferences.

Ballová Mikušková, Eva

“Rationality and conspiracy beliefs in Slovak population – typology”

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The main aim was to make typology according to participants' rationality and conspiracy beliefs. In the sample of 470 participants there were identified (cluster analysis) three main

types of people: rational skeptics (n=138), non-rational skeptics (n=220) and non-rational believers (n=112).

Barrafrem, Kinga

"Mental coding of outcomes in monetary and social contexts"

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Outcome editing is a set of rules that describe how individuals mentally code multiple outcomes. They can be segregated, i.e., evaluated separately, or integrated, i.e., evaluated jointly. However, do individuals use the same editing rules for monetary outcomes (e.g., consumer purchases) and for social outcomes (e.g., weekend trip with friends)? This question is investigated using a large-scale online survey with a sample of the Swedish population (n=2063). The findings show that the editing of monetary outcomes differs from the editing of social outcomes. For example, while individuals prefer to integrate monetary losses with gains to reduce or cancel the pain of a loss, they prefer to segregate social losses from gains. Our findings help explain why sometimes the choices involving social outcomes differ from the choices involving monetary outcomes.

This study investigates how individuals mentally code multiple outcomes. They can be evaluated separately or jointly. Do individuals use the same editing rules for monetary and social outcomes? Using a large-scale survey we find that mental coding differs between contexts.

Baumann, Christiane

"A Linear Threshold Model for Optimal Stopping Problems"

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In an optimal stopping problem, people encounter a sequence of options and are tasked with choosing the best one; once an option is rejected, it is no longer available. The optimal solution is to choose the first number that is above a threshold that depends upon the current position in the sequence. Recent studies suggest that people's behavior in sequential search tasks is best described by a threshold strategy but that their thresholds deviate from the optimal policy. We suggest that humans adapt their thresholds linearly, motivated by findings that adults and children tend to use linear functions to approximate more complex functions. We tested this hypothesis in an online ticket shopping task and compared people's strategy between three models that define how thresholds are generated. We show that linear thresholds provide the best account of the data. To replicate our results and to test whether we can predict how participants adapt to different environments we conducted a second experiment, in which we manipulated the distributions of ticket prices across three conditions (scarce: left skewed, normal, plentiful: right skewed). The linear threshold model captures participants' data accurately in all three conditions whereby the slope is adjusted to the environmental structure of the task. As predicted by the linear model, participants search longer in the plentiful than in the scarce environment. Overall, our work provides evidence that humans use linearity as a mental shortcut in optimal stopping tasks – understanding this heuristic enables predicting which environmental structures facilitate

or impair human performance, providing a step towards a more complete theory of optimal stopping.

Bavolar, Jozef

“Decision-making styles in the goal-attainment process”

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Decision-making styles have been found to be related to a variety of decision outcomes inspected generally or in specific areas such as mental health or school achievement. This has predominantly been done without considering the processes of implementing these ways of decision-making into specific behaviour. The present research tries to identify the role of these styles as a stable characteristic in selected aspects of goal-related variables as the presumed mechanism of coming to adaptive decision outcomes. 157 students completed a battery of measures which examined their decision-making styles and indecisiveness as ways of making decisions. They indicated their most important personal goal and were asked for selected characteristics – progress in its attainment, type of motivation, positive and negative emotions related to the goal and monitoring of progress in goal attainment. The correlation analysis indicated that the two most prominent decision-making styles – rational and intuitive – are mainly related to monitoring one’s own progress in goal attainment. The avoidant style and indecisiveness as similar constructs are negatively associated with the goal’s characteristics – progress, self-concordance (dominance of internal motivation), effort and positive emotions, while positively with the negative emotions. On the other hand, decision-making styles were not able to explain the additional variance in goal progress and goal effort over and above the goal characteristics. Indeed, only indecisiveness added a significant explained variance in effort. The study calls attention to the role of decision-making processes in goal-striving behaviour although the first results indicate a more significant role of goal-related variables than stable decision characteristics.

Becker, Tom

“Prevention by Intervention: how to achieve vision zero in aviation”

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This research shows that future accident prevention in aviation depends mainly on the decision-making and intervention behavior of pilots and highlights current barriers and chances for achieving zero fatalities in aviation.

Bertani, Nicolò

“Fast and simple elicitations using an adaptive procedure: application to probability weighting”

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We devise a fast and simple procedure for real-life elicitations in decision under risk. The procedure is adaptive, modular, and choice-based. We show its real-life applicability by eliciting the probability weighting function under the dual theory of Yaari (1987).

We validate our procedure with a lab experiment: with unsupervised participants, our procedure grants parsimonious questioning and short interview time. Our results show

consistency with the literature at both individual and aggregate levels. Additionally, we find that standard parametric forms return shapes that violate underlying preferences in the majority of instances. Violations occur for a plethora of functional shapes, and display systematic dependence on the location in the probability interval. We conclude that standard forms with global parameters come at an unexpected descriptive price that needs to be considered going forward.

Bertani, Nicolò

“Ambiguity and depletion in environmental choices.”

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The environmental consequences of our actions are plagued by uncertainty: their severity, likelihood, and time horizon are deeply ambiguous.

We devise a lab experiment to study the differential role of attribute ambiguity and depletion in environmental choices.

Bhatia, Sudeep

“Semantic representations extracted from large language corpora predict high-level human judgment in seven diverse behavioral domains”

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Recent advances in machine learning, combined with the increased availability of large natural language datasets, have made it possible to uncover semantic representations that characterize what people know about and associate with a wide range of objects and concepts. In this paper, we examine the power of word embeddings, a popular approach for uncovering semantic representations, for studying high-level human judgment. Word embeddings are typically applied to linguistic and semantic tasks, however we show that word embeddings can be used to predict complex theoretically- and practically relevant human perceptions and evaluations in domains as diverse as health behavior, risk perception, organizational behavior, social cognition, and marketing. By learning mappings from word embeddings directly onto judgment ratings, we outperform a similarity based baseline as well as common metrics of human inter-rater reliability. Word embeddings are also able to identify the concepts that are most associated with observed perceptions and evaluations, and can thus shed light on the psychological substrates of judgment. Overall, we provide new methods and insights for predicting and understanding high-level human judgment, with important applications across the social and behavioral sciences.

Bhatia, Sudeep ||| Nr + Naam spreker: 23 He, Lisheng

“The Wisdom of Model Crowds”

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Risky choice is one of the most extensively studied domains in behavioral decision research. Over the last 70 years, numerous experiments have revealed the shortcomings of expected value and expected utility theories. In response, dozens of distinct behavioral theories have been advanced to account for observed behavioral patterns. However, there is little consensus regarding which of these models offers the best account of behavior, and it is

unclear how we can combine these models to obtain novel descriptive and predictive insights regarding risky choice. In this paper we offer two solutions to this issue. First, we conduct a large scale comparison of 58 prominent models of risky choice, using nine existing behavioral datasets. This allows us to comprehensively evaluate numerous models in terms of their performance on the individual level across a range of different experimental designs. Second, we show that each of the existing models can be seen as an “expert”, which provides a unique opinion in a choice prediction problem, and that crowds of risky choice models can perform better than individual models alone. This suggest that different choice models may capture different aspects of the decision process and that the numerous existing models can be seen as offering complementary rather than competing accounts of individual choice behavior.

Białek, Michał

“Inducing feelings of ignorance makes people more receptive to expert opinion”

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People don't respond more to experts than to fellow lay people (Johnston & Ballard, 2016). We sought to better understand the factors that make it more likely that people will revise their beliefs in response to expert vs. public opinion. We hypothesized that exposing an illusion of explanatory depth would lead to more belief revision to experts. We found that after exposure, expert opinion was more influential than public opinion. Our results suggest that experts may not be afforded privilege of opinion in their own domains over the public because people think they know more than they do.

Bjälkebring, Par

“Objective Numeracy and Life Satisfaction: Ignorance is Not Bliss.”

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Core to research in decision making has been to find determinants of better decisions that can lead to better life outcomes and, ultimately, to being satisfied with one's life. This topic has attracted attention in psychology and in economics, sociology, and health sciences. Research regarding how cognitive abilities shape decision making and life outcomes has demonstrated that one important factor is objective numeracy, the ability to understand and use mathematical concepts. Important decisions often contain numeric information, and objective numeracy has been related to higher quality decisions and superior financial and health outcomes. However, little research has examined whether numeracy-related outcomes, in particular, are related to increased overall life satisfaction and life-domain satisfaction. We investigated numeracy's relationship to life satisfaction overall and in five domains (health, income, work, family, and friends) in a diverse sample of 5,748 American adults. Consistent with numeracy-related outcomes in the literature, greater objective numeracy was directly related to higher satisfaction with health, income, and work (but not family or friends). Further, objective numeracy was an important predictor of higher yearly income, and it had a positive indirect effect, through yearly income, on general life satisfaction as well as satisfaction with health, income, work, family, and friends. Results held when controlling for education, verbal logic, age, gender, and personality (Big 5). These

results suggest that greater numeracy may lead to better decision-making ability, and, in turn, to better life outcomes and higher levels of life satisfaction.

Blaywais, Reut

"The impact of personal reward on the economic value of moral judgment towards immoral behavior"

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The purpose of this study is to examine moral judgment towards a person who behaves immorally and the willingness to exercise economic punishment against him. By using the method of rolling a cube and self-reporting on the result, the study examined the effect of personal rewards on the judges, as a function of the perceived motive for the behavior. The study showed that when people benefit from someone else's inappropriate behavior, they do not judge it theoretically as less immoral, but, practically, in terms of the economic value of moral judgment, people have expressed more leniency in the immoral act when they themselves have also been rewarded. The degree of personal morality moderates this phenomenon. When people benefit from someone else's inappropriate behavior, they do not judge it theoretically as less immoral, but, in practice, they have expressed more leniencies when they themselves have also been rewarded. The degree of personal morality moderates this phenomenon.

Bleichrodt, Han

"Measuring Beliefs under Ambiguity"

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This paper presents a simple method to measure the beliefs of a decision maker with non-neutral ambiguity attitudes. Our method require three simple measurements, it is incentive-compatible, and it allows for risk aversion and deviations from expected utility, including ambiguity aversion. An experiment using two natural sources of uncertainty (temperature in Rotterdam and in New York City) showed that the estimated beliefs were well-calibrated, sensitive to the source of uncertainty, and similar to the beliefs that were estimated by more sophisticated but time consuming methods.

Böhm, Robert

"How Defaults Shape War and Peace"

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A remarkable feature of violent intergroup conflict throughout human history concerns its apparent tendency to perpetuate itself. To understand what makes intergroup conflict such a sticky problem, we build on interdisciplinary insights concerning the power of defaults to shape human behavior. We propose that intergroup aggression is more likely when it is presented as the default than when either peaceful coexistence or selfishness are presented as defaults. We conducted three experiments (overall N = 1,507) to test our hypotheses. Experiments 1 and 2 used incentivized economic games between teams of decision makers, and demonstrated that individuals' propensity to invest their resources in any behavioral alternative increases substantially when that behavioral alternative is presented as the default. These findings generalized across different social identities and

across different levels of identification with the group (preregistered Experiment 2). Finally, these findings also generalized to policy recommendations for governmental spending (preregistered Experiment 3).

Bolger, Fergus

“Producing and Evaluating Structural Models in a Delphi Process”

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Bayes Nets (BNs) have proved useful for supporting causal modeling in many real-world applications, but their potential has been limited since users must have significant normative knowledge. Further, in our sponsor's domain – military intelligence – analysts usually work in teams, so we need to implement group decision support, yet there is a lack of validated methods or software supporting group collaboration on BNs. Consequently, we are developing a web-based structured technique – Bayesian Argumentation via Delphi (BARD) – to permit groups of domain experts with minimal normative training to produce high-quality BNs. BARD seeks to harness the power of multiple perspectives on a problem, while minimizing biases of freely interacting groups, through a Delphi process: solutions are first produced individually, then shared, followed by an opportunity for individuals to revise their solutions. To test the hypothesis that BNs improve as the result of Delphi, we conducted an experiment where individuals, with a small amount of BN training and practice, produced a structural model using BARD for each of 2 Bayesian-reasoning problems. Participants then received 6 other structural models for each problem, rated their quality on a 7-point scale, and revised their own models if they wished. Both revised models and top-rated models were on average significantly better quality (against a gold-standard) than the initial, individually-produced models. We therefore conclude that BARD has potential to improve the quality of BNs produced by groups. Further, since there was no significant difference in the quality of group models selected by rating or revision, it is proposed that the former rather than the latter is used in future BARD implementations, as it is quicker and easier.

Bonder, Taly

“Complexity and simplification in decision from experience”

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In many natural settings people can make decisions based on their past experience in similar situations, and also by relying on cognitive rules that accumulate experiences over situations. Cognitive rules have two important advantages: they summarize the data, minimizing cognitive effort, and facilitate use of more data. Nevertheless, in certain settings people behave as if they rely on past-experience sampling, even when it is easy to find simple rules that maximize performance (Plonsky, Teodorescu & Erev, 2015). In other settings people appear to favor simple cognitive rules (Payne, Bettman & Johnson, 1993; Gigerenzer, 2007). The current research tries to clarify the conditions under which people tend to rely on past experience or use simple rules by exploring multi-cue decisions based on feedback. Study 1 examined a situation in which cognitive 'take the best' rule maximized earning while reliance on sampling of past experience impaired performance. It was found that majority of participants relied on small samples of past experience rather than using

'take the best' rule. Study 2 compared three conditions in which sampling of past experience optimized performance. In two of the three conditions, past experience sampling was consistent with the prediction of cognitive rules: 'take the best' and 'majority rule' - this consistency was found to optimize performance. Study 3 examined decision making in a stochastic environment in which the optimal strategy was 'weighted additive rule'. The results of this study present the boundary conditions of past experience sampling strategy.

Borsboom, Charlotte

"What makes a price path risky?"

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We examine the influence of financial price path characteristics, as frequently used in newspapers and online sources, on investors' perceived risk, return beliefs and investment decisions. To this end, we use a series of survey experiments in which participants (including actual investors) are presented with different price patterns. First, we demonstrate that risk perception can be significantly different for price paths with the very same daily and monthly returns (depending on their order), concluding that historical volatility is not the only driver of risk perception. Furthermore, we identify the most important price path drivers for risk perception, and our findings reveal that it is mostly influenced by salient features such as highs, lows and the existence of crashes. Return forecasts are influenced by past final returns and the most recent price trends. Perceived risk and return beliefs are a strong predictor of investment decisions. Our results add to the understanding of investors' perception and beliefs, and point at biases in decision-making and dependence on presentation formats.

Bosworth, Steven

"Organizational ethics, narratives and social dysfunctions"

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The paper explores the joint determination of economic output, wages, corporate culture, employees' ethical standards and monitoring intensity in an analysis of organizational dysfunction. The utility from economic activities can frequently be enhanced through unethical, socially harmful activity, such as corruption, sexual harassment and environmental degradation. The ethical sensitivities of managers and their employees are shaped through their social interactions and thus organizational dysfunctions can arise. Such dysfunctions may be mitigated through changes in government policies or social norms. These changes become particularly effective if they encourage the managers and employees to adopt more ethical narratives. This narrative shift gives the managers and employees more ethical objectives, guiding their economic behaviors. The more ethical objectives induce them to adopt even more ethical narratives, and so on, in a virtuous circle that promotes social welfare. The paper explores the joint determination of economic output, wages, corporate culture, employees' ethical standards and monitoring intensity in an analysis of organizational dysfunction. The utility from economic activities can frequently be enhanced through unethical, socially harmful activity, such as corruption, sexual harassment and environmental degradation. The ethical sensitivities of managers and their employees are shaped through their social interactions and thus organizational

dysfunctions can arise. Such dysfunctions may be mitigated through changes in government policies or social norms. These changes become particularly effective if they encourage the managers and employees to adopt more ethical narratives. This narrative shift gives the managers and employees more ethical objectives, guiding their economic behaviors. The more ethical objectives induce them to adopt even more ethical narratives, and so on, in a virtuous circle that promotes social welfare.

Boyle, Peter

“Store Brand vs. National Brand Prices: Willingness to Pay ≠ Willingness to Accept”

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Two approaches for eliciting consumers' price preferences for store brands were tested to determine if estimates based on willingness-to-accept (WTA) converge with those of willingness-to-pay (WTP). As predicted, WTA price estimates exceeded those of WTP even controlling for quality differences.

Brandstätter, Eduard

“How Good are Choice Heuristics?”

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Previous research (Payne, Bettman, & Johnson, 1993; Thorngate, 1980) investigated the efficiency of choice heuristics in comparison to expected value theory. In these computer simulations decision strategies were applied to error free data, characterized by full outcome and probability information. In this research we test the efficiency of various risky choice heuristics in comparison to expected value theory in environments with noisy data. To this end we make use of the decision-from-experience paradigm. For the computer simulations we implemented twenty different choice environments, which were created by combining five monetary outcome distributions (rectangular, normal, exponential, Cauchy, lognormal) with four different probability distributions (rectangular, U-shaped, exponential, skewed). Each of the 20 environments contained 6.000 different decision problems, in which the following five decision strategies: expected value theory, the equiprobable, probable, lexicographic, and the least-likely heuristic, made 50 choices per decision problem. We found that the equiprobable heuristic performed particularly well and its performance fell short of only 3.4% compared to expected value theory. When outcome and probability distributions were drawn from rectangular distributions, the equiprobable heuristic even outperformed expected value theory, when information was scarce (i.e., after 5 draws for each gamble). Our results suggest that heuristics might not be chosen because of cognitive limitations or effort-minimization, but because they are actually better.

Brettschneider, Julia

“Perspectives on decision trees under uncertainty”

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We introduce the perspectives-on-a-tree model, a mathematical framework for multi-period decision processes incorporating subjective aspects of several decision makers. Each individual is equipped with a subjective perspective consisting of knowledge, utility,

outcome distribution and awareness windows capturing the depth of memory and the degree of foresight employed in that individual's decision making.

To model the simultaneous presence of several decision makers in the same decision node, we introduce influence, a generalized notion of ownership. It assigns a probability distribution of decision ownership to each node, allowing a broad class of social choice rules, ranging from weighted contributions (such as in compromises) to probabilistic selections of one dominant opinion. The latter is applicable even when the choice set lacks algebraic structure, as in some categorical examples, or when choices are incommensurable. Games with both deterministic and probabilistic player assignment are included in this framework, using Dirac measures to describe full control by one decision maker.

Our perspectives-on-a-tree model subsumes a broad range of decision rules, including EUT, prospect theory, regret theory and worst case analysis. We understand deviations from rationality w.r.t. a subjective utility and perceived outcome distribution, and introduce a quantitative score in place of the standard binary score.

Applications of our theory arise naturally in processes involving multiple decision makers (both humans and nature) with different perspectives and evolving roles. For example, acceptance of conditional offers, individual trading behaviour, shared decision making in clinical practice, and complex diagnostic processes (e.g. genetic screening for diseases and ancestry).

Bruine de Bruin, Wandí

"Age differences in anticipated emotions for future life events"

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People of all ages face decisions about their future, which involves anticipating emotional responses to events that are yet to occur. Studies with college students have shown relatively strong anticipated emotional responses to future life events, but adult age differences have been unexplored. We recruited a national UK life span sample (N=2089) to examine age differences in anticipated emotions for future life events of negative, positive, or undefined valence, and in strategies for regulating those emotions. Older adults anticipated less negative emotions than younger adults independent of event valence, but we found no age differences in anticipated positive emotions. Reports of anticipated negative and positive emotions suggested that participants expected to feel better after positive (vs. undefined) and worse after negative (vs. undefined) events. Older adults reported engaging more in functional emotion regulation strategies (e.g., savoring), and less in dysfunctional ones (e.g., brooding). The tendency to savor positive aspects of the future was the main driver of anticipating less negative and more positive emotions. Our findings align with theories of aging suggesting that older adults report better well-being and better emotion regulation, and have implications for helping adults of all ages to manage their anticipated emotions when making decisions about the future.

Budescu, David

"The Wisdom of Forecasting Teams"

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A surprising result of some recent large-scale geopolitical forecasting tournaments (Mellers et al., 2014) is that small, collaborative teams were, on average, more accurate than individuals working alone. This result seems to contradict the well-known "wisdom of crowd" thesis that emphasizes the importance of independence among forecasters. We study ways to take full advantage of this and boost this beneficial "teaming effect" by answering the following question: If one has access to n forecasters, is it better – in terms of overall engagement and accuracy – to divide forecasters into many small teams or create new teams from the smaller teams? We re-analyzed data from teams and individuals who participated in Year 4 of the ACE forecasting tournament, as well as data from a new experiment that manipulated systematically team size. Smaller teams ($n=5$) were more active than larger teams ($n=15$), but larger teams were more accurate. We compared the performance of the original teams, with nominal teams using aggregates of teams based on a similar number of randomly selected individuals, and a new form of teams called recombined teams that aggregate the forecasts of random subsets of team members from the original teams (or, in some cases, merge several smaller teams). The recombined teams performed best, as they matched the activity level of the smaller teams and the accuracy of the best larger teams. We conclude that, if one has access to n forecasters, is it best to assign them into relatively small original teams, and generate aggregate forecasts based on the recombination of subsets of their members.

Mellers, B. A., et al. (2014). Psychological strategies for winning a geopolitical forecasting tournament. Psychological Science, 25, 1106–1115.

Burdea, Valeria

"Communication with sucker and lying aversion"

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We investigate the effect of cheap talk in sender-receiver games where the sender wants the receiver to always take the same action, irrespective of the state of the world. These games model many economic situations such as investment, voting or purchase decisions. We consider environments where the interests of the players are either more likely aligned, or more likely conflicting. Using a simple theoretical analysis we show that communication can harm in settings where a conflict of interests is less likely. This is due to increased skepticism resulting from receivers' aversion to being deceived ("sucker aversion"). However, when interests are more likely conflicting, communication helps due to senders' lying aversion. We run experiments to test these predictions and find that communication has a significantly positive effect on payoffs when interests are more likely conflicting. This cannot be explained by lying aversion only; efficiency concerns seem to also matter. On the other hand, when interests are more likely aligned, communication does not significantly increase receivers' skepticism and it does not affect payoffs. This is at odds with the results of Ert et al. (2014).

Burro, Giovanni

“Sky's the limit: an empirical investigation of maximum price and its effect on regret and trading decisions.”

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We carry out an empirical test of Regret Theory in dynamic financial decisions, using trading data from the LDB dataset (Barber and Odean, 2013). Following theoretical predictions and a laboratory test of Strack and Viefers (2017, SV), we apply their approach to field data. In their work, SV show that the optimal strategy for an Expected Utility maximiser is to stop at a threshold. This implies that investors would not sell a stock at a price already seen. SV also claim that regret increases with distance between the running maximum price over the whole investment period and the current price, and that regret inhibits selling. Subjects do not follow threshold strategy in a laboratory setting.

Focusing on trades which span less than a year, we find that most of our sample investors do not follow a threshold strategy. We check if investors follow a threshold strategy in the gain and in the loss domain. We check if investments and individual features influence the propensity to follow it. Our main finding in this section is that longer trades are associated with a lower consistency with a threshold strategy both in the gain and in the loss domain. Investors probably gamble for rebound of the stock. We control for differences due to age, category of investor and type of bank account, too.

Most importantly, we analyse the impact of maximum price level and temporal distance from the maximum on the propensity to sell a stock for a gain. We find that investors are more likely to sell a stock when temporally closer to the maximum and when the price is further from the running maximum. The effect of temporal distance is the most relevant in shaping regret, with respect to the effect of price distance.

We find that traders do not follow a threshold strategy. We find that investors are more likely to sell a stock when temporally closer to the maximum and when the price is further from the running maximum.

C

Caserotti, Marta

“The Impact of Experiencing Money Versus Time Scarcity on Tradeoffs”

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Even if most prior work has investigated the effects of money and time scarcity separately, similar effects have been observed. This research investigates the potential interactive effects of experiencing money and time scarcity on tradeoffs decisions between both resources.

Čavojová, Vladimíra

“Why should we think like scientists? The role of scientific reasoning in susceptibility to epistemically suspect beliefs and cognitive biases”

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In our study we examined whether scientific reasoning skills predict people's susceptibility to cognitive biases and epistemically suspect beliefs over established cognitive predictors – cognitive ability and thinking dispositions. Participants (N = 317) filled in measures pertaining to their ability to evaluate scientific evidence, cognitive ability, and two thinking disposition scales, as well as a 34-item self-report method to measure susceptibility to epistemically suspect beliefs, and several commonly employed problems from heuristics and biases literature. Correlational analysis showed that higher scientific reasoning skills, cognitive ability, and analytic thinking dispositions were negatively related, and dogmatism positively related to the susceptibility to both epistemically suspect beliefs and cognitive biases. Regressions confirmed that scientific reasoning skills predict susceptibility to both epistemically suspect beliefs and cognitive biases over and above cognitive ability and thinking dispositions, although the overall proportion of explained variance was much higher in the reasoning performance than in the acceptance of unfounded beliefs. This is presumably because epistemically suspect beliefs are influenced more by social and personality factors, while cognitive biases seem to depend primarily on cognitive predictors. We discuss the results in the context of popular process models of the susceptibility to cognitive biases and draw practical conclusions for everyday importance of scientific reasoning skills among non-scientific folk.

Čavojová, Vladimíra

“Receptivity to non-transcendental bullshit – development of a new method”

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*We developed a scale designed to measure receptivity of bullshit (a) in a more general form (as opposed to pseudo-profound one), (b.) that is thematically positioned in a more mundane domains (as compared to spiritual context). In the first step, we generated 24 vocabulary definitions of mundane terms from various aspects of life (health, politics, etc.) together with 3 modifications of each definition: modification of form (obscureness), modification of content (untruth), modification of both. Based on the results, 13 items were chosen for the final scale. In the following study, carried out on representative sample (458 participants, 220 women, age median 28.93, SD=13.38) we validated the new measure (NBSR) created in the pilot study together with the original Bullshit receptivity scale (BSR; Pennycook et al., 2015) and host of other conceptually related measures and personality variables. Results showed high correlations between assessing BSR and NBSR items in context of truthfulness, profoundness and likeability (all r 's > .525***). The higher participants rated bullshit as truthful, profound and likeable, the more likely it was for them to believe in other epistemically unwarranted beliefs, the more ontologically confused and less cognitively reflective they were. Moreover, Agreeableness correlated with bullshit receptivity measured by BSR ($r = .106^*$) and NBSR ($r = .160^{**}$). Preliminary results suggest that we have valid measure of non-transcendental bullshit, which show meaningful relationships with*

conceptually relevant variables. Moreover, we pointed to possibility of personality factors playing role in susceptibility to bullshit.

Chacon, Alvaro

“Algorithm aversion or appreciation? A diary study”

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There is a growing body of research suggesting that, although algorithms tend to improve decision making outcomes, they are often given suboptimal weight, a phenomenon that has been termed “algorithm aversion” (Dietvorst et al., 2015). Despite the growing popularity of this idea, a recent study has found evidence for “algorithm appreciation” (Logg et al., 2018): People are more likely to use advice from algorithms than from humans. We argue that these disparate results are partly due to the cross-sectional methodology employed in these studies, which do not address how people experience the repeated interactions with these decision aids.

To overcome this shortcoming, we studied algorithm adoption in daily decisions over time. More specifically, we conducted a diary study, in which 545 participants made weather and financial predictions for 18 days based on daily advice. We used a 2x2 experimental design (advice type: human vs algorithmic; and advice quality: accurate vs inaccurate) and Experience Sampling Methodology (ESM).

We used multilevel mixed models to analyze the effect of advice type, advice quality and time (number of days) on weight of advice (WOA) using a Judge Advisor System (JAS) framework. Our results suggested that there were no initial differences across advice type conditions. However, over time, and when the advice was inaccurate (i.e., when people saw the advice fail), people heed algorithm advice decreasingly. Indeed, at day 18, the advice given the least weight was the inaccurate algorithm. In other words, failing algorithms were penalized over time, in an incremental (as opposed to discontinuous) way. This suggests that, interestingly, inaccurate algorithms are more likely to accrue a negative reputation than inaccurate humans are.

Chapman, Gretchen

“Wanting it vs. working for it: Risk preferences in choice vs. effort”

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Although overweighting of small probabilities is a key tenant of Prospect Theory, two pre-registered incentive-compatible studies demonstrate that this phenomenon manifests in choice tasks but not effort tasks. In a laboratory study, when participants chose between a small probability lottery (1% chance of \$1) and a certain amount (\$0.01), they preferred the lottery, consistent with overweighting of small probabilities. But when offered one of these two prospects as an incentive for performing a task, the certain incentive was more motivating than the lottery, demonstrating a preference reversal when comparing choice to effort. A field study using a walking task largely replicated the results: participants chose a 1% chance of \$50 over a certain \$0.50, but the certain amount was as effective as the lottery in motivating participants to walk laps. These findings indicate that overweighting of small probabilities is response specific. That is, small probabilities are overweighted in choice

tasks but not in effort tasks. We speculate that individuals dislike exerting effort for nothing, which is the frequent outcome of the lottery incentive. Overweighting of small probabilities appears to be a more narrowly defined phenomenon than previously believed.

Chaudhry, Shereen

“Thanking, Apologizing, Bragging, and Blaming: Responsibility Exchange Theory and the Currency of Communication”

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From the time we are children, we are taught to say “thank you” and “I’m sorry.” These communications are central to many social interactions, and the failure to say them often leads to conflict in relationships. Research has documented that, alongside the impact they can have on relationships, apologies and thanks can also impact material outcomes as small as restaurant tips and as significant as settlements of medical malpractice lawsuits. But, it is trivial to utter the words; how can such “cheap talk” carry so much value? In this paper, we propose a “responsibility exchange theory” that explains why these communications are not costless, and which draws connections between four forms of communication that have not previously been connected: thanking, apologizing, bragging, and blaming. All four of these communications relay information about credit or blame, and thus introduce image-based costs and benefits for both the communicator and the recipient of communication: Each of the four communications involves a tradeoff between appearing competent and appearing warm. By formalizing these social psychological insights with a cognitive approach to modeling communication, and by applying game theoretic analysis, we offer new insights about social communication. We test several of the model’s novel predictions about strategic communication in two experiments: The first involves hypothetical choices in a scenario study, and the second involves real choices in a live interaction. We end with a discussion of the theory’s place in the literature and consider extended predictions and applications as examples of future directions for research.

Chen, Jingnan

“When do men shy away from competition? An experiment on unethical conduct and competitive (dis)advantage”

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With a novel design, we study competition in an environment where the playing field is not levelled. Competitive advantage can be obtained through unethical behavior or luck. We find that men’s willingness to compete is significantly affected by the competitive environment, while women only respond to the difficulty of the task. In particular, Men are significantly deterred from entering competition if there is the possibility of disadvantage or an unloved playing field caused by unethical behavior. Finally, we find no evidence of low ability subjects using unethical means to win a competition.

Chen, Daniel

“IMPLICIT EGOISM IN SENTENCING DECISIONS: FIRST LETTER NAME EFFECTS WITH RANDOMLY ASSIGNED DEFENDANTS”

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Judges assign 8% longer sentences when they match on first initials with the defendant. The effect is consistent with self-image motivations to create social distance from negatively-valenced targets perceived to be associated with the self. The effects are larger for black defendants classified (by police) as “Negro” rather than “Black”. The first initial effect replicates for the last name, as does the difference by racial label. These results are robust to adjusting for controls including skin, hair, and eye color. Name letter effects appear for roughly all judges and amplify when the first and second letter of the name match, when the entire name matches, or when the name letter is rare.

Chen, Daniel

“Motivated Reasoning in the Field: Partisanship in Precedent, Prose, Vote, and Retirement in U.S. Circuit Courts, 1800–2013”

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We document motivated reasoning among U.S. judges. We employ a supervised learning approach to measure partisanship of text and citations of circuit court opinions. We find persistent but low partisanship of language overall, with the notable exception of civil rights and First Amendment, which liberals and conservatives have mobilized in certain periods. Citations display a significant level of partisanship and increase over time. We also document an increase in vote partisanship—dissenting only against judges appointed by the opposing party’s president. We show an increase in partisan retirement—strategically timing retirements that sclerotize the judiciary and stymie democratic churn. Finally, we show that motivated reasoning grows with judicial experience, but not age, and is more pronounced for Republican appointees.

Choshen-Hillel, Shoham

“Lying to Appear Honest”

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People try to avoid appearing dishonest. Although efforts to avoid appearing dishonest can often reduce lying, we argue that, at times, the desire to appear honest can actually lead people to lie more. We hypothesize that people may “lie to appear honest” in cases where the truth is highly favorable to them, such that telling the truth might make them appear dishonest to others. We provide evidence for our hypothesis from real-world scenarios and from behavioral lab studies. Participants who happened to drive a high mileage (according to a scenario), lied and under-reported it to avoid appearing dishonest, thereby forgoing some compensation they deserved from their company (Study 1). In a chance game involving monetary prizes in the lab, participants who had a very large number of wins (that may have seemed suspicious to the experimenter) reported fewer wins. Thus, they lied and incurred a monetary cost in order to avoid looking like liars (Studies 2a–b). Critically, we show that people’s tendency to under-report their favorable outcomes is driven by their valid concern that others would think that they have over-reported (Study 3). We discuss our findings in relation to the literature on dishonesty and on reputation.

Cohen, Doron

"Outcome Ranking Nudges: Influencing behavior without changing the outcome distributions"

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We introduce outcome ranking nudges: Gentle interventions that, without changing the outcome distributions associated with the possible actions, increase the proportion of experiences in which outcomes of the promoted behavior are ranked above the outcomes of alternative actions. While mainstream subjective weighting models such as Prospect Theory predict these nudges will not affect choice behavior, models that assume reliance on small samples suggest a large and predictable effect. We test these predictions in a pre-registered study of sequential decisions under risk. Our results show that outcome ranking nudges effectively increase over time the attractiveness of the promoted option. Our analysis suggests that the impact of these nudges can be predicted from the hypothesis that people tend to select the option that led to a better outcome in a small set of similar experiences, even when each experience represents only a single and isolated choice.

Collsiöö, August

"Intuitive Addition and Analytic Multiplication – An Investigation of Information Integration Strategy Use in Multiple Cue Probability Learning and Expected Value Contexts"

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The study investigates the assumption of additive cue integration being intuitive and multiplicative cue integration being analytical and possible explanations for discrepant findings regarding the use of additive/multiplicative integration strategies in MCPL-experiments and experiments based on expected value calculations.

Colman, Andrew

"Cooperation does not decay when the Prisoner's Dilemma game is repeated many times, and women cooperate far less than men"

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In the finite-horizon repeated Prisoner's Dilemma in which the number of rounds to be played by fixed player pairs is common knowledge in the game, rational players are bound to defect in every round, following the uniquely optimal Nash equilibrium path determined by backward induction. It is frequently claimed that experiments confirm declining cooperation over repetitions of this game, but the evidence for this is unconvincing, and a classic experiment by Rapoport and Chammah in 1965 reported, in fact, that cooperation eventually recovers if the game is repeated sufficiently often. These researchers also reported that men paired with men cooperate almost twice as frequently as women paired with women – an unexpected finding and an effect size seldom encountered in psychological studies of gender differences in behaviour. Our conceptual replication with Prisoner's Dilemma games repeated over 300 rounds with no breaks, using more advanced, computerized methodology and statistical time series analysis, revealed no decline in cooperation, apart from endgame effects in the last three rounds. We also replicated the massive gender difference, confirming, in the UK, a remarkable finding first reported in the US in the 1960s.

Columbus, Simon

“Playing a Different Game: Perceived Interdependence as a Mechanism Underlying Framing Effects on Cooperation in Social Dilemmas”

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Context frames such as describing a Prisoner's Dilemma as a “community” or a “stock exchange” game cause significant variation in cooperative behaviour. Prior accounts of framing suggest that frames enter behaviour by altering either first-order beliefs or social preferences. Alternatively, we suggest that framing may influence how people's perceive the deep structure of the game. We draw on recent advances in research on situation construal to propose that frames affect perception of interdependence between players. Prior research has shown that people readily think about situations in terms of their interdependence with others, and how people perceive their interdependence with others in different games predicts differences in cooperation across these games. In a formal model, we show that variation in perceived conflict of interests can affect cooperative decisions in the presence of social preferences and positive beliefs. By eliciting both situation perceptions and beliefs about others' behaviour in a framed game, we test the proposed interdependence mechanism and compare it against existing mechanistic explanations based on frame-dependent beliefs. We find that while individual differences in perceived conflict of interests explain significant variance in cooperation, the effect of framing is better explained by changes in first-order beliefs.

Comerford, David

“From Gut Feelings to Considered Forecasts: The Effects of Incentivizing and Unpacking the Forecasting Question”

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Expectations are, along with preferences, a core driver of behaviour. The standard way to elicit forecasts in surveys is using a direct question format that asks whether a variable will have increased or decreased between time 1 and time 2. This paper compares forecasts of unemployment elicited by this direct format against forecasts from an identical but incentivized condition and from an indirect format condition, which unpacks the forecasting question into its constituent questions. The indirect format condition asks respondents to estimate the unemployment rate at time 1 and to then to estimate the unemployment rate at time 2; the direction of change can then be inferred from the two estimates. In each of three studies, with cumulatively over 1,000 respondents, accuracy incentives increased the likelihood of correct forecasts. Study 1 shows that accuracy incentives had similar effects on Republicans and Democrats. This result is hard to reconcile with an explanation for forecast bias offered by prior literature, that respondents engage in deliberate partisan cheerleading. Study 2 presents process evidence that unincentivised direct format forecasts are biased by the affect heuristic: respondents answer the question “will unemployment have increased or decreased between time 1 and time 2?” as though asked “how do I feel about the economy right now?” Studies 1 and 3 show that the indirect format yields forecasts that are more similar to incentivized forecasts than to unincentivized direct format forecasts. Study 3 also demonstrates that incentivized and indirect forecasts better

explain car purchase behavior than unincentivized direct format forecasts. I conclude that the indirect format offers promise as a means to debias forecasts.

Conte, Beatrice

“When do defaults backfire? The twofold effect of default options on green consumption when competing motivations are at stake.”

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We investigated the effect of defaults that (dis)favor eco-friendliness versus enjoyability of a product on consumer sustainable choices. Results showed that when a default penalized the personal enjoyability of the product, it backfired by reducing the eco-friendliness of participants' decisions.

Crosetto, Paolo

“The rise and fall of the attraction effect”

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We run an incentivized choice process experiment along the lines of Caplin et al (2011) to assess the robustness and nature of the Asymmetric Dominance Effect (ADE, Huber et al., 1982), the most prominent example of context effects. According to the ADE, adding a dominated option to a choice set increases the choice share of the newly dominant option at the expense of other options. While widely replicated, the ADE is usually found in hypothetical or payoff-irrelevant situations, and without considering the choice process. We systematically vary the utility difference of the options and track the choice process in real time.

Subjects face each choice for a given time and are free to change their mind during this time. We keep track of all the provisional choices. Once the time has ran out, we draw a random uniform moment and the item chosen at that moment is binding. If no choice had been made, then an item is chosen at random. Subjects are incentivized to give a fast reply and then reconsider.

We find that the ADE is a transitory phenomenon, that disappears when subject are given enough time and incentives to ponder their choices. The ADE emerges for the most part only in the early stages of the choice process. Consumers provisionally choose the asymmetrically dominant option to avoid the dominated decoy and then progressively switch until choice shares come to correspond to price differences only. We expand our analysis by considering differences in individuals' response modes (intuitive vs. deliberative) and differences in the presentation of options (numerical or graphical). This allows us to ascribe more precisely the role of fast and slow cognitive process in the emergence and disappearance of the attraction effect.

Cruz, Nicole

“If Oswald had not killed Kennedy, would someone else have? Dynamic reasoning with indicatives and counterfactuals”

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A fundamental hypothesis in the probabilistic approach to deductive reasoning is that most reasoning, in everyday life as well as in science, is from premises that are not certain, but are only held with higher or lower degrees of belief. This uncertainty cannot be captured in binary, classical logic, but it can be in probability logic. Probability logic generalises deduction to probabilities, specifying the degree of belief we can reasonably have in the conclusion of an inference, as a function of the logical structure of the inference together with the degrees of belief we assign to its premises.

An inherent limitation of deduction, whether binary or probabilistic, is that it applies only to relations between concepts at a specific point in time. It can therefore not model situations in which we dynamically change our degree of belief in the premises of an inference upon acquiring new information.

In this talk we present empirical work investigating dynamic reasoning with conditional statements. We compare two types of conditionals: indicatives, e.g. "If Oswald did not kill Kennedy, then someone else did", with counterfactuals, e.g. "If Oswald had not killed Kennedy, someone else would have". We formulate predictions for when people increase, decrease, or leave unchanged their degree of belief in an indicative or counterfactual conditional, if p then q , upon learning that its antecedent, p , is true.

The results corroborated the predictions for counterfactuals, but were more mixed for indicatives. We interpret the findings using the Bayesian network framework within the probabilistic approach to reasoning, and discuss implications of the results for alternative accounts of the interpretation of and reasoning with conditionals, e.g. that of mental model theory.

D

Damman, Olga

"Using upward social comparison information to influence people's intuitive appraisals of cardiovascular risk information"

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Aim: To investigate whether providing people with upward social comparison information influences their responses to a hypothetical cardiovascular disease risk result.

Methods: Healthy participants (45-69 yrs), recruited via an online access panel, were provided with a hypothetical risk result (30%) from a cardiovascular risk calculator. Participants were randomly assigned to either: (1) a comparison with a person without risk factors ('ideal risk profile'); (2) a comparison with an average person ('average risk profile'); or (3) no comparison. Both comparison groups contained upward social comparison information (10% risk). Check questions assessed whether numbers were correctly extracted from the test result while viewing the information. Outcome variables: intuitive risk appraisals, negative affect, behavioral intentions, information evaluations. ANOVAs were conducted with provision of upward social comparison information as the main

independent variable, correct extraction of numbers, numeracy and graph literacy as interaction terms.

Results: One-third (35%) of the 152 participants failed to correctly extract the numbers. Several interactions between upward social comparison information and correct extraction of numbers were found on: intuitive risk appraisals ($F(2,146)=7.6$, $p=.001$), negative affect $F(2,104)=4.5$, $p=.013$) and behavioral intentions ($F(2,146)=4.0$, $p=.019$). ANOVAs with literacy skills included as interaction terms (i.e. numeracy, graph literacy) showed similar significant interactions with numeracy (but not with graph literacy) on intuitive risk appraisals and negative affect.

Danaj, Eriselda

“I don't have enough time to be honest: time constraints and cheating behavior”

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If we do not give people enough time to complete a task, are they more likely to cheat? This project uses an experimental approach to test the main effect of time constraints on cheating behavior and propose a moral justification mechanism.

d'Arcangelo, Chiara

“Information and reputation in the repeated trust game”

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This paper analyzes the role of reputation in the repeated Trust Game, investigating the extent to which asymmetric outcomes can be sustained as equilibria of the game. It focuses on the adoption and the relative performance of fully cooperative strategies, compared to the so called extortionate strategies, i.e. strategies that sometimes defect, but cooperate often enough to induce full cooperation from the opponent. The first part of the paper considers players that are constrained to use memory-one strategies, i.e. strategies that only condition on the previous outcome of the game. It describes the full set of Nash equilibria, showing that, as for the Prisoner's Dilemma, in no Nash equilibrium players can gain more than the mutual cooperation payoff. The second part considers a setting in which one long-run second player interacts with a sequence of short-run first players, each one knowing the long-run player's behavior in the previous round. The main result is that, when only the previous action is disclosed, the only equilibria are mutual cooperation and mutual defection; if instead the previous mixture is disclosed, also asymmetric outcomes can be sustained as equilibria of the game, and the long-run player is able to gain more than the mutual cooperation payoff, by using an extortionate strategy. The last part of the paper tests this prediction with a laboratory experiment, showing that subjects do understand the different incentives implied by the different information structures: they tend to be more cooperative when cooperation is the best that they can do, but they are also ready to use less cooperative strategies when asymmetric outcomes can also be sustained as equilibria of the game.

de Baets, Shari

"Trusting forecasts"

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Accurate forecasting is necessary to remain competitive in today's business environment. Forecast support systems are designed to aid forecasters in achieving high accuracy. However, studies have shown that people are distrustful of automated forecasters. This has recently been dubbed 'algorithm aversion'. In this study, we explore the relationship between trust and forecasts, and if trust can be boosted in order to achieve a higher acceptance rate of system forecasts and lessen the occurrence of damaging adjustments. In a survey with 134 executives, we ask them to rate the determinants of trust in forecasts, what trust in forecasting means to them and how trust in forecasts can be increased. The survey analysis indicates four main factors that play a role in trusting forecasts: (1) the forecast bundle, (2) forecaster competence, (3) combination of forecasts, and (4) knowledge.

de Boer, Femke

"Always Coca-Cola? Nudging beverage choice in a realistic virtual supermarket environment"

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This study investigated whether nudging - the rearrangement of a choice context gently suggesting a specific choice - can stimulate healthy beverage choice in a virtual supermarket, but found no significant effect. Possible reasons include strong preferences or many choice alternatives.

de Kwaadsteniet, Erik

"Sharing in Need': How Own and Other's Hunger Affect Food Allocation"

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In the present research, we investigated how being in need influences the sharing of scarce goods. Do needy people share less with others? And what if the other is in need too? In two experiments, we tested these questions by experimentally manipulating participants' need for food by varying the amount of hunger they had (by means of fasting). Specifically, we tested whether hunger influenced food allocations in a dictator game in which allocators had to distribute cookies between themselves and a recipient. Importantly, we did not only investigate how the allocator's own hunger influenced the distribution, but also how it was influenced by the recipient's hunger state. Based on three different theoretical frameworks (rational choice theory, distributive justice and the empathy gap), we formulated and tested three alternative hypotheses. The experimental data presented in this paper clearly demonstrated that people take both their own and another person's needs into account when distributing scarce goods, which is in line with a distributive justice explanation. At the same time, the findings seem to refute hypotheses that are based on rational choice theory and the empathy gap. Implications are discussed and ideas for future research are presented.

Dehghan, Sahar

“Investigating Tax Compliance of Taxpayers in the Framework of Prospect Theory Using Bayesian Hierarchical Model”

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This study aims to investigate the direct effects of the structure of penalties and anticipated incentives in taxes act on compliance behavior of taxpayers in the framework of “prospect theory”. The estimated results via Bayesian hierarchical method indicated that taxpayers of employment section are more sensitive toward incentives of direct taxes act.

del Missier, Fabio

“Insights from a Longitudinal Study on Decision-making Competence in Older Adults: a Rosier View”

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Decision-making skills are of paramount importance for obtaining good life decision outcomes and successful independent living across the adult life span. Cross-sectional studies suggested that age-related decline in fluid cognitive abilities undermines older adults' ability to make decisions that are cognitively demanding. Unfortunately, the findings of existing studies on aging and decision making can be challenged by inherent methodological limitations. Due to their cross-sectional nature, the reported differences may not reflect aging but, instead, differences between cohorts. We present the results of the very first longitudinal study in older adults. We investigated age-related changes over five years in three important aspects of decision-making competence: (a) the ability to express consistent preferences despite superficial variations in the description of choice options (resistance to framing), (b) the ability to correctly apply procedures for choosing among multiple options, (c) the ability to ignore irrecoverable and hence irrelevant past costs (resistance to sunk costs). Findings showed very slight age-related decline in resistance to framing and in the ability to apply decision rules, and no decline at all in resistance to sunk costs. Furthermore, the results showed that these three aspects of decision-making competence can be differentiated from each other and from fluid and crystallized cognitive abilities. Finally, we found a greater contribution of crystallized cognitive abilities in the former two facets of decision-making competence, suggesting that older adults' decision performance benefited from acquired knowledge and skills. We discuss the theoretical and applied implications of these findings for research on decision making and cognitive aging.

Dhami, Mandeep

“Criminal Punishment by Preferred Numbers: Rough Justice Gets Rougher”

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Judges (and legal policymakers) believe that courts are capable of finely tailoring punishments to fit the individual offence and offender. However, criminal court sentencing is a complex cognitive activity that is often performed by the unaided mind under suboptimal conditions. As such, sentencers may not behave according to policy, guidelines and training. By analyzing the distribution of sentences meted out in one year in England and Wales, and

in one year in New South Wales, Australia, we find that sentencing appears to reflect limitations of the sentencing mind. Specifically, we show that sentencers, like most people, prefer certain numbers when meting out sentence lengths (in custody and community service) and amounts (for fines/compensation). These 'common doses' accounted for just over 90% of sentences in each jurisdiction. In addition, the size of these doses increased as sentences became more severe. Finally, the doses followed a logarithmic pattern. These phenomena are reminiscent of Weber's and Fechner's laws. The present findings not only undermine the notion of individualized justice, they run contrary to arguments against efforts to reduce judicial discretion, and raise questions about the (cost) effectiveness of sentencing.

Dickert, Stephan

"Decisions to accept refugees: Using graphs to communicate the severity to the political right"

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Graphical displays are often used to showcase the scope of humanitarian crises. We investigate the effects of cumulative versus non-cumulative graphs of fatalities on severity perceptions and support for refugees. The meaning and perceived severity of these graphical displays may further depend on political orientation, as cognitive styles and processing strategies seem to differ for people on the political right compared to the political left. In two studies we found lower willingness to accept refugees, less support for humanitarian aid interventions, and perceptions of refugees as a higher social risk factor for people on the political right. Additionally, the cumulative graph was related to higher severity perceptions, which in turn increased the willingness to accept refugees and support for humanitarian aid interventions. However, a moderated mediation analysis showed that higher severity judgments were related to a greater willingness to accept refugees only for participants on the political right. In Study 2 we additionally found that these effects do not depend on a more detailed description of each graph or information that translated the fatalities into a "deaths-per-day" format. This research provides insights into the psychological underpinnings on people's willingness to support refugees and also indicates a possible policy intervention how to effectively communicate the suffering of others to the public.

Dieckmann, Anja

"The influence of emotional arousal on the decision to share movie recommendations"

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Emotional arousal has been linked to the motivation to socially share information with others and can reliably be detected in the voice. This is also relevant for applied consumer research, especially given the recent availability of automatic arousal detection software. In an experiment, we studied how emotional arousal varies with intrinsic involvement, operationalized by participants' preferential choice of upcoming movie trailers, and extrinsic rewards, operationalized by monetary incentives. Emotional arousal is inferred from the participants' spoken reviews of their selected trailers both automatically by a validated classifier and by an independent group of human judges. Positive intrinsic involvement – that is, reviewing one's preferred trailer – and extrinsic rewards induce

higher vocal arousal as perceived by listeners, which is associated with more subsequent social sharing of trailers and higher persuasiveness ratings of the reviews. In comparison, arousal inferred by the automatic classifier shows smaller differences between experimental manipulations. Overall, results support the notion that arousal plays a causal role for the decision to socially share an experience.

Diederich, Adele

“Mach Score and Public Good contribution: On how information is used to trust another person.”

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In a trust game, a receiver's score of the Machiavellianism scale and contribution in a Public Goods game is used as sources of information for a sender, who decides how much to send to a receiver in a Trust game.

Dimant, Eugen

“When a Nudge Backfires: Using Observation with Social and Economic Incentives to Promote Pro-Social Behavior”

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Both theory and recent empirical evidence on nudging suggest that observability of behavior acts as an instrument for promoting (discouraging) pro-social (anti-social) behavior. Our study questions the universality of these claims. We employ a novel four-party setup to disentangle the roles three observational mechanisms play in mediating behavior. We systematically vary the observability of one's actions by others as well as the (non-)monetary relationship between observer and observee. Observability involving economic incentives crowds-out anti-social behavior in favor of more pro-social behavior. Surprisingly, social observation without economic incentives fails to achieve any aggregate pro-social effect, and if anything it backfires. Additional experiments confirm that observability without additional monetary incentives can indeed backfire. However, they also show that the effect of observability on pro-social behavior is increased when social norms are made salient.

Donkin, Chris

“Bringing nudges into the lab: Using evidence accumulation models to understand the role of external influences on decision-making”

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The standard approach to understanding the role of external influences on decision making, or nudges, has been top-down. Research has focused on finding low-cost interventions that change behaviour in real-life scenarios. Our aim with this project is to take a bottom-up perspective. We use the well-studied area of simple decision making and accompanying theoretical models, such as the diffusion model (Ratcliff, 1978), as the lens through which to study external influences on behaviour. We present the first step in this project, an experiment in which participants were asked to judge a stimulus as bright or dark. Before some decisions, participants were told about the behaviour of their peers (e.g., “70% of the other participants responded dark to the upcoming stimulus”). We also varied the difficulty

of the task, from impossible to relatively easy. We found that participants responded more in line with the norm information when the task was impossible, but that behaviour was unaffected by norm information when the task was easier. Interestingly, when we analysed the data with a diffusion model, we found that difficulty had no effect on the parameters of the model. The norm information affected the start-point of evidence accumulation, with the norm information being a single of evidence for the appropriate response before the trial began. However, the norm information had practically no influence on the rate at which evidence accumulated, with decisions being driven only by the properties of the stimulus under evaluation. Together, this suggests that the interaction between the efficacy of the social norm information and uncertainty/difficulty emerged out of the architecture of the decision-making apparatus, but did not exist at the latent, psychological level.

Drummond, Caitlin

“Motivated Communication of Scientific Evidence: Scientific Reasoning Ability is Associated with More Accurate, Not Biased, Communication”

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Individuals scrutinize evidence more critically when it is inconsistent with preferred conclusions (Ditto & Lopez, 1992). Recent research has investigated whether individuals with greater cognitive sophistication, as measured by numeracy or CRT scores, are more likely to engage in such motivated reasoning, with conflicting results (e.g. Kahan et al., 2017; Tappin, Pennycook & Rand, 2018). We test for the existence of such motivated cognitive sophistication using a validated measure of scientific reasoning ability (Drummond & Fischhoff, 2017), the ability to evaluate scientific evidence. In a preregistered experiment, we asked participants to read about two hypothetical and flawed scientific studies communicating causal conclusions from correlational data linking 1) coffee and cholesterol, and 2) immigration and crime. Participants were asked what they would tell another person about each of the two relationships, via an open-ended item. For the immigration, but not the coffee, study, participants displayed motivated reasoning: those who read preference-inconsistent evidence were less likely to use casual language, and more likely to communicate the study's flaw. However, those with greater scientific reasoning ability were less likely to describe the correlational relationship using casual language (for both studies) and more likely to communicate the flaw (for the immigration study), regardless of whether the evidence was attitude-consistent or -inconsistent. Our findings instead suggest that scientific reasoning ability is associated with more accurate, rather than biased, communication of scientific evidence.

Dudás, Levente

“Nudges in new light. Results of a survey on public support for behaviorally informed policies”

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In our study we aim to evaluate how the support for behaviorally informed a policy changes considering the following two types of framing: When the purpose of the policy is presented to the subject, and when different policy alternatives are also presented, all aimed for the same purpose. The considered policy alternatives were: regulation, positive & negative

financial incentives, a subliminal and an informative nudge. In the authors' opinion these considerations reflect best a real-life policy evaluation.

The subjects were split into three different groups. In the first condition the purpose and the alternatives were not disclosed, and the assessment was only required on the 7 policies using subliminal nudges. The purpose of the policies was presented to the second group before assessing the 7 nudges, and the third group had to assess all 5 policies after considering the purpose of them.

The main hypothesis tests show that while presenting the alternatives does not have a significant effect, revealing the purpose of the policies decreases the support for the subliminal nudges. The differences in the support for the 5 policies confirm previous findings of general acceptance of nudges. It is interesting that although the positive financial incentives have great support in 5 cases (as expected), there are two policies that received little support.

Our findings demonstrate that the generally high support of behaviorally informed policies withstands the wider policy considerations, although there is a slight risk of people feeling manipulated if the intentions of the policy is revealed. This can be moderated by the trust in public institutions.

E

Eberhardt, Wiebke

"Well Raised: Teaching Children about Finance"

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Consumer financial decisions are getting more complex, increasing the importance of teaching children about finance. We examine financial socialization, the "process by which young people develop consumer-related skills, knowledge, and attitudes" (Moschis & Churchill, 1978, p. 599). We look at the relationship between financial socialization and consumers' attitudes, knowledge, behavior, and outcomes; and at what specific financial socialization activities provide the strongest correlations with these measures.

We analyzed the Consumer Financial Protection Bureau's (CFPB) online National Financial Well-Being Survey (N = 6263; CFPB, 2017). The survey contained measures of financial socialization (seven items), consumer attitudes (materialism), financial knowledge (objective and subjective), behaviors (money management, propensity to plan, whether savings is a habit), and outcomes (financial well-being, liquid savings).

We find that financial socialization significantly positively predicted each of the dependent measures. Interestingly, no single item predicted all of the measures; the strongest relationships were with the item "Discussed family financial matters with me." Providing an allowance was significantly positively correlated with materialism, and significantly negatively with financial literacy.

Our results show that when trying to make predictions about consumers' financial situations, financial socialization is important to consider. Our results also inform parents and financial educators who are interested in pursuing financial activities with children. They may provide some comfort to parents with lower income, as it is arguably possible for them to "discuss family financial matters," even if they cannot provide an allowance.

Analyzing the Consumer Financial Protection Bureau's National Financial Well-Being Survey (N = 6263), we find that financial socialization significantly positively predicts consumers' attitudes, knowledge, behavior, and outcomes. Our results inform parents and policymakers about specific items to teach children about finance.

Efendic, Emir

"Asking an Algorithm (compared to a Human) for Advice has Consequences for How people Evaluate your Motivations"

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Are advice seekers who get advice from algorithms (compared to other humans) evaluated differently on their motivations and intentions? We demonstrate that advice seekers who solicit and follow advice to invest in an environmentally friendly company, are considered as more guided by profit if the advice came from an algorithm, compared to a human. No difference, however, is observed for advice to invest in an environmentally unfriendly company. Similarly, a doctor who solicits and follows advice to prescribe medication made by a company that lobbies medical staff is considered as being more guided by ensuring their patients welfare if the advice came from an algorithm, compared to another doctor. A framework is provided which helps us predict how people will evaluate the advice seeker's motivations dependent on whether the advice is simply solicited or followed and whether there are other motivations at play. We conclude that people's assumptions about algorithms have striking consequences on how they evaluate advice seekers that get advice from them.

Eriksson, Gabriella

"Drivers' decision to speed: Perceived risk factors and reasons for and against speeding"

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According to the World Health Organization, reducing drivers' speed is crucial because it leads to fewer and less severe accidents. Here, we report on mental models interviews designed to characterize the factors drivers perceive to contribute to accidents, whether speeding is perceived to be one of those factors, and what drives their decisions to speed. The interviews were designed to reveal people's beliefs or mental models about driving – as a first step towards identifying potential needs for intervention. Specifically, we used mental models interviews to investigate how drivers perceive accident risks and decisions to speed.

Semi-structured 'mental model' interviews with 54 drivers who varied in experience were conducted in the UK and Sweden. Drivers were asked about risk factors in driving and discussed why they speed, as well as why they avoid speeding.

Across interviewees, speeding was the second most identified risk factor after overtaking. The third most mentioned risk factor was mobile phones. Most interviewees considered speeding as going faster than the speed limit, but some only considered driving up to 40 miles per hour over the speed limit to be speeding. Most interviewees reported being in a hurry as a reason for speeding, followed by feeling safe in the car and enjoying the speed. Reasons against speeding included law enforcement, increased stopping distances and the potential risk of hitting a person.

Thus, interviewees did identify speeding as a risk factor, but seemed to have some misconceptions of what speeding means. We discuss our findings in terms of their implications for risk communications relevant to driver education materials, dashboard tools and variable road signs.

Erlandsson, Arvid

"You are equally valuable, but I will not help you: The prominence effect in eight helping dilemmas"

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Why do people sometimes prefer to help few rather than many patients in need? Also, how do people's preferences in helping dilemmas shift as a function of how these preferences are expressed? In this project, we merge research about moral and medical decision making with research about the prominence effect (e.g. Slovic, 1975).

In two studies (paper-and-pen based on Swedish students and online on American M-Turkers) we first let participants read several helping dilemmas (each focusing on a specific helping effect) where they were asked to match two proposed projects so that they became "exactly equally attractive" to them. For example in the ingroup-effect dilemma, participants were asked how many outgroup patients that must be treated in Project A to make it equally attractive as Project B which could treat 100 ingroup patients. At a later time, participants were forced to choose between the two projects that they previously had matched to be equally attractive. If participants were really indifferent between Projects A and B, they would be chosen roughly equally many times on a group level.

Crucially, this was not the case. For the majority of helping dilemmas, one of the projects were chosen significantly more often than 50% indicating that some preferences are only expressed when forcing people to choose. To exemplify, 81.4% of the participants matched ingroup and outgroup patients as equally valuable in the matching task, but among these, 89.7% materialized the project helping ingroup members when forced to choose. Likewise, 94.9% of the participants matched female and male patients as equally valuable in the matching task, but among these, 82.4% went for the projects helping females when forced to choose.

Ert, Eyal

“Could Product Experience Change People’s Preferences for Genetically Modified Food?”

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Consumers reaction to GM food is typically negative, and they are even willing to pay a premium to avoid it. Studies of consumers’ preferences for GM food have focused merely on description-based choice, although in reality food is an experience good. This focus on mere descriptions of GM products could be justified on the ground that genetic modification is a credence attribute, and as such its benefits cannot be realized by experience. The current study challenges this assumption, by testing whether short experience of GM food can affect consumers even though it does not provide actual information about its main (credence) attribute. Participants chose between regular and GM granola either with or without sampling it first (i.e., from description vs. from experience). People also indicated their willingness to accept (WTA) a compensation of replacing the product of their choice with the alternative product. The results showed that sampling significantly increased choice in the GM granola. In addition, WTA for the GM granola was lower in the sampling than in the description condition. These results suggest that experience can affect people’s choices even when it does not reveal objective information. This study provides an initial evidence showing that experiencing credence goods could actually change consumers’ preferences for it, despite the theoretical prediction that it should have no effect.

Estrada-Mejia, Catalina

“Choice architecture engages norms to influence pro-environmental choices”

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This research tests the ability to influence the consumption of eco-friendly products through choice architectures that make social or personal norms salient without attempting to change attitudes or predispositions. Four experiments manipulate the salience of different types of social or personal norms in choice environments by making norms explicit, altering product sets, and generating social consequences of choice. The target behavior was purchasing a recycled paper notebook, captured through direct purchases or willingness to pay commitments. We find that choice architecture activates personal but not social norms. The results point to the use of passive interventions such as choice architecture helping to promote environmentally-responsible purchase decisions by individuals.

Etgar, Shir

“White-collar Crime in Academia: Trends in Digital Academic Unethical Behavior over Time and Their Effect on Punishment Decisions”

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In a well-defined penalizing system, one would expect that similar unethical behaviors should result in similar penalties (Bazarman & Moore, 2008; Gino et al., 2009). However, it's an established fact, that punishment decisions are influenced by many factors, such as

individual's characteristics or organizational factors (e.g., Gino et al., 2013; Mazar et al., 2008). This research aims to suggest an additional factor that impacts penalty severity: whether the unethical behavior was carried out using digital or analog instruments. Previous study (Friedman et al., 2016) reported lower penalties for digital academic unethical behaviors compared to traditional, "analog" ones. The present study investigated the mechanism behind this effect by examining trends of change over time in penalties for academic unethical behaviors. Note that this study didn't use self-reported information, but analyzed 628 university's Disciplinary Committee's protocols, collected during four consecutive years. Findings showed a stable trend of lower penalties for digital offenses over time. These findings support our hypothesis that digital unethical behaviors are perceived as "white collar crimes", which are judged as less harmful, therefore punished less severely than analog offenses. This hypothesis is also supported by our findings, that motivations to behave unethically influenced penalties' severity for analog, but not for digital offences. Unexpectedly, a consistent gender-gap was found in penalties' severity for both digital and analog offenses, indicating that women were penalized more severely than men. This might be caused since women are judged by different reference point than men (Biernat, 2012). We will discuss the theoretical and practical implications of these findings.

Etgar, Shir

"Oh My Gosh, You Are Overreacting! The Mechanism behind Judgments of Inappropriate Emotional Expressions"

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How is an emotional expression judged as appropriate or inappropriate? This process is unknown. This research aims to explore the process underlying judgments of emotional expressions, by examining to which reference point/s emotional expressions are being compared.

Evers, Ellen

"Arbitrary Fairness"

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People often hold strong but superficial moral beliefs. For example, many people believe that resources should be assigned in an equitable fashion; the same effort should be compensated the same, and the similar violations should be fined in the same way. Missing in this belief is the unit in which these outcomes should be expressed. Whatever is the same in time spent does not have to be the same in money earned and vice versa. Here we show that people generally fail to take the interchangeability of units into account when judging and assigning fair punishments and rewards. As a consequence, judgments about the fairness of punishments and rewards as well as distributions of resources are strongly influenced by arbitrary decisions about which unit to express them in.

moral tasks. Moreover, the results revealed the main effect of social condition factor on participants' hand movements while making their decisions. In conclusion, even minimalist social condition in which participants do not communicate or interact with each other affect their decision-making performance. The general aim of the current study is to investigate the effects of social condition on people's decision-making performance in two different domains, namely; economic and moral. The results revealed that even minimalist social condition affect their decision-making performance.

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Fallahzadeh, Pardis

"Decision-Making Behaviour and Minimal Social Condition: New Insights from Joint Perception"

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Theories of decision-making have been widely investigated during the last decades. Most of the literature in the area of decision-making investigates the mechanism underlying decision-making processes in an isolated laboratory environment. Although we can control external factors that may affect the process of decision-making in such a design, we mostly make the decisions in a social environment which is better captured in an experimental situation that allows social interactions. The general aim of the current study is to investigate the effects of social condition on people's decision-making performance in two different domains. We hypothesized that even a minimal social context can influence people's decisions. The main experiment was a decision-making task composed of two tasks, namely; economic and moral. Each of these two tasks consisted of three blocks, each in different social conditions, namely; individual, joint, joint with gaze-cueing. In the "joint with gaze-cueing", they saw each other's eye-gaze on their own screen. 34 Pairs of participants of the same gender (8 female pairs) were assigned to the experiment. Moreover, we used eye- and mouse-tracking technologies as the main methodology of our study. The results showed that participants' decision-making performance was affected by different social conditions. Participants speeded up making their decisions in the joint with gaze-cueing condition in comparison with the individual condition in both economic and

Fariña, Andrea

"Theory of Mind and Cognitive Control in prosociality: a large-scale assessment of the neural correlates of social value orientation"

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Despite a sample size of 205 participants, we found no relationship between other-regarding preferences and cognitive control. Crucially, however, we found that value for others' rewards was reflected in greater cortical thickness regions consistently linked to social cognition.

Fasolo, Barbara

“Domain matters: A comparative study of aided choice in consumer vs medical domains”

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Previous work suggests that choice is domain specific, but prior studies are limited to situations where the choice behavior measured is not aided by any form of choice architecture (Johnson et al., 2012). The aim of this paper is to explore how choice efficiency (the number of “best choices”) and choice process differ by choice domain (consumer vs medical) and choice architecture. In collaboration with an important health think-tank we ran an online experimental study where participants chose a hospital for a non-urgent surgery and a hotel for their holidays from an online scorecard with 5 options compared side by side. The choice was aided by three choice architectures: Opt-out Default (best option pre-selected), “Best-First” (5 options pre-sorted by-quality and the highest quality hospital/hotel was first, in the left-hand column; “best” was defined by experts), and “Best-in-Hotspot” (best option on the fourth place in a horizontal array of alternatives, roughly in the middle of the screen). We find that choice aided by choice architecture is domain-specific. First, all three choice architectures lead to better choice quality in the medical than in the consumer setting. Second, while Opt-out Default works best in the consumer setting, Best-in-Hotspot outperforms the other architectures in the medical domain. Third, the choice process also differs by domain. While in the consumer context participants search primarily attribute-wise (comparing different options on one attribute at a time), they search option-wise in the medical context. Which choice architecture is the best depends to a great extent on the context (e.g., consumer vs. medical), and the goal the policy maker or an organization is trying to achieve.

Feldman, Gilad

“Mass pre-registered replications project of ~47 classic findings in judgment and decision-making”

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Aim: Mass pre-registered replication project on classic findings in judgment and decision making conducted by undergraduates at the University of Hong Kong.

Method: Project has so far spanned two semesters with 39 concluded projects and 8 ongoing. In these pre-registered replication projects, undergraduate students analyze articles and attempt to reproduce methods and materials to conduct effect-size calculations and power analyses, design online Qualtrics experiments, and adopt open-source (R/JAMovi/JASP/Shinyapps/GPower) and latest psychological science tools and templates (e.g., Brandt et al., 2014; van't Veer & Giner-Sorolla, 2016), with a pre-registration of the replication plans on the Open Science Framework (OSF; osf.io). We then run the experiments on well-powered (0.95-0.99) Amazon Mechanical Turk American online samples. Students then write APA style journal submission standard reports of the findings. Twitter prediction markets are used to assess predictions of replication project findings.

Results: In spring 2018 we summarized 17 successful, 3 semi-successful, 1 inconclusive, and 3 unsuccessful replications. In autumn 2019 we summarized 9 successful, 5 inconclusive, and 4 likely unsuccessful replications. Some replications included extensions, most successful.

Conclusion: The project has been an invaluable learning experience, for both students and the research and teaching teams, with valuable insights and important contributions to the literature and the academic community.

Fiedler, Susann

“The cost of imperfect memory in social interactions”

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Memory has been proposed as one of the most crucial cognitive capacities required for successful cooperation in social dilemmas. Remembering whether a person cooperated or defected in a previous interaction enables decision makers to avoid being exploited by free riders. From an evolutionary perspective, the ability to remember an interaction partner's behavior and avoid exploitation should be particularly important for prosocial individuals. Following this idea, we investigated whether the ability to remember how a social interaction partner behaved is related to an individual's social preference in three studies. Further, we aimed to identify potential drivers of the effect by analyzing information search during encoding of the partner's behavior. Using eye-tracking, we recorded participants' gaze behavior during the observation of other players' previous choices in decomposed games. Subsequently, participants were asked to recall the behavior of each observed player. We then used individuals' social preferences (measured as social value orientation) to predict participants' memory performance. We found that prosocial individuals were more likely to recall previous players' behavior than prosocial individuals. Moreover, a mediation analysis indicated that those differences were partly driven by the extent of information search during encoding. In sum our results suggest that prosocial individuals are more likely to remember their interaction partner's behavior, which could protect them from being exploited in future interactions.

Figner, Bernd

“Stress decreases adolescent patience in intertemporal choice”

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Adolescence is characterized by an increase in stress reactivity and by an increase in problematic risky and shortsighted behaviors such as substance use, unsafe sex, and delinquent behaviors. While previous research reported that stress leads adolescents to make riskier decisions, crucially, adolescent problem behaviors also comprise an intertemporal dimension, namely trade-offs between short-term versus long-term outcomes. We investigated whether stress-induction decreases patience in intertemporal choices in 91 adolescents (aged 16.83–17.70 years, 47% female) by having them perform

intertemporal choice tasks before and after stress induction. The results showed that stress-induction indeed reduced patience in adolescent intertemporal choice and led to fewer self-controlled preference reversals, while leaving valuation judgments of rewards outside of a choice context unaffected. Larger stress-induced cortisol increases were (a) significantly associated with overall greater patience across timepoints (before and after stress-induction), and (b) marginally significantly associated with a greater reduction in patience after compared to before stress. Taken together, the results suggest that stress reduces adolescents' self-control and thus leads to less patient choices. These results implicate stress-induced impatience as a possible mechanism contributing to adolescent real-life problem behaviors.

Filkukova, Petra

"Truth is in the eyes of the beholder: Factors impacting fake news recognition"

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Questionnaires containing a mix of fake and true news items were distributed at the University of Oslo.

We found that the majority of participants are confident in their abilities to recognize facts from misinformation, however, their confidence is not justified: the fake news items in our experiment reached a higher credibility rating than the real news.

We found that news which were congruent with participants' political orientation reached higher credibility rating than opposing news and hence one's preexisting attitudes were unwittingly used as a clue for recognizing facts from misinformation. Women overall trusted all news items (both real and fake) more than men did and in addition, they had also stronger emotional reactions from the news (sadness, fear, anger, worry, surprise).

We found that students of social sciences and humanities were more sceptic to credibility of all news items (both fake and true) than students of technical fields. We hypothesize that this finding is caused by different degree of education and training in critical reading and media literacy.

Frey, Renato

"Identifying robust correlates of risk preference: A systematic approach using specification curve analysis"

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What are robust correlates of risk preference? Despite that past work has long investigated classic candidate correlates (e.g., demographic characteristics, cognitive abilities, socio-economic background), systematic knowledge concerning their relation with risk preference has been largely inconclusive in past research. On the one hand, previous studies have typically implemented just one of many possible operationalizations of risk preference. On the other hand, previous studies did not systematically take into account that the various candidate correlates might be intercorrelated, thus leaving it an open question how robustly they are indeed associated with risk preference. We addressed these issues

by assembling a comprehensive dataset including multiple person indicators (i.e., candidate correlates) and several operationalizations of risk preference (including self-report, behavioral, and various aggregate measures), as well as by adopting and extending an exhaustive modeling approach called specification curve analysis (SCA). In sum, for each of six classic candidate correlates (sex, age, fluid and crystallized intelligence, years of education, and household income) we implemented 4352 Bayesian regression models in a large and diverse sample of the German general population (N=916). Our results suggest that demographic characteristics (i.e., sex, age) are robust correlates of self-reported risk preference. Yet, by and large there were no such associations with incentivized behavioral measures. These results suggest that the choice of measurement matters substantially for identifying robust correlates of risk preference. In future research, using similar approaches may also prove helpful for identifying correlates of personality dimensions other than risk preference.

G

Gaertig, Celia

“Why (and When) Are Uncertain Price Promotions More Effective Than Equivalent Sure Discounts?”

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Past research suggests that offering customers an uncertain promotion, such as an X% chance to get a product for free, is always more effective than providing a sure discount of equal expected value. In four studies (N = 6,713), we find that uncertain price promotions are more effective than equivalent sure discounts only when those sure discounts feel small. Specifically, we find that uncertain promotions are relatively more effective when the sure discounts are actually smaller, when the sure discounts are made to feel smaller by presenting them alongside a larger discount, and when the sure discounts are made to feel smaller by framing them as a percentage-discount rather than a dollar amount. These findings are inconsistent with two leading explanations of consumers' preferences for uncertain over certain promotions – diminishing sensitivity and the overweighting of small probabilities – and suggest that people's preferences for uncertainty are more strongly tethered to their perceptions of the size of the sure outcome than they are to their perceptions of the probability of getting the uncertain reward.

Gafeeva, Rufina

“Payment account settings matter: A further investigation of the mobile-premium effect on spending”

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Despite the rapid proliferation of mobile payment, how their actual usage will affect consumer behaviour remains relatively unknown. Existing research documents a card-

premium effect of higher spending when paying with card than with cash due to a reduced transparency of the transaction. We employ a field study and an online experiment to examine consumer spending with mobile payment and card payment. In addition to the physical payment form (card vs. mobile phone), we differentiate between the payment account settings (automatic debit vs. manual deposit), i.e., the access method of the payment account of a digital payment mode to monetary resources. We find that it is not the difference in physical payment form that results in higher spending but the difference in payment account settings: Automatic debit payment account settings result in higher spending compared to Manual deposit payment account settings. We interpret the effect of payment account settings on consumer spending in accordance with mental accounting theory, which posits that individuals allocate resources to mental accounts as non-fungible budgets and use the size of a mental account as a reference point to which they consider expenditure. Based on this, we propose that payment account settings determine the size of the mental account that is cognitively accessible at the time of purchase, consequently affecting spending.

Gaisbauer, Felix

“Using social information in dealing with dilemmas in disguise”

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Should I have another drink now and risk a worse hangover tomorrow? Do I order a fish dish I crave although over-consumption is endangering this fish species? A decision situation may have conflicting rewards along a temporal (alcohol example) or a social dimension (over-fishing example) – either way, individuals frequently forego the best global option in the presence of a locally more attractive option – a tendency known as melioration.

We use a socialized and simplified version of the Harvard game to comparatively study whether humans can exploit social information to overcome suboptimal melioration learning in undisclosed dilemma situations. In a first experiment, we vary the nature of the dilemma in disguise (temporal vs. social) and the informational uncertainty of the rewards (deterministic vs. probabilistic) between participants to examine how these different sources of uncertainty change participants' strategy learning. In a second experiment, we use the same manipulations but incentivize coordination rather than competition.

In both experiments, participants learn to adopt the optimal maximization strategy in a temporal dilemma but display suboptimal melioration learning in a social dilemma. We replicate that participants learn faster in situations with deterministic rather than probabilistic rewards. Crucially, participants display more exploratory behavior in the social conditions, but this exploration is less effective for identifying optimal behavior – even if coordination is incentivized.

One important implication of our results is that observing seemingly selfish behavior in dynamic social situations with an undisclosed reward structure can mostly be explained by ignorance about the environment, rather than strategic

Gamliel, Eyal

“Effects of task form on chosen heuristics: Evidence from energy and time-saving decisions”

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People's ability to make correct judgments based on efficiency measures (e.g., fuel, energy), have been found to be biased and sub-optimal. The MPG illusion demonstrates that people overestimate the impact of fuel-efficiency increases when made from high starting point. Similarly, the time-saving bias shows that people incorrectly believe that they can save more time when increasing speed from relatively high values. Studies have identified three non-normative cognitive mechanisms (heuristics), that characterize people's erroneous judgments: favoring the efficiency/speed increase that has the higher absolute difference between the initial and increased values, or the highest proportional increase, computed either from the initial or the increased value. Previous studies have used different types of tasks in which people were either asked to compare options, rank several options, or match between different values. This study systematically manipulated the type of task hypothesizing that more difficult tasks (i.e., ranking) would result in reduced usage of the proportion heuristics relative to simple tasks (i.e., comparison and matching). 200 Prolific Academic participants answered tasks that were relatively easy (matching and comparison), or more difficult (ranking). The results showed that for all three types of tasks, about one third answered according to the difference heuristic; however, whereas one third of the participants answered both the matching and comparison tasks according to the proportion heuristic, only less than 10% did so in the ranking task. Our findings provide evidence that the task difficulty can affect people's usage of the proportion heuristic: Less participants used the proportion heuristic when the task was more difficult.

Gandhi, Natasha

“Associative cues underpinning judgments of food healthiness”

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Following a healthy diet involves many complex decisions. A key challenge is understanding what makes a food product healthy. Both previous research and policy interventions are centered on the nutrients people should be eating, not what people intuitively use as healthiness cues (Lobstein & Davies, 2009). This paper assumes that efforts to improve food choices can only be effective if we understand how people generate subjective healthiness perceptions and how interventions might shape these perceptions.

We draw on methods from machine learning and data science combined with classical insights in psychology (association), to study this issue quantitatively, with a high degree of naturalism and generality. The goal was to uncover the associations that the public (n = 150) and experts (n = 10) hold about different foods. Additionally, we explored how well these associations predict food healthiness perceptions compared with nutritional information. Our findings showed natural food concepts were strongly associated with healthiness, whereas social context and concepts related to junk food predicted unhealthy judgements. Perhaps most interestingly, these associative cues significantly outperformed objective

food nutrients in predicting people's judgments, for both experts and non-experts. Our methods therefore allow us to accurately predict health judgments and characterise the representations people are using (and misusing) when forming their judgments. In subsequent studies, we also utilise the same method to quantify how interventions are shifting around these representations.

Overall, our trained computational models can be applied to predict the healthiness of nearly any food item, and the influence of added information, providing a powerful new set of tools for behavioural scientists studying food perceptions.

Gao, Yu

"Measuring partiality and its application to the collective-risk social dilemma"

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Different models of social preference usually differ in the assumed fairness concerns, such as efficiency, maxmin preference, or inequality aversion, and the model estimation captures the relative weight between the assumed concern and self-interest. When the concern of an individual differs from a model's assumption, the model estimation is biased by the gap between the two concerns. In this paper, we propose a model of social preference that does not assume any specific fairness concern but uses each one's "impartial allocation" directly elicited by using the veil of ignorance. In our model, we can estimate the individual "partiality", which is the relative importance between one's own material utility and the compliance to the impartial allocation. We test its validity and feasibility through an experiment under the context of the collective-risk social dilemma.

Geipel, Janet

"Using Language to Promote Sustainable Consumption"

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In four studies we investigated whether the language used to describe aversive but sustainable products influences individuals' intended and actual consumption of these products. We presented participants with a brief description of an aversive but sustainable product (recycled wastewater, artificial meat, or insect-based food) and asked them whether they would consume it. The key manipulation involved language: about half of the participants in each study received the materials in their native language whereas the rest in a foreign language. In studies 1 to 3 we found that foreign (vs. native) language descriptions promote higher intended consumption of aversive sustainable products. In addition, Study 3 provided evidence that this effect was mediated by emotions, and specifically by feelings of disgust: foreign language descriptions triggered less disgust than native language descriptions. Study 4 examined whether the effect of language extends to actual consumption. Participants read a brief description of recycled water and subsequently were

given the opportunity to drink recycled water. Language influenced the amount of recycled water consumed but only for participants who declared not to be thirsty at the beginning of the study. Specifically, for these participants foreign language descriptions increased consumption. The present findings are of theoretical significance because they demonstrate that the effect of foreign language is not constrained to judgment but it extends to intention and behavior. In multilingual societies where foreign-language use is commonplace such language interventions could be actionable.

Gerlach, Philipp

“Lying and cheating in luck and performance tasks. A meta-comparison.”

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Over the past decade, a large and growing body of experimental research has analyzed dishonest behavior. Yet the findings as to when people engage in (dis)honest behavior are to some extent unclear and even contradictory. A systematic analysis of the factors associated with dishonest behavior thus seems desirable. This meta-analysis reviews two of the most widely used experimental paradigms: die-roll tasks and matrix tasks. In die-roll tasks participants roll a die unobserved from the experimenter and then report their supposedly observed outcome to the experimenter (Fischbacher & Föllmi-Heusi, 2013). In matrix tasks participants are asked to solve matrices containing 12 three-digit numbers by finding the number pair in each matrix that adds up to exactly 10.00 (e.g., $4.56 + 5.44 = 10.00$; Mazar, Amir & Ariely, 2008). In both tasks participants know in advance that the reported outcome is rewarded by a corresponding amount (e.g., participants earn \$1 per observed pip or per solved matrix). We integrate data from 219 experiments (totaling $N = 18,231$ choices). Our findings suggest that a comparable percentage of people lie in die-roll and matrix tasks. However, in die-roll tasks liars lie to a considerably greater degree. We discuss and test several possible reasons for the difference between the two paradigms. The results suggest that the relative implausibility of high rewards in matrix tasks and the relative common use of misleading setup practices may help explain why matrix tasks yielded on average smaller degrees of dishonest reports compared to die-roll tasks.

Gesche, Tobias

“Human Bias in Algorithmic Choice”

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How should an algorithm deal with the danger of making a wrong decision? The current work addresses this question in an experiment. In it, subjects set a parameter which controls a data-driven algorithm. This parameter, a threshold, determines whether a person's preference for risk is high enough for a financial risk to be taken. A lower threshold means that the algorithm implements risky choices more often and that the rate of false positives is higher. Conversely, a higher threshold implies less risky choices but also more false negatives. The findings are as follows: i) When setting the threshold for themselves, subjects leave the algorithm little influence in the eventual decisions by either setting the threshold

very high or very low. When setting it for others, they leave the algorithm more influence. On average, however, chosen thresholds are the same when subjects set it for decisions which affect themselves as when they set it for decisions which the algorithm makes for others. ii) Subjects respond to conflicts of interests: When setting the threshold for decisions which affect others, subjects respond to a bonus for inducing risky decisions. They do so by setting the threshold lower than when the bonus is absent. iii) Threshold choices in all treatments are unaffected by whether the choice procedure is framed as being based on a “computer algorithm” or a human-developed “decision rule”.

Gheondea-Eladi, Alexandra

“Friendship in the ultimatum game A parallel games model with noncomparable social and monetary pay-offs”

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Background: In this paper a formal analytical model is proposed for ultimatum games with social and monetary pay-offs when players consider them non-comparable.

Results: The choice in an ultimatum game in which players are friends is modeled as two parallel (simultaneous and connected) games. Each parallel game is concerned with a single type of pay-off, either social or monetary, such that comparability is ensured within each game, but not among games. A multi-dimensional social utility function is defined in order to aggregate utilities of non-comparable pay-offs. Depending on the degree of comparability of the separate dimensions of the social utility, we define three ways of maximization. Segmentation is used when dimensions are fully non-comparable. Spill-over is used when they are partially comparable and partially non-comparable. Compensation is used when the social and monetary pay-offs are considered fully comparable.

Methodology: A modified ultimatum game experiment is built (Z-tree) when the researcher and the participants are connected by friendship or are strangers. Quantitative and qualitative methods are used to analyze the data.

Conclusions: The formal model presented explains the behavior of participants. Explanations of behavior are no longer linked only to individual preferences, but to the subjective probability of obtaining a socially constructed reward, based on social norms, scripts or experience.

Gisbert, Josep

“How selective outcome feedback affects learning and information processing”

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We analyze how different ways of accessing information about investment alternatives affects how people learn. We compare two environments, a selective feedback environment, in which participants observe the outcome of an alternative only if they choose it, and a full feedback environment, in which participants always observe the outcome of the alternative

–even if they do not choose it. We find three main results. First, in the selective feedback environment participant's beliefs are closer to the Bayesian posteriors given the sampled information than those of the participants in the full feedback environment. This indicates that participants processed better the sampled information in the selective feedback environment. Second, we show that this better information processing mainly happens in the domain of reference point losses. Third, as trial progresses in the selective feedback environment investors increasingly avoid the risky alternative. This sampling bias ultimately overcomes the processing advantage in the selective sampling condition: despite better information processing, participants in the selective sampling condition end up making larger judgment errors than those in the full feedback condition. Our findings imply that future work on sampling and judgment formation should not only examine how past experienced information and the environment affect information samples but also how the sampling mode (e.g. active vs passive) systematically affects the processing of sampled information. We analyze how people learn from experience under selective feedback or full feedback. We find that in the selective feedback condition, participant process sampled information better than in the full feedback condition.

Gizem Yilmaz, Nida

“Testing the effects of audiovisual information and narration style on patients' information use in a lung cancer treatment decision aid.”

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Aim: To study the effects of exposure to audiovisual and narrative information in a Patient Decision Aid for lung cancer treatment on patients' responses, and to assess whether these effects are more beneficial to older patients compared to younger patients.

Method: 2(Modality: textual vs audiovisual) x 2(Narration style: factual vs narrative) x 2(Age: <65 years vs >65 years) online experiment in 305 analogue cancer patients and survivors. Participants were presented with a hypothetical scenario, and informed on treatment procedures, side effects, and outcomes for both surgery and stereotactic ablative radiotherapy. Subsequently, participants were asked to make a hypothetical choice. ANOVAs were used for data analysis.

Results: Audiovisual information was associated with less cognitive load ($M_{dif} = -1.99$, $p < .001$), less decisional conflict in terms of 'effective decision' ($M_{dif} = -4.98$, $p = .019$), and more satisfaction with the attractiveness of information ($M_{dif} = 1.47$, $p = .001$) compared to textual information. Besides, narrative information had a greater effect in older patients compared to younger patients in terms of uncertainty about the decision ($M_{dif} = -7.78$, $p = .036$). Audiovisual narrative information was associated with less cognitive load compared to textual factual information ($M_{dif} = -2.83$, $p < .001$), less cognitive load ($M_{dif} = -2.13$, $p = .009$) compared to textual narrative information, and more satisfaction with the attractiveness of information ($M_{dif} = 1.83$, $p = .016$) compared to textual narrative information.

Conclusions: Our study shows promising results for strategies that might make PDAs

Glickman, Moshe

“Time varying boundaries in decisions between numerical sequences”

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Integration-to-boundary is a prominent normative principle used in evidence-based decisions to explain the speed-accuracy trade-off and determine the decision-time. Despite its prominence, however, the decision boundary is not directly observed, but rather is theoretically assumed, and there is still an ongoing debate regarding its exact form: fixed (time-invariant) vs. collapsing (time-variant), with empirical evidence producing mixed results. The first aim of the present study is to demonstrate that the algorithm of integration-to-boundary extends beyond the perceptual domain, to decisions between rapid pairs of numerical sequences (2Hz), and the second aim is to examine the boundary type, by directly monitoring the noisy accumulated evidence. In a set of two experiments (supplemented by computational modelling), we demonstrate that: (i) integration to time variant collapsing-boundary takes place (ruling out non-integration heuristic strategies), resulting in a performance that is 87% (group level) of that achievable by an ideal observer, (ii) participants can adaptively adjust their boundaries in response to reward contingencies, and (iii) the decision-boundaries increase in case of inconsistent information. These findings may contribute to the understanding of the algorithm that characterizes human decision-making, and have wide implications to topics such as optimality, decision flexibility and numerical cognition.

Glöckner, Andreas

“A Multi-national Investigation of Cross-Societal Punishment”

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We investigate cross-societal punishment and stereotypes about punishment in (according to age and gender) population-representative samples from ten different countries (N=1,904) including Sweden, Japan, Poland, Mexico, Germany, United States, Spain, Netherlands, Italy, and China. Persons interact with persons from all other nations in incentivized one-shot two-person prisoners' dilemma games using a strategy method. Interactions are anonymous and only the players' nationality is mutually known. The possibility to apply costly peer-punishment is manipulated between subjects. We find consistent stereotypes concerning the expected tendency of persons from other countries to punish. Across countries, highest punishment is expected from persons from the United States, Germany and Poland. These punishment stereotypes in cross-societal cooperation are, however, wrong and correlate negatively with countries real punishment levels. We also observe substantial variations concerning the effect of punishment between countries. Contrary to the standard finding and our hypotheses, in several countries the possibility of punishment reduces transfer indicating potential crowding-out effects concerning cooperation. Several further variables showed qualitatively different effects as compared to typical student samples and substantial variations between countries. Implications for the development of a theory of cross-societal cooperation and punishment will be discussed.

Gluth, Sebastian

“Comparing dynamic models of altruistic decision making”

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In recent years, the sequential sampling modeling framework has been adopted to provide a mechanistic account of social preferences and to predict the outcomes and response times (RT) of altruistic decisions. However, a systematic comparison between the proposed models is lacking, and the contributions of different motives for altruistic behavior, such as fairness and efficiency, remain unclear. Here, we set out to fill this gap by investigating behavior in a two-alternative forced-choice Dictator Game, in which participants had to decide between two different allocations of money between themselves and an anonymous other person. A total of 70 participants were tested in the first session, and a subset of 45 participants were also tested in a subsequent session with more trials and individually tailored choice options. A variety of social preferences models were combined with the diffusion model to enable joint predictions of choices and RT, and hierarchical Bayesian modeling was used for parameter estimation and model comparison. We found that RT depended on differences between the choice options with respect to allocation to self, allocation to other, and fairness of allocation. Correspondingly, models that focus on either fairness or efficiency were outperformed by models that take both motives into account. The best performing model in both sessions quantifies social preferences as a weighted additive of fairness considerations and allocations for self and other. In addition, we found strong evidence for a starting point effect, indicating an initial bias towards the option offering a higher allocation for self. In conclusion, a comprehensive mechanistic account of altruistic choice requires the consideration of multiple drivers of social preferences.

Michael Goedde-Menke

“Being an Expert when there are no Experts: The Impact of Knowledge Illusion on Probability Weighting”

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We empirically show that individuals have distinct attitudes towards different sources of risk. This evidence contradicts the common theoretical assumption of risk constituting a unique source of uncertainty. Instead, the processing of objective probabilities in decisions under risk depends on an individual's knowledge illusion regarding the underlying source. We conduct an experiment involving three different gambles, i.e., risky games where objective probabilities are known, no further information-based advantages exist, and outcomes are independent of knowledge. The gambles are chosen based on their popularity (low, medium, high) to induce variation in participants' perceived expertise. The variation is an illusion though since all objective probabilities are explicitly provided. Our results indicate that individuals engage in less severe probability weighting if their knowledge illusion regarding a gamble is more pronounced. Our finding highlights the impact of perceived (but irrelevant) expertise on decisions under risk and offers a novel explanation for the home and local bias observed in equity markets.

Goksel, Selin

“Embarrassment Inhibits Medical Advice Seeking”

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Why do individuals search for medical information online instead of seeking advice from an expert? Across four studies (N = 1899), we find that people are more likely to avoid contacting a medical expert and instead search for information online when their conditions and symptoms are considered embarrassing. We propose that people hold a visceral negative reaction to the thought of communicating embarrassing information about the self to others, and this holds even when speaking to experts. Moreover, the cause of an illness does not need to degrade the perception of the self in order to be considered embarrassing: while people do avoid experts when their ailments violate self-care norms (e.g., improper hygiene), they also avoid speaking to experts if a symptom occurs on parts of the body considered to be embarrassing but do not otherwise reflect poorly on the patient. We additionally find that the effect of embarrassment is particularly strong when it is about the self, such that people are more likely to speak to an expert when searching for information on behalf of a friend than the self. Finally, we explore how doctors can present themselves in order to assuage people's concerns about revealing embarrassing information, and find that the more embarrassing the illness, the more that people prefer an asocial relationship with a medical doctor.

Gordon-Hecker, Tom

“It Wasn't Me: Having a default increases efficient (albeit inequitable) allocations”

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Previous studies have demonstrated that, when asked to choose between equity and efficiency when allocating resources, people may prefer equity over efficiency, even at the cost of discarding some resources. We ran two experiments in which we asked participants to choose between allocating a resource to one of two equally deserving recipients, or to discard it, and manipulated whether there was a default recipient or not, and whether allocators could use a random allocation or not. The results suggest that what people are really averse to is the responsibility for determining how inequity is implemented, i.e. who gets what. When a default receiver exists, and allocators do not need to perform the aversive task of choosing one of the two possible recipients, they are far more likely to accept inequity in order to maximize efficiency. We show that whereas most allocators prefer to use a random allocation in order to reduce their responsibility, this preference significantly reduces when they can stay with the default option. Moreover, whereas in more emotionally demanding situations (e.g., allocation of losses) randomization may be seen as less acceptable, reducing one's responsibility by staying with the default option is similarly effective in promoting efficiency both when allocating gains and losses.

Taken together, our findings suggest that people are indeed inequity responsibility averse and are willing to create inequity when they can attribute the responsibility to someone (or

something) other than themselves. When people can elude the psychological cost of being responsible for inequitable allocation of resources, they are more likely to be efficient and maximize society's resources.

Gordon-Hecker, Tom

“Randomizing the tracks: A robust preference for randomization over inaction and directed-action in moral dilemmas”

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We use modified versions of the trolley dilemma, in which decision-makers can randomize the trolley's path. We show many people prefer randomization to both inaction and directed-action, and we propose they prefer minimizing responsibility over following abstract moral rules.

Gourdon-Kanhukamwe, Amélie

“Boundary conditions of acceptability of nudges”

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While nudges have become a popular behaviour change intervention both in the literature (e.g. Cioffi, Levitsky, Pacanowski & Bertz, 2015) and in public policy (e.g., with the development of 'Nudge units'), empirical findings (e.g., Reisch & Sunstein, 2016) suggest that people find type 2 nudges more acceptable than type 1 nudges. In this project, I aim to test empirically some of the boundary conditions proposed to this preference: for example, Bovens (2009) suggested that type 1 nudges may be more acceptable when the social issue they address is urgent.

To achieve this, I first replicated Felsen, Castelo and Reiner's (2013) findings, using the same design and material. Findings supported that type 2 nudges are more acceptable than type 1 nudges, but also suggested that this preference is moderated by the nudge domain, in a different pattern from the original experiment.

In a second experiment, I focused on the responsible purchasing domain, as it yielded the strongest evidence for a preference for type 1 nudges in the first experiment. I then manipulated the social urgency of the nudged issue (responsible purchasing) by presented two different news conditions (between-subject). The nudge type was manipulated as in Felsen et al. (2013) and Experiment 1. Findings suggested that this boundary condition proposed by Bovens (2009) does not interact with the nudge type. Additionally, the preference for type 2 nudges was not replicated in Experiment 2.

There was therefore no empirical evidence to support Bovens' (2009) proposal that urgency of social issues could make type 1 nudges more acceptable. A further experiment will use a different manipulation of urgency, with base rates, to confirm that the latter is a reliable finding.

Gradwohl, Nico

“Probability matching and avoiding to share: Maximizing is adaptively decreased in a competitive social setting with learning agents.”

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In decisions under risk and uncertainty, others can provide valuable information or increase the amount of information and uncertainty. When learning to predict which of two differently likely and mutually exclusive events will occur, people frequently fail to maximize (i.e., exclusively predict the more likely event) and instead probability match (i.e., predict relative to the event probabilities). In social situations, choosing a less likely option can be adaptive to avoid having to share with others. Here we show that individuals adapt their behavior to their social context, whether they are aware of others' presence or not. In an online experiment on Amazon Mechanical Turk 310 participants played 200 trials of a binary prediction task in a social environment that included two artificial reinforcement learning players. We varied whether participants (a) shared the rewards from correct predictions with the artificial players or not and whether they (b) were unaware or aware of the artificial players' presence, or could see their current prediction, reward, and total reward. When rewards are shared and both artificial players tend to predict the more likely event, participants predict the less likely event more frequently than without shared rewards. If at most one artificial player tends to predict the more likely option, participants' choice proportions do not systematically differ between conditions. Effects do not depend systematically on the available social information. The findings are still compatible with the hypothesis that individuals probability match because they assume to be in a competitive situation. Overall, our results indicate that individuals may use strategies related to probability matching which help them to navigate an uncertain social world.

Gross, Jörg

“Individual Solutions to Shared Problems Create a 'Modern' Tragedy of the Commons”

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Climatic changes, population growth, and economic scarcity alone and together create shared problems that can be tackled effectively through cooperation and coordination. Perhaps because cooperation and coordination is fragile and easily breaks down, human societies also provide individual solutions for shared problems, like private means of transportation and protection, or privatized healthcare and retirement planning. What remains unknown is whether and how the availability of individual solutions, and the concomitantly reduced co-dependence on others, affects free-riding on others' cooperation on the one hand, and the efficient creation of public goods on the other. This we examined using a new experimental paradigm in which groups of individuals faced a shared problem and could use personal resources to solve it either individually or collectively. Across different cost-benefit ratios of solving the shared problem individually vs. collectively, individuals display a remarkable tendency towards group-independent, individual solutions. Such 'individualism' leads to inefficient resource allocation and coordination

failure. Only when cooperation can save more than 70% of the resources, groups start to coordinate on collective action. Peer punishment helps groups to coordinate on the more efficient collective solution but also leads to wasteful punishment feuds between 'individualists' and 'collectivists'. Our results indicate that societal and economic innovations that reduce co-dependence and reciprocity concerns can create a "modern tragedy of the commons." In the presence of individual solutions to shared problems, groups not only need to find solutions to the free-rider problem but also need to find a balance between self-reliance and collective efficiency.

Gutoreva, Alina

"Risky Choice from Social and Personal Experience"

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People can acquire new information either via personal experiences or from the socially transmitted experience of others. Social learning is learning that is influenced by observation of or interaction with another individual, or their products, whereas asocial or personal learning does not involve such social interaction. Here, we investigate one possible cause for Description-Experience Gap — that descriptions represent a social source of information, which leads to differential weighting of rare events. We add social information into an experience-based protocol to examine whether there is a potential difference in the risk preference and perception of rare events when learning from personal experience versus when observing experience of another person.

Two experiments examined risky choice when learning from personal experience versus when learning from directly observing the experience of another person. A decisions-from-experience procedure was used, where people learn about pairs of options by sampling. After sampling, people made a choice between the two options—where one option was typically safer and the other one riskier. On some rounds, participants instead observed samples drawn by another person (partner) and then made a final decision based on this social experience.

People trended toward choosing more riskily in the social condition than in the personal experience conditions, as though they were underweighting rare events less. This pattern in the social condition more closely resembles what is observed when people make risky decisions from description, suggesting that part of the description-experience gap in risky choice may come from descriptions acting as a transmitter of social information.

H

Haase, Niels

"Is there a desirability bias and if so, what motivates it?"

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50 years of research into the interdependence of probability and utility have found evidence for every combination of over- and underestimation of desirable and undesirable events' probabilities and produced a great number of theoretical accounts for these various biases. Much of this inconsistency is due a failure to differentiate between biases in information accumulation and a direct influence of desirability as well as to methodological shortcomings in measurement. Indeed, there is very scant evidence for truly motivated reasoning in the realm of subjective probability. This preregistered study employed a minimal experimental paradigm that is freed of all known confounds. Subjects were provided with an objective informational basis, that is, an icon array of 2,236 black and white squares indicating the occurrence or non-occurrence of a more or less undesirable event (between-subjects) and made probability judgments as percent estimates. The objective probability was additionally manipulated within-subjects (5%, 50%, 90%). In an online sample, (N = 415), four separate accounts focusing on various aspects of information framing and the role of the judge were pitted against a base-line condition. The results indicated that the probability of an extremely undesirable event tends to be overestimated in comparison to one that is less so, indicating pessimism. This trend, however, disappears when the judge herself causes the stochastic event to happen and it is actually reversed when she is affected by it herself, indicating optimism. This study presents reliable and unambiguous evidence for a causal influence of an event's utility on its subjective probability and provides insights into moderating motivational drivers.

Haase, Niels

"Pacioli and Pascal: Probability and Solving the Problem of Points"

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Subjects were presented with different versions of an unfinished game and asked to divide the stakes or bet on one of the players winning if the game were continued. Results point to a general misunderstanding of probability.

Hadjichristidis, Constantinos

"Diversity effects in probability judgment"

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Previous research has shown that the subjective probability of an event depends on whether its description mentions examples ("a randomly chosen undergraduate majors in biology or in any other science") or does not mention examples ("a randomly chosen undergraduate majors in science"). In three experiments we examined descriptions that mention examples and manipulated whether the examples are similar (e.g., biology, medicine) or diverse (e.g., biology, mathematics). Experiment 1 provided evidence for a diversity effect: descriptions

that listed diverse examples overall induced a higher probability judgment than descriptions that listed similar examples. Experiment 2 replicated the diversity effect and demonstrated that its roots are (partly) cognitive: descriptions that mentioned diverse examples activated more subcategories (but not more exemplars) of the target category than descriptions that mentioned similar examples. Experiment 3 investigated and ruled out the hypothesis that the present effect is driven by misinterpretation, and namely that descriptions that list similar examples are misinterpreted to refer to more exclusive categories. The present results highlight the role of categorization processes in probability judgment, and might translate into actionable strategies in domains that involve persuasion. For example, to gain public support for a particular proposal it might be better to list diverse (vs. similar) benefits associated with the proposal.

Hafenbrädl, Sebastian

“The business case for CSR: A trump card against hypocrisy?”

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Why do many companies talk about Corporate Social Responsibility (CSR) in terms of a business case? We show that from a company's perspective, using a pragmatic business case frame makes for a good impression management strategy. Building on literature about moral evaluations and hypocrisy, we propose that CEOs run the risk of raising expectations too high when talking about CSR in strongly moral terms and that audiences will see them as hypocritical when they then seem to fail to fulfill these expectations. Yet, if CEOs try not to raise expectations by not talking about CSR, they will be immediately judged unfavorably. Framing CSR in terms of the business case allows CEOs to avoid these problems, because audiences perceive CSR activities as less diagnostic of CEOs' moral character when framed in business case terms. We find support for our theoretical framework in two experiments (total N = 1659).

Hagmann, David

“The Hidden Cost of Soft Paternalism”

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A carbon tax is widely accepted as the most effective policy for curbing carbon emissions, but is controversial because it imposes costs on consumers. An alternative, “nudge,” approach promises smaller benefits, but with much lower costs. We propose that nudges aimed at reducing carbon emissions could have a pernicious indirect effect if they offer the promise of a ‘quick fix,’ and thereby undermine support for more impactful policies. Substantiating our concern, six experiments, including one conducted with individuals involved in policymaking, show that introducing a green energy default nudge indeed diminishes support for a carbon tax. Supporting the idea that nudges decrease support for substantive policies by providing false hope that problems can be tackled without imposing significant costs, we show that minimizing the perceived economic cost of the tax and disclosing the small impact of the nudge both eliminate crowding-out, without diminishing support for the nudge.

Hagmayer, York

“Does biomedical knowledge improve diagnostic decision making – a systematic review”

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There is an ongoing debate in medical education and decision making, if and how biomedical knowledge supports students and practitioners in diagnostic decision making. Theories on causal learning and reasoning and medical expertise suggest that biomedical knowledge as a form of causal knowledge should increase diagnostic accuracy. Until now, a review of empirical research addressing this topic is lacking. We conducted a systematic review, summarizing the literature published until October 2017. Fifteen studies with 17 experiments that studied the effect of biomedical knowledge on diagnostic accuracy in medicine were included and summarized with a narrative synthesis as well as several meta-analyses. A random effect model was used to estimate the mean effect sizes. Results showed that biomedical knowledge improved diagnostic decisions only if it was integrated with clinical knowledge during learning ($d=.55$). A separated presentation of the two kinds of knowledge did not lead to an improvement indicating that learners do not integrate clinical and biomedical knowledge themselves. Further analyses showed that the positive effect of integrated knowledge is probably not mediated by a facilitation of learning or recall of clinical features. These findings indicate that biomedical knowledge improves diagnostic accuracy, but only if it is actively integrated with clinical knowledge. Limitations of these findings were that most studies investigated students and sample sizes were small. Moreover, very few studies were designed to test theoretical hypotheses on why biomedical knowledge improves diagnostic accuracy. Hence, the question why only integrated biomedical knowledge has a positive impact on diagnostic accuracy remains unanswered and should be investigated further. A systematic review summarizes 15 studies investigating the effect of biomedical knowledge on diagnostic accuracy in medicine. Results showed that biomedical knowledge improved accuracy only if it was integrated with clinical knowledge during learning. The underlying psychological mechanisms remained unclear.

Hainguerlot, marine

“Physicians’ precautionary belief updating, overdiagnosis and overtreatment”

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In this paper, we study whether overtreatment is related to how physicians update their beliefs about the patient having a disease when new information, reassuring or alarming test results, is acquired.

We use data from a prospective, multicenter, cohort study conducted in 15 French pediatric emergency departments (ED). Physicians were asked to record the medical information they collected about febrile infants younger than 3 months ($N=1848$) from the admission to the discharge, including medical history, physical examination and laboratory test results. In addition, they were required to report their probability estimate that the infant had a bacterial infection (BI), on a visual analog scale from 0 to 100%, before (pre-test probability) and after (post-test probability) knowing the results from the laboratory tests that were

immediately available at the ED. Then, they reported their decision to treat with antibiotics or not. We used the results from the culture tests, which were not available at the ED, to determine whether an infant had a BI or not.

We find that physicians update their belief about the risk of BI to a lower extent in response to reassuring test results than alarming test results. Consequently, they over-estimate the probability that the infant has a BI when test results are reassuring. Furthermore, the more precautionary they are in their update, the more they prescribe unnecessary antibiotics. Our results suggest that overtreatment is related to precautionary belief updating.

Halali, Eliran

"Trust your gut: Intuitive mindset enhances the quality of trustworthiness forecasts"

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We tested the effectiveness of affective/intuitive, compared to analytical/deliberative, mind-sets in forecasting the trustworthiness of potential interaction partners. We focused on two difficult tasks with an objective accuracy criterion, which both require subtle affective cues to identify the trustworthiness of interaction partners. In three experiments participants were instructed to rely on intuitive or deliberative modes of thought. In Experiment 1, participants evaluated potential flatmates, whose verbal descriptions were balanced in their attractiveness, but differed in the computer-manipulated trustworthiness of their facial pictures. In experiments 2 and 3, participants viewed short videos of trust-game receivers (who participated in a past experiment) and they had to predict if those trust-game receivers reciprocated or not. We found a clear superiority of the intuitive mind-set in sensitivity to trustworthiness, suggesting that intuition promotes the sensitivity to trustworthiness cues of potential interaction partners. By contrast, the analytical mind-set resulted in predictions that were insensitive to trustworthiness information.

Halali, Eliran

"Trust your gut: Intuitive mindset enhances the quality of trustworthiness forecasts"

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We tested the effectiveness of affective/intuitive, compared to analytical/deliberative, mind-sets in forecasting the trustworthiness of potential interaction partners. We focused on two difficult tasks with an objective accuracy criterion, which both require subtle affective cues to identify the trustworthiness of interaction partners. In three experiments participants were instructed to rely on intuitive or deliberative modes of thought. In Experiment 1, participants evaluated potential flatmates, whose verbal descriptions were balanced in their attractiveness, but differed in the computer-manipulated trustworthiness of their facial pictures. In experiments 2 and 3, participants viewed short videos of trust-game receivers (who participated in a past experiment) and they had to predict if those trust-game receivers reciprocated or not. We found a clear superiority of the intuitive mind-set in sensitivity to trustworthiness, suggesting that intuition promotes the sensitivity to

trustworthiness cues of potential interaction partners. By contrast, the analytical mind-set resulted in predictions that were insensitive to trustworthiness information.

Halevy, Anat

“A spillover effect of altruistic cheating: When benefiting others goes wrong”

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In three experiments, we examined how altruistic cheating; i.e., unethical behavior for the benefit of others, might contribute to the diffusion of ethical dissonance. Specifically, we suggest that justifications for altruistic cheating might weaken the moral shackles and spill over to self-serving unethical acts. Results revealed that participants who had an opportunity to cheat for increasing donation to charity, later demonstrated an increased tendency to cheat for their own profit. We termed this ‘the spillover effect’ of altruistic cheating on subsequent self-serving unethical behavior. We also differentiated between this effect and moral licensing, showing that the latter serves as a stronger justification than altruistic cheating which may still inflict an ethical dissonance, and therefore does not lead to high cheating scores as good deeds not stained by cheating.

We then demonstrated that when the ability to altruistically justify one’s previous unethical act was restrained, less selfish unethical behavior ensued, suggesting the spillover is mainly governed by feelings of entitlement to cheat. Understanding how to disentangle the virtues of benevolent behavior from its hidden destructive forces may take us one step further towards developing a more moral-supportive environment.

Halvor Teigen, Karl

“Do people think of random outcomes as unlikely?”

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Most people agree that a blind draw of a marble from an urn will produce a random outcome. But is perceived randomness affected by the number of marbles? It appears that a winning draw will be considered more random with 10 than with 90 winning marbles (out of 100). We explored in six experiments how perceived degree of randomness of an event is related to the perceived likelihood of the same event, specifically whether low-probability events were viewed as more random than comparable events that were judged (rightly or wrongly) to be more likely. The events to be judged ranged from outcomes of lotteries to bus arrivals, coincidental encounters, unexpected exam grades and the outcome of football matches between strong and weak teams. Unlikely coincidences were perceived to be more random than the same events presented in a more likely frame. For instance, a drunk driver crashing with a sober driver is perceived as more likely and less random than a sober driver crashing with a driver that is drunk. Only extremely deviant outcomes happening for unclear reasons made some people reject the randomness account, presumably believing such extreme events must have a causal explanation (and thus not so unlikely, after all). We conclude that,

under most circumstances, people associate randomness with low probability events, indicating outcomes that “could not be predicted”.

Haran, Uriel

“Functional overconfidence: When (and why) advisors exaggerate stated confidence”

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Confidence statements are regarded as means of conveying and measuring uncertainty. We suggest that motivations related to one’s role in a social exchange prescribe additional functions for expressed confidence. When advising others, people seek to be informative by providing relevant, accurate information, but also to simplify their advisees’ decisions by reducing their experienced uncertainty. When advisors are well informed and likely to provide accurate advice, they can effectively reduce the uncertainty of their advisees by exaggerating the confidence they express in their advice. Expressing overconfidence would be less likely when advisors’ certainty is low, augmenting concerns of misleading. In three experiments, we found that advisors stated higher confidence in their recommendations, compared with independent opinion providers, but only in high-certainty situations. These differences were associated with the motivation to be helpful to advisees, which became more important, and more strongly linked to expressed confidence, in high-certainty environments.

Harris, Chris

“Biased preferences through exploitation: The effects of skewed environments on information sampling”

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A fundamental tradeoff all agentic organisms face is the choice between information search and reward maximization. Only through explorative information search does one acquire more knowledge about an environment and learn, e.g. about areas to avoid or where the best food sources can be found. Once a certain option is regarded as superior, however, one can then commit to this option in order to maximize the rewards in the here and now. Balancing these two interests, exploration and exploitation, becomes relevant in all repeated choices and is a necessity for optimal learning. While exploitation can turn out to be suboptimal because one does pick up less easily on more attractive alternatives, we argue here that exploitation in itself can lead to illusions of contingencies between options and rewards. Specifically, we argue that exploitation leads humans to maintain biased beliefs regarding the rewards options offer, even when those options are in fact equally rewarding. We further argue that this is dependent on the environment a decision maker is in.

In two experiments, initial evidence was set up for participants to perceive an actual contingency (Experiment 1) or infer an erroneous contingency (Experiment 2) that made one option look more rewarding. In a subsequent free-sampling phase this led to a sustained bias toward this option when the environment was reward-rich, but not when it was reward-

impoverished, even though the two options were equally rewarding in this phase. We argue that biased sampling in reward-rich environments could be responsible for false beliefs about the outcomes of behavioral options and discuss this in relation to social information exchange (impression formation and confirmation bias) and health (alternative medicines).

Harris, Adam

“Challenges for the measurement of optimistic belief updating”

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How people update beliefs is a longstanding and central question in neuroscientific and psychological inquiry. Accurate beliefs are critical to effective decision making. A recent research paradigm has suggested that people are optimistic in their belief updating, such that they update more from good than bad news. This research also identified a variety of neural mechanisms associated with this optimism. A subsequent critique raised questions over the status of such optimistic belief updating and, necessarily, with the interpretation of the neuroscientific data. Consequently, new computational methods (based on principles of Bayesian updating and reinforcement learning) have been advanced to study the phenomenon. This talk evaluates these methods. Simulations demonstrate conceptual problems associated with these new methods, problems which mean that nothing can be learnt regarding the status, or neural correlates, of ‘optimistic belief updating’ from the research conducted to date. These simulations also highlight the disconnect between reinforcement learning and normative, Bayesian, belief updating. We conclude by outlining necessary steps to guide the development of a suitable method for measuring optimistic belief updating.

Hart, Einav

“The Relational Concern model: Negotiating for Services versus Products”

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Individuals obtain many consequential outcomes through negotiation. Negotiators aim to advance their own economic interest, but also to build trust and relationships. We challenge the implicit assumption in the negotiation literature that economic concerns and relational concerns are orthogonal. When the negotiation involves the provision of services, the negotiation process may affect relational outcomes that influence productivity. As a result, the negotiation itself may change the service and the economic value of the agreement. We show that in service negotiations, individuals need to build a collaborative relationship through the negotiation process in order to advance their economic interests. Across laboratory and field studies, we demonstrate that individuals negotiate less aggressively for services than for goods, because they fear that negotiating may harm relational outcomes. Our investigation underscores the endogenous importance of negotiators' relational outcomes to their economic outcomes, in particular when the negotiation involves services and employment.

Harvey, Nigel

“Ethical decision making: Effects of social influence”

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Are we independent ethicists or are ethical decisions subject to social influence? Such influence may be explicit, based on information about what other people would do. Alternatively, it may be implicit and dependent on the prevailing moral climate within a group.

To study explicit social influence, we used a drone warfare scenario in which people making sacrificial decisions under outcome uncertainty were told what percentage of people in their unit agreed with them. Participants conformed to the majority regardless of the ethical doctrine that their decisions implied they held. This conformity was greater when outcome uncertainty was higher.

In our study of implicit social influence, people were told they were living in an authoritarian state that acted repressively towards an ethnic group. In Scenario 1, they belonged to this group and made sacrificial decisions about whether to activate a sleeper cell to sabotage plans that the state had to act against the group. Doing so would risk the lives of the sleeper cell but could save lives that state action would otherwise threaten. In Scenario 2, other participants considered themselves as working for the authoritarian state. They made sacrificial decisions about whether they would activate a sleeper cell embedded with activists associated with the group in order to disrupt their plans to attack state facilities. We plotted the likelihood of sleeper cell activation against kill-save ratios associated with its activation. Scenario 1 functions were higher and steeper for Kurdish participants than for participants with ethnicities associated with peaceful states (e.g., Chinese, White-British). Furthermore, for Kurdish participants only, functions for Scenario 1 were higher and

Herberz, Mario

“Choice architecture in environmental car choices: Unit familiarity increases sensitivity to attribute differences”

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Although there is a large consensus about anthropogenic climate change in western societies, consumers are reluctant to purchase environmentally friendly products. Especially in the transportation domain, consumers refrain from adopting energy-efficient technology such as electric vehicles (EVs). We argue that consumers' resistance could partially stem from unfamiliarity with kWh as a unit of consumption. When considering to buy an EV, consumers cannot compare levels of consumption across technologies without investing considerable effort to translate the unfamiliar unit of kWh/100 km into the familiar unit of liters/100 km.

We hypothesized that displaying consumption in kWh / 100 km reduces consumers' sensitivity to differences in consumption and environmental images. In order to test our assumption, we conducted two studies where participants compared pairs of cars on their perceived level of consumption and their environmental image. We experimentally manipulated the unit in which consumption was displayed (liter vs. kWh) between subjects.

In Study 1 (N = 161 German car drivers), we found that the use of the less familiar unit of kWh / 100 km reduces consumers' sensitivity to differences in consumption. We found the same reduction in sensitivity for perceived environmental images.

In Study 2 (N = 122 UNIGE students), we replicated our findings from Study 1. Additionally, we identified self-reported processing fluency as a mediator of the relationship between unit of consumption and differences in perceived consumption and environmental images.

Our findings support the use of liters fuel equivalence / 100 km to display the energy consumption of EVs. This allows consumers to process their efficiency advantage

Hertwig, Ralph

"The Role of Beliefs and Complexity of Lotteries in Decision from Experience"

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Our goal is to compare decisions from description and experience for a broad range of lotteries of varying complexity, and examine the effect of complexity on decision making under risk and uncertainty. We employ a within-subjects experiment, where each participant must make decisions from both description and experience, and also separately elicit subjective probabilities about the likelihood of events when learning from experience. Our experiment covers four different types of lottery pairs arising from the combination of simple (up to two outcomes) versus complex (up to four) lotteries and decision from description versus experience. We model decision makers as using one of three decision models (Rank-dependent expected utility, Mean-Variance-Skewness preferences, Expected Utility theory) and estimate the use of these models for each of the above four types of lotteries. We find significant differences across these four types. RDEU is dominant in simple decisions from description, still important in complex decisions from description, but falls significantly in importance for both simple and complex decisions from experience. In decisions from experience, most subjects are classified as using the Mean-Variance-Skewness model, surpassing Rank-dependent expected utility. Furthermore, we also find significant within-model parameter heterogeneity across the types of lotteries. We confirm the existence of a decision-experience gap in complex lotteries, and provide new evidence about how this depends on the characteristics of the lottery pairs. We conclude that both the complexity of lotteries and their presentation significantly affect decision making processes, that is, the models proposed in the literature have different scope.

Hilbig, Benjamin

“What if we studied real choices? A critical assessment of consumer choice research”

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Consumer choice is one of the most prominent applied areas of decision making. At its core, it aims to understand and predict real-life choices that are typically associated with certain consequences (e.g., paying a price, consuming a good etc.). However, the experimental paradigms used in consumer choice research are commonly devoid of said consequences. As we show in a literature review of studies ($k = 446$), consumer research rarely implements costs (losing a previously earned endowment) or gains (actually receiving what was chosen) to structurally resemble real life consumer choices. In an experiment ($N = 669$), we test whether presence versus absence of these consequences systematically affects observable behavior. Findings reveal that consequences affect both the overall willingness to purchase a good and the relative preferences for different products. In other words, hypothetical scenarios – as studied almost exclusively in consumer choice research – lead to systematically different choice behavior.

Himmelstein, Mark

“Identifying Skilled Forecasters: Psychometric and Longitudinal Approaches”

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A number of recent studies have identified geopolitical forecasting accuracy as a stable trait, wherein some individuals consistently perform better than others. Various dispositional variables have been linked to forecasting accuracy. We validate and extend the work on identifying forecasting skill using data collected during the first year of the Hybrid Forecasting Competition (HFC). The HFC program seeks to develop and test hybrid geopolitical forecasting systems that integrate human and machine forecasting components to create maximally accurate, flexible, and scalable forecasting capabilities. In the primary analysis, Item Response Theory (IRT) was applied to psychometric inventories to assess their utility and criterion validity in predicting forecasting accuracy. Two crucial constructs emerged: quantitative reasoning and political knowledge. A reduced 20-item measure was shown to have virtually identical predictive validity as the original 105-item psychometric battery administered. In a separate analysis, IRT was also applied directly to accuracy measurement to obtain a more predictive measure of future forecasting ability. A third analysis examined the relative longitudinal utility of various predictors at different time points throughout the competition. Psychometric scale scores were most predictive early on, but as past accuracy data accumulated over time, the marginal value of psychometric measures diminished. Finally, we are working to replicate results on a separate sample of forecasters from the same forecasting competition.

Himmelstein, Mark

“Anxiety and the Framing Effect: Intolerance of Uncertainty Predicts Frame Consistent Choice Patterns”

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The framing effect is a well-known decision bias in which people tend to express risk-averse preferences when problems are framed in terms of gains, but risk-seeking preferences when problems are framed as losses. Drawing inspiration from observations that the neurocircuitry active during frame-consistent decision making is similar to a network that plays a strong role in the development and maintenance of anxiety, the primary focus of this study was to examine whether different measures related to anxiety predicted more robust frame-consistent choice patterns. The results confirmed that intolerance of uncertainty (IUS) predicted greater risk-aversion for gains and risk-seeking for losses. Results suggested that higher IUS scores predicted a more reflexive decision-style in the gain frame; but that in the loss frame, this reflexive decision style was more prominent across all levels of IUS. Results also showed significant moderating effects of the drive and fun seeking subscales of behavioral activation (BAS-D and BAS-F, respectively) on the relationship between behavioral inhibition (BIS) and the framing effect, but there was no direct relationship between BIS and the framing effect. The reward responsiveness subscale of behavioral activation (BAS-R) predicted greater risk-seeking for losses but showed a smaller effect on risk-aversion for gains and no interaction effect with BIS. Finally, small but statistically significant effects were identified for the respective differences between certainty and probability elicitation tasks, and between framing and reflection tasks.

Hochman, Guy

“Revenge is not blind – Testing the ability of retribution to justify dishonesty”

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The current study tests the power of revenge as a justification mechanism for cheating behavior while decreasing its associated guilt feelings. Participants were required to accept or reject fair vs. unfair offers in the Ultimatum Game. After responding, the participants learned that the proposer was also honest or not, and were given a chance to retaliate by cheating back the proposer in a subsequent task. Then, they underwent a lie detection test regarding their behavior in the retaliation task. Similar to previous studies, participants rejected more unfair proposals, regardless of their honesty. By contrast, participants cheated proposers who were unfair less, but cheated more those who were dishonest. This later finding was prominent only among participants who haven't already punished proposers by rejecting their offers. Importantly, arousal level was lower for participants who cheated to a large extent a dishonest proposer relative to those who cheated to a small extent. A reverse pattern was found for those who cheated an honest proposer. These results indicate that revenge is not blind. People tend to punish unfair offers directly by rejecting the proposal, but dishonesty is punished later on by guilt-free cheating

Hod, Nurit

“Judging those you cheat: Consumers’ reviews following unethical consumption”

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Unethical consumption is a widespread phenomenon, with high financial costs to firms and society at large. Research on unethical behavior has focused mainly on the antecedents of such acts, and how they can be mitigated (Mazar, Amir, & Ariely, 2008; Shalvi, Gino, Barkan & Ayal, 2015). However, research has overlooked the possible impact of ethical behavior on consumers' subsequent satisfaction and reviews. Recognizing that many consumers obtain a product unethically, it is unclear (empirically or theoretically) how such consumers view the vendors they mistreat. On the one hand, unethical consumers experience guilt that leads them to reparative acts such as positive product reviews (Cohen, Wolf, Panter & Insko, 2011; Xu, Be'gue & Bushman, 2012). On the other hand, unethical consumers may 'blame' the company for their ethical digression, causing them to further mistreat the company by reporting lower satisfaction levels and less positive reviews (Barkan, Ayal, Gino & Ariely, 2012).

In two studies we show that participants who used a product (an app based on the dots task) that allowed cheating, and exploited it for higher earnings, rated the app less favorably than participants who earned similarly without cheating. The ability to justify cheating moderated the effect. When justification was not hard to make, increased cheating was associated with lower satisfaction level. By contrast, in the hard to justify condition (i.e. easiest task), cheating rate was not associated with satisfaction level.

These early results reveal unexplored dimensions that may be important for marketers, firms, and policy makers in terms of managerial strategies, marketing strategy and brand perception. The research is novel in considering unethical behavior as a cause, rather than an effect.

Hogarth, Robin

“Regression toward the mean: What do people understand? What to do about it?”

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The failure to recognize regression toward the mean (RTTM) is commonly attributed to misunderstanding of statistical error and motivations to identify causal reasons. We seek to illuminate these explanations. We report three experiments. Participants were MBA students (229 in total). Experiment 1 was a familiar task: to predict a student's rank in a final exam on the basis of the mid-term rank. Experiment 2 was a context-free version of the same task. Both experiments had 2x2 designs varying the accuracy of the predictor variable and whether this came from the upper or lower extremes of its distribution. After making predictions, participants provided written explanations. In Experiment 3, participants faced a diagnostic task. Given knowledge of the student's mid-term and final ranks, participants were asked to provide explanations. On aggregate, participants in Experiments 1 and 2 made predictions consistent with RTTM, e.g., mean judgments were more regressive with poor as opposed to good predictors. But there were inconsistencies with respect to extreme

observations. At the individual level many participants failed to respect the implications of RTTM. We conducted a content analysis of the explanations distinguishing between whether these were statistical or causal in nature. In Experiment 1 (with context) 52% were statistical, and 48% causal. In Experiment 2 (no context), causal explanations were still surprisingly high at 25%. In Experiment 3, once again we observed a high rate of causal stories (60%). We conclude that even with a quantitatively sophisticated population, the lure of causal explanations is strong and may outweigh rational, statistical analysis. An important task is to define heuristics that people can employ for making these judgments.

Hosch, Ann-Katrin

“Now categorize again! – Forced strategy change in an unsupervised categorization task and its effect on discovering an underlying structure”

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The study investigated which strategies are employed by participants when asked to categorize stimuli differently every block without receiving feedback. Unidimensional and two-dimensional strategies (conjunctive rules and information integration) were distributed evenly across blocks. An underlying structure was not learned.

Hoyer, Karlijn

“The effect of dispositional greed on trading behavior”

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Questionable financial practices by greedy Wall Street bankers are often mentioned as one of the root causes of the 2008 global financial crisis that led to, among other things, increased unemployment and business failures (see, for example, Dalai Lama, 2009; Munasinghe, 2010; Suranovic, 2010). Yet, there is surprisingly little empirical research investigating the trading behavior of greedy individuals in stock markets. In our laboratory study (N = 127), we test how individual differences in greed relate to buying, selling, pricing, and (limit / market) ordering behavior in asset markets, and to the occurrence of asset market bubbles. We present results from 15 experimental asset markets with a constant fundamental value, closely mimicking the design of Weitzel et al. (2018). Using multilevel analysis, we found that greedy people were more likely to sell their assets at higher prices. This result is driven by market orders, rather than limit orders, meaning that greedy individuals are quick in identifying and accepting higher priced buying orders submitted by other traders. We found no effect of dispositional greed on other aspects of market behavior and long run profits. Our research could not confirm that the financial crisis could have been caused by bankers' greed.

Ideno, Takashi

“Decision style and time perspective in multi-attribute choice”

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This study investigated the relationship between decision making types and time perspectives using the multi-attribute decision-making scale and the ZTPI. One thousand and six hundred Japanese participated in the internet survey. The result indicated that the decision-making types had close relationships with time perspectives.

Ilkink, Iris

“The role of time ambiguity in intertemporal choice”

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Although time ambiguity (i.e., uncertainty about when an outcome will occur) is ubiquitous in real-life, its behavioral and neural effects remain unknown. In study 1, we developed a novel intertemporal fMRI choice task in which participants (N=24) made choices between sooner-smaller (SS) versus later-larger (LL) monetary rewards with time ambiguity placed on the SS, LL, both, or neither (e.g., €30 in 1-9 or 5 weeks vs. €50 in 11-19 or 15 weeks). Overall, participants preferred options with exact delays over those with ambiguous delays, displaying time ambiguity aversion. Presence (versus absence) of time ambiguity was associated with increased intraparietal sulcus and decreased ventromedial prefrontal cortex activation, and individual time ambiguity preferences modulated dorsolateral prefrontal cortex and insula activation during subjective value (SV)-coding. Lastly, computational choice models suggested that ambiguity impacts the SV of options via time perception or via an additive ambiguity-related penalty term. In online study 2 (preregistered on <https://osf.io/rhau2/>), we aimed to replicate the time ambiguity effect and also investigate possible time ambiguity moderators. Participants (N=194) made hypothetical choices between a fixed SS and a LL that systematically varied in levels of time ambiguity, amount, and delay. We replicated the time ambiguity aversion effect for shorter (≤ 30 days) but not longer (90/180 days) delays. Furthermore, time ambiguity was less aversive when the ambiguity range included today (e.g., 0-20 days) compared to when not (e.g., 20-40 days). In conclusion, these studies provide the first behavioral and neural evidence of ambiguity aversion in the time domain, which likely contributes to shortsighted decisions beyond delay discounting.

Isoni, Andrea

“Tainted Nudge”

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We conduct five studies to investigate the possibility that prosocial nudges that result in private benefits are regarded less favourably than nudges that do not result in private benefits. We distinguish between a weak tainted nudge effect – a nudge motivated by prosocial concerns that results in profits is regarded less favourably than the same prosocial nudge without profits – and a strong tainted nudge effect – a nudge motivated by prosocial concerns that results in profits is regarded less favourably than the same nudge motivated by profits without prosocial benefits.

Studies 1, 2 and 3 present participants with a newspaper article describing a University deploying a nudge either to encourage healthy eating or to lower the cost of meal provision. In some conditions, this main motive is accompanied by a secondary one (either lower the cost of meal provision or encourage healthy eating). In each of the resulting four conditions, participants rate the initiative with respect to its morality and prosociality, and express their support for it. The results are consistent with a weak tainted nudge effect, but not with a strong one.

In Studies 4 and 5, the prosocial motive is stated by the University as the main motive, but the nudge is in fact motivated solely by profit considerations. Participants also rate the honesty of the initiative. A strong tainted nudge effect is found for honesty, morality and prosociality (only in Study 4), but not for support.

Overall, our findings suggest that nudges can be tainted by profit motives. However, their social value is recognised, at least to the extent of achieving the support of the public, even when the nudger is not considered honest, moral or prosocial.

Iyamabo, Jeremiah

“Price-Denomination Effect”

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We investigate whether consumer choice of which denomination to purchase with, which product to buy (more expensive or cheaper), and which means of payment to use (debit card or cash) is influenced not only by the denominations at hand but also by the price information they encounter. Across five studies ($n > 2900$), including online, lab and field studies, we find that consumers violate the descriptive invariance principle by consistently choosing to purchase with denominations that (closely) match a certain price. We further show that given the same budget, when selecting which of the two products to buy consumers are more likely to purchase a product price of which matches the denomination they possess even if it is a more expensive product. We also show that consumers choose to use cash over debit card for payment when the denomination at hand matches the price of the product, and reverse the preference for debit card over cash when there is no match between price and

the denomination people hold. We conclude by discussing theoretical and practical implications of the results.

Izydorczyk, David

“Simulating the Ecology: Using the BIAS model to simulate and explain contradicting evidence of the out-group homogeneity effect, the intergroup bias, and the density hypothesis”

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Results of a simulation study suggest that the contradicting findings of people judging their in-group as more differentiated and more positive as well as positive information being less differentiated than negative information can be explained by the BIAS model.

J

Jekel, Marc

“Relation between Parameters of the Parallel Constraint Satisfaction Network Model of Decision Making and Other Individual Differences”

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The parallel constraint satisfaction model of decision making (PCS-DM) has been proposed as a formal model of probabilistic reasoning and decision making (Glöckner & Betsch, 2008; Glöckner, Hilbig, & Jekel, 2014). The model assumes that participants automatically weight and integrate all available pieces of information and partially distort information in the decision process for reaching maximally coherent interpretations of evidence for choice options. The model has two individual free parameters: sensitivity to differences in validities P and preference-consistency for options λ . Based on participants' probabilistic inferences in a correlational online study, we individually fitted the two parameters and tested in how far they relate to other personality constructs as predicted (e.g., HEXACO, cognitive reflection, numeracy, risk aversion, and loss aversion).

Juanchich, Marie

“Are two heads better than one in social care?”

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In two experiments, we investigated whether social workers make better decisions – defined by compliance with professional standards – either individually or jointly with a supervisor. Supervision did not improve decision-making quality.

Juanchich, Marie

“Effect of the directionality of verbal probabilities in a shoot/don’t shoot task”

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Past research has shown that framing uncertainty using the directionality of verbal probabilities affect decision making in vignette studies. We tested the effect of directionality in a “decision based on experience” methodology, where participants could experience the decision situation and the consequence of their decision.

In three experiments (N = 87, 75 and 55) participants made a series of decisions on whether to shoot a suspect or not based on a prediction. In all experiments the procedure of each decision trial was the same: participants read a prediction that quantified the risk of the suspect having a gun, then, participants were shown the suspect (with a gun or not) and had a second to decide whether to shoot or not, followed with the provision of feedback. The probability of the suspect having a gun was calibrated onto the probability conveyed in the prediction. We manipulated the probability conveyed by the prediction and its directionality in a 4 (probability level: very low, low, high, very high) × 2 (directionality: positive vs. negative) within-subjects design in which participants made 8 decisions per prediction, totalling 64 decision trial organised in 8 blocks of the 8 experimental conditions. In Experiment 2, we also manipulated the degree to which participants could see the item that the suspect hold and in Experiment 3 we withdrew feedback.

Directionality and probability conveyed had an effect on decision in the three experiments. The effect of directionality was the same whether the image of the suspect was net or blur and across blocks of decisions. However, the effect of directionality was larger when we withdrew performance feedback in Experiment 3 compared to Experiments 1 and 2 (+4%, +3% and +13%) indirectly pointing out the role of experience.

K

Kanay, Ayşegül

“Making the carbon basket count: Enabling sustainable online grocery shopping through goal setting”

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Numerical and other kinds of product carbon labels have been proposed to communicate carbon footprint information to consumers doing their grocery shopping. However, consumers do not always use this information in their decision-making due to inability to comprehend this information in a way that can influence their decision-making. We tested the effects of product-level and basket-level CO₂ information on consumer behaviour and representations of product CO₂ footprint in a high-fidelity experimental online shopping platform. Moreover, using insights from Goal Setting Theory we introduced an aspiration level, i.e. a sustainable goal, supported by an injunctive norm to the basket-level representations. We found that basket goal setting (in the form of feedback with respect to a

feasible sustainability goal supported by an injunctive norm) led consumers to reduce the carbon footprint of their baskets (regardless of whether the basket CO2 footprint was presented in a numeric or graphic form) and facilitated more accurate learning of product carbon footprints. Product level CO2 footprint information whether in numeric or colour-coded form had no effect.

Kareev, Yaakov

“Myopic reactivity in repeated choice: The case of competing with others for a scarce, unevenly distributed resource”

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Foraging for a scarce resource takes place when fewer resource-units than agents are distributed among several locations and agents choose at which location to look for the resource. But, how do foragers distribute themselves over the different locations? Optimal foraging theory postulates that the distribution of agents should match the distribution of resource-units (the ideal free distribution; IFD), but research with animals and humans has revealed undermatching at the location at which the resource in question is most abundant. For the IFD to be reached, full information about other foragers' choices and outcomes is required, information that is usually not available. We conducted a theoretical analysis of the implications of relying on different levels of information: on the incomplete, but still valid information usually available in foraging scenarios and on full information. This analysis demonstrates that myopic reactivity to disappointment and regret, which are likely to arise in the wake of incomplete information, leads to undermatching. Behaviors driven by disappointment and regret are shown to depend on both the distribution and the abundance of the resource. However, those different feelings lead to different degrees of undermatching. Four experiments employing incentivized repeated choices were conducted. The information provided to participants, the number of locations, and resource abundance were manipulated to test the predictions of the models. Analyses of aggregate choice probabilities and trial-to-trial choice dynamics indicate that myopic reactivity to regret provides the best explanation for the observed data. With more information available, behavior matches more closely the IFD predictions.

Karl, Thomas

“Language and Punishment”

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The use of foreign languages is widespread and is an important part of communication not only in international politics and business, but increasingly so on the internet. A large amount of research on bilinguals has found foreign language effects in the context of individual judgement and decision making: when the environment is in a foreign language as compared to the native one, participants tend to be less subject to common biases such as loss or risk aversion, to perceive a greater emotional distance to the context, and to rely more on deliberate cognition. Moreover, individuals seem to be less judgmental of norm

violations when they are informed of such in a foreign language . In this paper, we focus on social interactions in the context of norm considerations. In particular, we study the effects of foreign language use on dictator giving and second party punishment in the context of a classic dictator game. Overall, we find no main effect of foreign versus native language on giving and punishment behaviour. Instead, we find foreign language affects participants asymmetrically conditional on their social value orientation. The foreign language effect seems to increase the difference in behaviour between prosocial and prosocial individuals in both, dictator giving and punishment of norm violations. The proposed mechanism relates to the social intuitionist model stating that moral decisions are often the result of automatic responses. In line with previous research, a foreign language context could decrease deliberative reasoning and thereby leading to more intuitive choices expressing inherent preferences. We discuss related implications for contexts such as politics, business, and integration. This project studies the effects of foreign language use on dictator giving and second party punishment. The foreign language seems to increase the difference in behaviour between prosocial and prosocial individuals in dictator giving and punishment of norm violations.

Kaszas, Daniel

“Investigating the effect of different price paths on subsequent risk taking”

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A laboratory experiment investigated the effect of experiencing a gradually unfolding market downturn on later risk taking, compared to a more rapidly developing decline of the same magnitude. Experiencing a more protracted decline leads to higher subsequent risk aversion.

Kause, Astrid

“Consumers’ perceptions of rules for reducing carbon footprints of food”

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Consumers’ food choices substantially influence the carbon footprint associated with food production and consumption. Environmental and climate researchers have identified effective rules for reducing the carbon footprint of consumer food choices, such as eating seasonal produce and limiting consumption of red meat and dairy. In a national UK survey, we examined whether consumers were aware of the most effective rules for reducing the carbon footprint of food choices. On average, our participants knew 1-2 rules, which were relatively ineffective for reducing the carbon footprint of food choices. Even participants who self-identified as pro-environmental did not always generate the most effective rules. We also asked participants to estimate, either in grams of greenhouse gas emissions or percent change, how much carbon footprints would be reduced by implementing specific rules. Those who were asked to make estimates in grams (which is the prevalent unit for describing carbon footprints in environmental sciences) were less accurate than those who made estimates in percent change. Our findings suggest a need for interventions that help

consumers to identify more effective rules for reducing the carbon footprints of food choices. Communicating these in percent change likely makes rules easier to understand, and should allow consumers who are motivated to reduce the carbon footprint of their food choices to do so more effectively.

Kirgios, Erika

“Choice Bracketing and Its Implications for Gender Diversity in Organizations”

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Past research has shown that when consumers make multiple decisions simultaneously, they choose more diverse product bundles than when making the very same decisions one at a time. We extend this literature on broad versus narrow bracketing from the selection of products to the selection of people. Leading explanations for why broad bracketing produces more diverse product selections such as boredom and satiation do not apply to the selection of people. As a result, it remains an open question whether the diversity of groups formed under broad bracketing will exceed the diversity of groups formed under narrow bracketing. If broad bracketing increases the diversity of individuals included in selective groups, this has important implications for organizations seeking to diversity their ranks. In four preregistered experiments ($n = 2,176$) and an archival analysis of faculty hiring data, we show that people create more gender-diverse groups when making otherwise identical personnel selection decisions simultaneously rather than in isolation. A mediation study suggests that under broad bracketing, people focus more on emergent group properties, which drives these effects.

Klein Teeselink, Bouke

“Incentives, Performance and Choking in Darts”

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This paper examines the effect of incentives on the performance of darts players. We analyze four data sets comprising a total of 123,402 darts matches of professional, amateur and youth players. The game of darts offers an attractive natural research setting, because performance can be observed at the individual level and without the obscuring effects of risk considerations and the behavior of others. We find that amateur and youth players perform better under moderately higher incentives, but choke when the incentives are really high. Professional players similarly display better performance under higher incentives, but appear less susceptible of choking. These results speak to a growing literature on the limits of increasing incentives as a recipe for better performance.

Kobis, Nils

“Social norms of corruption in the field – Posters can help to reduce bribery in South Africa”

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Corruption marks a major societal challenge. Although many corrupt practices such as bribery are outlawed in national codes of laws, stark differences in (perceived) corruption levels persist around the world. To explain this gap between legal norms and actual

behavior, the current corruption literature emphasizes the importance of social norms, the unwritten rules that guide behavior. Recent lab research suggests that short social norms messages can reduce people's perceptions of descriptive norms about bribery and lower their own inclination to bribe. In pursuit of first field

Kogler, Christoph

"Timing of Audit Feedback Affects Tax Compliance and Reaction Times"

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Previous studies suggest that delaying feedback on tax audits results in higher levels of tax compliance compared to immediate feedback, which is the standard form of feedback in lab studies on tax compliance. The current study investigates the stability of the effect of delayed audit feedback on tax compliance. In an incentivized experiment participants were either assigned to a delayed feedback condition, in which information on the occurrence and the outcomes of audits was only communicated after the last of 18 rounds of taxpaying, or an immediate feedback condition, where the respective information was reported directly after each round. In addition, tax rates (10%/30%/50%), audit probabilities (5%/15%/25%), and fine levels (1.5 x evaded amount/2.5 x evaded amount) were varied within a repeated-rounds design, since these factors are known to have a strong influence on tax compliance. The results reveal that compliance in the delayed feedback condition was significantly higher than in the immediate feedback condition, and this effect developed over time. In addition, higher tax rates, higher audit probability, and higher fine levels resulted in higher tax compliance. Furthermore, a significant interaction of feedback type x audit probability was observed, with higher compliance in case of delayed feedback and the medium level of audit probability (i.e. 15%). Exploratory analysis regarding reaction times clearly showed that participants in the delayed feedback condition were slower in deciding whether to comply or evade. In combination with perceiving delayed feedback as more unfair as indicated in the post-experimental questionnaire, the difference in reaction times is interpreted as potential evidence of aversive uncertainty.

Kogut, Tehila

"Sharing and belonging: The recipient's group affiliation moderates the association between social acceptance and pro-social behavior"

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Research suggests that willingness to behave in a prosocial manner may be dependent on people's sense of belonging to their community in which they mutually seek to aid, to support, and care for each other. Therefore, when people feel excluded, their inclination to perform such behaviors are reduced or eliminated (e.g. Twenge et al., 2007). In the current study we suggest that rejected people's tendency to behave in a less prosocial manner (compared to more accepted people) is restricted to behaviors that are oriented toward the rejecting group or environment, and not when the pro-social behavior is directed toward outgroup recipients. We present two studies, examining actual sharing behavior (resource allocation) in two types of groups: In Study 1, Two hundred and fifty M-turk participants took part in the "cyberball game" (a virtual ball tossing game) in which they were either included

or excluded (ignored) by the other players in their group. Next, they played the dictator game with a partner from their group or with a member of a different group. In study 2 we examined teenagers' (M=267) actual social acceptance among their peers, and their sharing with a student from their ingroup (their own class) versus a student from the outgroup (a different class)). Results of the two studies reveal a similar pattern suggesting that rejected people behave in a less prosocial manner only toward recipients from their own group. However, when a recipient from a different group is considered, no significant difference was found between prosocial behavior of socially accepted and rejected individuals.

Kołodziej, Sabina

“Do we need good justifications to evade taxes?”

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The aim of the study is to analyze the impact of good justifications on the propensity to evade tax. Those justifications are aimed to distort immoral behavior and allow maintaining positive self-esteem by the individual.

Koppel, Lina

“Willingness to pain: Risk taking and probability sensitivity in decisions involving painful and monetary outcomes”

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Many everyday decisions involve non-monetary, affect-rich outcomes such as pain. Furthermore, people often make trade-offs between pain and money: we spend money on pain relief, take out sick days at work, etc. However, much of what is known about decision making comes from experiments involving monetary, affect-poor outcomes, often in the positive domain. To better understand decision making involving affect-rich outcomes, we conducted four experiments (total n = 174) in which we compared risky decisions involving painful outcomes to those involving monetary outcomes. In study 1, participants chose between two options that each involved some probability of monetary loss (affect-poor task) or painful heat stimulation (affect-rich task). They also indicated how much they were willing to pay to avoid some probability of pain or monetary loss. In studies 2 and 3, participants chose between pain and monetary loss with varying probabilities. In study 4, we compared monetary and painful decisions from description (in which magnitudes and probabilities were explicitly stated) to equivalent decisions from experience (in which magnitudes and probabilities were learned by sampling outcomes from each option). Overall, our results indicate that decision processes are similar for affect-rich and affect-poor outcomes. Specifically, they suggest that people can and do take probabilities into account when making decisions involving painful outcomes, at least when choice alternatives are presented numerically in a joint-evaluation format. This is in contrast with a large literature on probability neglect and the affect gap in risky choice, which has suggested that people largely ignore probabilities when choices involve affect-rich prospects. We compared risky decisions involving painful outcomes to those involving monetary outcomes. Our findings suggest that people do take probabilities into account for both painful and monetary

prospects, at least when choice alternatives are presented numerically in a joint-evaluation format.

Kopsacheilis, Orestis

"A "horse race" between elicitation methods of Cumulative Prospect Theory"

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Eliciting risk preferences is crucial for testing and applying economic models. Traditionally, measures of risk preferences focused on expected utility. Much empirical evidence, however, suggests that people often violate expected utility, and Tversky and Kahneman's Cumulative Prospect Theory (CPT, 1992) has emerged as the dominant descriptive model of risky choice. To facilitate its application, several methods to elicit its parameters have been proposed. Unfortunately, different methods lead to different estimates and it remains an open question which of the methods is to be preferred. In this paper, we design a systematic framework to 'horse-race' elicitation methods with an objective benchmark for performance: out-of-sample predictive accuracy. Given that true preferences cannot be observed, we consider the ability of measured preferences to predict future choices to be a reasonable second-best criterion to evaluate their performance. Using our framework, we examine elicitation methods for CPT that we consider representative for the state-of-the-art. The main difference between the considered approaches is whether they elicit preferences through the method of Certainty Equivalents or through choices between series of paired gambles. We test how preference parameters correlate across methods as well as which method produces the most accurate out of sample predictions. We test our conclusions using both standard Maximum Likelihood Estimations and Bayesian Hierarchical Modelling.

Krause, Jan

"Hyperopic Loss Aversion"

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The literature reports a tendency that future losses are discounted less than future gains, the so-called sign effect in intertemporal decision making. In this article, we study implications of the sign effect on risk taking: If future losses are discounted less than future gains,

mixed lotteries should become less attractive when payments are delayed into the future, a phenomenon we refer to as

hyperopic loss aversion. We provide a theoretical framework for

hyperopic loss aversion as well as empirical evidence: First, we replicate the sign effect under various incentive schemes. Second, we show that mixed lotteries become less attractive over time and this effect appears not to be driven by changes in risk preferences. Finally, we apply the notion of hyperopic loss aversion to investment decisions and show that it offers a novel behavioral explanation for the equity premium puzzle.

Kreiner, Hamutal

“COGNITIVE MECHANISMS UNDERLYING ATTRIBUTE FRAMING BIAS: THE CONTRIBUTION OF ATTENTION BIAS AND ASSOCIATION VALENCE”

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Attribute-framing bias (AFB) refers to individuals' tendency to evaluate more favorably positively (75% success) vs. negatively (25% failure) framed objects, although they are logically equivalent. In two studies we examined the relative contribution attention and associations mechanisms to AFB. Study 1 manipulated recipients' attention to the complementary aspect of the framed message either explicitly or implicitly. Participants rated different scenarios following a manipulation question that required them to calculate the complementary outcomes of either the target scenario (explicit) or a different scenario (implicit). The results indicate that shifting recipients' attention to the complementary frame moderated AFB compared to control conditions. Explicit attention-shift eliminated AFB, whereas implicit attention-shift moderately diminished AFB. Study 2 examined the effects of association valence on AFB by manipulating the valence the descriptors used in the scenarios independent of their outcomes. Outcome valence was manipulated by presenting either the positive (80% passed/didn't fail) or negative (20% failed/didn't pass) outcome. Descriptor valence was manipulated by using either a positive (passed/didn't pass) or negative (failed/didn't fail) term to describe the framed attribute. Experiment 2a used continuous descriptors, whereas Experiment 2b used dichotomous attribute descriptors. Outcome framing yielded a substantial effect in both studies whereas the descriptor effect was smaller or not significant. The findings will be discussed with regard to theoretical views that considered the contribution of attention mechanisms and association valence to AFB.

Krockow, Eva

“Antimicrobial resistance: a social dilemma problem?”

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Over-prescribing of antibiotics contributes to the growing threat of widespread antimicrobial resistance (AMR), estimated to overtake cancer as a leading cause of death. Antibiotic prescribing presents a difficult decision problem for medical practitioners, which has been characterised as a social dilemma. A familiar version describes the situation in which a public good (in this case, antibiotic efficacy) is exhausted due to over-exploitation. The dilemma arises because individuals are motivated to maximise individual payoffs, although the collective outcome is worse if all act in this way. In the choice context of AMR, antibiotics provide a safe and effective treatment option for patients with symptoms of bacterial infections, but at a population level, over-prescription reduces their effectiveness by facilitating the evolution of bacteria that are resistant to antibiotic medication. The dilemma is further complicated by the lack of visibility of AMR and the agency relationships inherent in the prescriber role. Consequently, only an adapted theory of social dilemmas can provide an integrative framework to characterise antibiotic overuse fully. Drawing on different theoretical perspectives and on empirical data collected across three different countries (South Africa, Sri Lanka and UK), this talk will discuss different strategies for shifting prescriber decisions and promoting a focus on the collectively desirable outcome of

conservation of antibiotic efficacy. Over-prescribing of antibiotics contributes to the growing threat of widespread antimicrobial resistance (AMR), estimated to overtake cancer as a leading cause of death. Antibiotic prescribing presents a difficult decision problem for medical practitioners, which has been characterised as a social dilemma. A familiar version describes the situation in which a public good (in this case, antibiotic efficacy) is exhausted due to over-exploitation. The dilemma arises because individuals are motivated to maximise individual payoffs, although the collective outcome is worse if all act in this way. In the choice context of AMR, antibiotics provide a safe and effective treatment option for patients with symptoms of bacterial infections, but at a population level, over-prescription reduces their effectiveness by facilitating the evolution of bacteria that are resistant to antibiotic medication. The dilemma is further complicated by the lack of visibility of AMR and the agency relationships inherent in the prescriber role. Consequently, only an adapted theory of social dilemmas can provide an integrative framework to characterise antibiotic overuse fully. Drawing on different theoretical perspectives and on empirical data collected across three different countries (South Africa, Sri Lanka and UK), this talk will discuss different strategies for shifting prescriber decisions and promoting a focus on the collectively desirable outcome of conservation of antibiotic efficacy.

Kubinska, Elzbieta

"Why we let ourselves be seduced by toxic derivatives?"

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We explain the popularity of "toxic" options. We hypothesize that numerical skills, processing information, risk attitudes, impulsivity, money attitudes are determinants of financial behavior, they mediate the relationship between financial knowledge and willingness to take position in toxic options.

Kugler, Tamar

"From Unethical Behavior to Pro-social Behavior – The Role of System Processing"

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There is conflicting evidence whether unethical behavior leads individuals to experience guilt and subsequent desires to morally cleanse or experience positive affect. However, we hypothesize both guilt and positive affect are mediators between unethical behavior and prosocial behavior and argue this dual mediated path is contingent on system processing. Specifically, we argue individuals who use system 1 processing will experience more guilt and exhibit more prosocial behavior while individuals who use system 2 processing will experience more positive affect and no increased prosocial behavior. Manipulating both unethical behavior and system processing in the lab, we find support for our model.

Kühberger, Anton

"Can you hear me? An excursion into decision making based on speech"

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In JDM research information is usually communicated by written text. However, many decisions are communicated by spoken, rather than written text. Virtually no research

exists on decision making based on the auditory domain. That is, we ask whether decisions differ when the relevant information is communicated in the auditive rather than in the visual channel. Our basic assumption (and hope) is that the classic findings of decision research will generalize over different input channels. That is, we do not expect serious differences between written and spoken communication, provided that the decision problems are simple and can be described by only little text. We report a series of experiments probing for modality-specific differences in a variety of well-known decision problems: classic risky choice lotteries; classic tasks on availability, representativeness, and anchoring; variants of framing tasks; the Ellsberg-task on ambiguity aversion; and some well-known counterfactual reasoning tasks. For simple and easy (but not for computationally difficult) lotteries we found less EV-maximization when the lotteries were communicated by speech rather than by written text. For the classic scenarios on availability, representativeness, and anchoring, as well as on the framing tasks, we found the known biases in both channels in similar size. In our variant of the Ellsberg-task we found that auditive communication led to less choices of the higher EV. Finally, the counterfactual reasoning tasks showed no modality specific differences. In sum, while most biases described in the heuristics and biases literature seem to replicate in the auditive channel, people seem to choose less rational in lotteries. This is good news not only for the JDM community.

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Le Mens, Gael

“Conceptual Ambiguity Systematically Affects Evaluative Judgments”

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We analyze how the concepts through which people comprehend their world influence evaluative judgments, such as ratings of movies, assessments of teachers, or choice among job candidates. We propose that people have valuations associated with concepts and use these valuations to ascribe value to objects. The weight of each relevant concept depends on the typicality of the object in the concept. We analyze a computational model of value judgments based on a Bayesian model of categorization. We derive predictions for a variety of settings that differ in terms of the information available to the evaluator regarding the features of the objects and the categories to which it belongs or not.

Our presentation will focus on objects whose feature-value configurations lie between concepts. We call such objects ‘ambiguous’: it is not clear which concept(s) apply to them. We define the conceptual ambiguity of an object as the entropy of the vector of categorization probabilities in the concept made salient by the context. Using simulations, we demonstrate that under a wide range of settings, conceptual ambiguity has a negative effect on evaluative judgments.

We tested this prediction in analyses of a dataset of 8 million restaurant reviews. We found that higher restaurant ambiguity is associated to lower ratings as well as with less positive emotion, more negative emotion, more tentativeness, more anxiety, more anger in reviews.

These affective reactions moderate the effect of ambiguity on ratings. We also ran a set of online experiments in which we manipulated the conceptual ambiguity of objects by varying, across conditions, the set of candidate concepts in which objects could be categorized. We found that valuation tends to decrease as conceptual ambiguity increases.

We analyze how the concepts through which people comprehend their world influence evaluative judgments about 'ambiguous' objects (it is not clear which concept(s) apply to them). We demonstrate that conceptual ambiguity tends to have a negative effect on evaluations.

Leib, Margarita

"Precision-in-Context Theory: In a Seller's Market, Precise Asking Prices are Suboptimal"

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Asking-prices in negotiations serve as anchors because the final agreement often settled near the mid-point between the asking-price and the counteroffer. Precise, rather than round asking-prices serve as stronger anchors. Consequently, a popular advice for sellers is to set precise asking-prices, drawing on research focusing on a buyer's market – where supply exceeds demand. Here, four pre-registered experiments as well as an archival analysis of real estate data reveal that in a seller's market, where demand exceeds supply and buyer bid above the asking-price, setting a precise asking price is suboptimal. In a seller's market, precise asking-prices lead to lower counteroffers, an effect driven by people's adjustment on a finer-tuned scale, but not by their evaluations of the seller's competence or the competitiveness of the market. Analyzing real-estate data from a fierce seller's market in Amsterdam (2017) showed that by increasing the roundness of the asking price by one level (e.g., from precise to the thousands to precise to the tens of thousands), sellers can gain thousands of euros per deal. Precision should be viewed and used in context.

Lejarraga, Tomás

"The Intuitive Statistician Lives: How a Change in Methods Shifted Our View on Human Judgment"

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How accurate are people's statistical intuitions? Attempts to answer this question gave rise to the field of judgment and decision-making. The early view was that human judgment could be approximated by probability theory and statistics. This view of man as an intuitive statistician was quickly replaced the Kahneman's and Tversky's finding, that people's judgments follow heuristics that are biased and prone to error. This new view became prevalent and was later underpinned by the award of two Nobel prizes to Kahneman and Thaler. However, the discrepancy between the diverging views was left unexplained. Why do people's judgments align with probability theory—as seen by Edwards, Peterson, and

Beach—and yet are prone to error—as seen by Kahneman and Tversky? These questions remained unresolved.

A decade ago, researchers examined two modes of learning about risky choices: experience and description. They found that, although the information acquired through these modes of learning could be equivalent, people process them differently, resulting in different decisions. Could it be that a description-experience distinction underlies the puzzling discrepancy in the views of the mind? We examined research practices in Peterson and Beach (1967) and in Kahneman and Tversky (1973), the seminal articles that established the distinct views on the mind. We discovered that most of the research in Peterson's and Beach's review uses experiments in which participants can learn from experience. In contrast, Kahneman and Tversky relied mostly on description-based protocols. Indeed, "the psychology of single questions" that Kahneman (2002) admired in Walter Mischel's work, percolated his own research and profoundly influenced the way research was going to be conducted thereafter.

Lelieveld, Gert-Jan

"Explaining reluctance to benefit from others' misfortune"

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The current research investigates decisions where people are not causing harm to others, but only benefit from the harm. Specifically, we assessed people's willingness to benefit from other's chance-caused misfortunes. In 4 studies, examining real behavior of individuals in a television game show (Study 1) and using experimental betting tasks (Studies 2–4), we show that people are reluctant to benefit from the misfortunes of others. Although in all studies participants' decisions were objectively unrelated to the likelihood of misfortune befalling others, subsequent analyses indicate that people erroneously feel that benefitting from others' misfortune increases the likelihood that such harm will actually occur. The results are discussed in relation to the literature on moral decision-making and magical thinking.

Leong, Lim

"When defaults backfire: Switching enhances the signaling value of choice"

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While past research has demonstrated that individuals tend to stick with default options, few studies have examined situations where individuals can select their own default setting. In five experiments using hypothetical scenarios and incentivized economic games, we test the hypothesis that decision makers driven by image concerns would select a default regime with the intention of switching from the default option. First, our results indicate that observers do perceive stronger signals from choices obtained by switching from, rather than staying with, the default, even though

Leuker, Christina

“When money talks: Judging risk and coercion in high-paying clinical trials”

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Clinical trials offering high pay are sometimes considered ethically inappropriate. To investigate why, we asked 1,372 respondents to evaluate a trial for a new Ebola vaccine offering one of three payment amounts [50, 1,000 or 10,000 pounds]. Some individuals used very high pay as a cue to infer the risks the clinical trial poses. The same individuals also thought that some clinical trials are too lucrative to be turned down—i.e. high pay can be coercive. Both perceived risk and coercion helped explain why the extent to which the clinical trial was considered distasteful—that is, why a market in which health is turned into a commodity was considered repugnant. On the policy level, to reduce the repugnance of clinical trials, research institutes should compensate participants for research-related harm, which may be achieved with no-fault compensation funds. These findings may generalize to other markets in which participants are partially remunerated for the risk they take (e.g. surrogate motherhood).

Levin, Irwin

“The Risky Decision Making Processes of High-Functioning Adults on the Autism Spectrum”

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As part of a long-term project on the Decision Making Competence of high-functioning adults on the autism spectrum, we conducted several studies of risky decision making. We focus on this population because of their increased role in decision making that affects their quality of life and that of those around them. We recruited participants through an online survey panel involving the multiple steps of self-identification, scoring beyond the cutoff point on a clinically-based screener, and verification through reported difficulties in social functioning and everyday decision making. Each study was designed to tap into different decision processes (social, cognitive and emotional) when comparing our target group with controls. The Cups task showed that cognitive processes related to decision making style led to impaired ability to differentiate between “good” and “bad” risks. The Asian Disease Task showed that the effects of emotional framing (lives saved versus lives lost) were not different between groups. The DOSPERT scale revealed that social deficits in autism led to distinct profiles of risk-taking in the domains of social risks and ethical risks. Likewise, a variation of the Temporal Construal Task revealed specific preferences for postponing social contacts such as job interviews. We conclude with a profile of strengths and weaknesses and summarizing that high-functioning adults have overcome some deficits associated with autism but not others.

Li, Chen

“Social and Strategic Ambiguity versus Betrayal Aversion”

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This paper uses a recently introduced method for measuring ambiguity attitudes in games to examine the difference in people's attitudes toward strategic ambiguity, as in game theory, versus “neutral nature” ambiguity, as in individual decisions. We identify a new, non-strategic, component underlying all strategic ambiguities, called social ambiguity. We recommend correcting for it before speculating on strategic causes. Thus, we shed new light on Bohnet and Zeckhauser's (2004) betrayal aversion in the trust game. We first show, theoretically, that, contrary to preceding claims in the literature, ambiguity attitudes do play a role here. We then show, experimentally, that social ambiguity, rather than betrayal aversion, can explain the empirical findings. These results show the importance of controlling for ambiguity attitudes before speculating on strategic factors.

Li, Ming-Hui

“Prosociality increases in harsh and unpredictable environments”

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Environmental characteristics affect people's survival and reproductive success, but it is unclear how prosociality varies with ecological environments. By analyzing data from a nationwide survey in China and the World Values Survey, we found that residents living in areas with a lower Human Development Index (HDI) showed greater prosociality. We also found that the effect of age on prosociality was moderated by HDI. These findings suggest that prosociality increased in harsh and unpredictable environments. Our findings contradict the prediction of life-history theory and shed light on the effects of living in a harsh, unpredictable environment and the origin of prosocial behavior. Environmental characteristics affect people's survival and reproductive success, but it is unclear how prosociality varies with ecological environments. By analyzing data from a nationwide survey in China and the World Values Survey, we found that residents living in areas with a lower Human Development Index (HDI) showed greater prosociality. We also found that the effect of age on prosociality was moderated by HDI. These findings suggest that prosociality increased in harsh and unpredictable environments. Our findings contradict the prediction of life-history theory and shed light on the effects of living in a harsh, unpredictable environment and the origin of prosocial behavior.

Li, Shu

“Worth-based Choice: Giving an offered smaller pear an even greater fictional value”

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Choices between options represented in a multidimensional space are presumably guided by the principle of value maximization. However, the current study assumes that those who are able to imagine things that do not actually exist could modify the multidimensional space

by self-generating an fictional dimension. We define the utility (U_v) assigned by the decision makers to the options on the offered dimension as value ($v[x]$) and the utility (U_w) on the self-generated dimension as worth ($w[xc]$). Our experiments demonstrated that an option with a greater value established on that given set of dimensions might not necessarily be chosen. Such a choice can be explained by the “worth-based choice” approach as people behave to select the option with the highest worth rather than that with the highest value. We are optimistic that the resulting findings will facilitate our understanding of the beauty of such “one step further” choice and assist us in understanding the following: the ability to generate a fictional dimension, to assign a delayed utility (worth) to the options on the fictional dimension, and to make a worth-based choice, could eventually be taken as the operational definition to measure the degree of “fiction-generating ability” as proposed by Harari (2014).

Liang, Zhu-Yuang

“Descriptive social norms promote Chinese college students’ walking behaviour: Evidence based on smartphone social media”

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Descriptive social norms have been widely applied to nudge health behaviour, including walking behaviour. However, previous research shows that the effects of social norms are unstable. The popularity of smartphone social networking applications provides a new channel to spread social norms. In this longitudinal field research, we utilized WeChat, the most popular social media platform in China, to investigate the effects of descriptive social norms on walking behaviour in the physically inactive college student population. We also looked at the moderating effects of group identity and gender in this relationship. The results showed that descriptive social norms were effective in promoting walking and that group identity and gender were two important moderators. When the level of consistency was high, descriptive social norms were effective in promoting walking. For men, descriptive social norms were more effective than self-monitoring; this was not observed with women. This research answers three questions: are descriptive social norms effective, whom are they effective for, and under what conditions. It can also provide scientific guidance to optimize the design of sports features on smartphones.

Liang, Garston

“Replicating the disaster information effect: knowing more about knowing more about disasters”

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How do people react to reports of disasters?

We examined this question using a geographical decisions-from-experience task where participants chose a house in which to live while facing the risk of natural disasters. Each house was situated in one of three villages, each with different exposures to disasters: no exposure, frequent occurrence with limited exposure, and infrequent but catastrophic

disasters. Crossed with these risks, participants received either a) forgone feedback over the entire 3 villages, b) forgone feedback for their own village.

The original finding across two experiments in Newell, Rakow, Yechiam & Sambur (2016) was that additional forgone feedback increased people's tolerance for risk-taking, i.e. knowing more about disasters led to riskier choices. The explanation for this pattern was that participants underweighted the probability of rare catastrophic disasters.

This 'disaster-information-effect', motivated a series of follow-up experiments, however, the failure to replicate the original finding in these follow-ups led us to re-examine the original question in further detail. Together with data from a registered replication (N = 242) we investigate people's reactionary behaviours to rare disasters at the trial-level.

Sequential analyses revealed evidence of a) differences in choices between witnessing a disaster and experiencing its effects, and b) gambler's fallacy-like reasoning where people moved into a disaster-affected region after witnessing the

Liefgreen, Alice

"A psychological account of human information evaluation and integration"

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The present work aims to explore people's information acquisition and evaluation behaviour in a novel probability context and utilising a more naturalistic criminal investigation scenario. Focus was placed on exploring the relationship between searching for information, evaluating it and integrating it within one's belief model in order to make causal judgement. Results overall suggest that although participants' search choices approximated those of informed BN-OED models, belief updating accuracy systematically decreased throughout the task. Findings were suggestive of a dichotomy between information evaluation and belief integration and question the descriptive abilities of BN-OED models to account for these processes. The implications of these finding in relation to the psychological literature of human inquiry as well as future work are discussed.

Lima de Miranda, Katharina

"Overconfidence and hygiene compliance in hospitals"

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Among measures to fight against hospital acquired infections (HAIs), an emerging epidemic in many countries around the world, adoption of appropriate hand hygiene practices by healthcare workers is considered a priority, championed inter alia by the World Health Organization's pertinent guidelines. Despite their simplicity and effectiveness in preventing the transmission of pathogens from one hospital patient to another, healthcare workers' compliance with hand hygiene rules is poor, with most empirical studies finding compliance rates well below 50% in many countries. Management strategies to increase compliance are often based on the notion that non-compliance is a moral hazard problem, characterized by

asymmetric information between hospital management and healthcare workers. In this view, healthcare workers' often high marginal opportunity costs of time induce them to cheat, knowing that non-compliance is hard to observe and the healthcare worker responsible for a transmitted infection will neither be detected, nor punished. In this study, we provide empirical evidence that an individual behavioral characteristic, known as overconfidence, induces many healthcare workers to overestimate their hand hygiene compliance and hence to underperform unknowingly and unintentionally. To highlight the relevance of overconfidence for management and policy, we develop a theoretical model in which measures aimed at overcoming a moral hazard-induced compliance-deficit are shown to be suboptimal or even counterproductive in the presence of overconfidence. Our experimental study with medical students confirms that overconfidence is a serious concern in hand hygiene compliance.

Lind, Therese

“Motivated reasoning under time pressure”

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In this paper we investigate how time pressure influences motivated reasoning. In previous work we considered a framework contrasting what we called motivated reasoning-as-feelings and motivated reasoning-as-analysis. According to the former, the information processing is primarily driven by intuitive responses. That is, when people evaluate new information, motivated reasoning happens automatically. People rely on emotional cues, this minimizes the cognitive cost of forming an assessment based on deliberation. For example, people might rely on a “how do I feel about it” heuristic when processing new information (Slovic et al., 2007). According to the latter, motivated reasoning is primarily driven by analytical processes where people seek to maximize their own utility by falsifying information that threatens valued beliefs. In this study the goal is to enrich the two competing hypotheses, by using measures of both mechanisms. In an experiment participants will be randomly assigned to either the time pressure condition or the control condition, in both treatments participants have to assess numerical information. In the potentially dividing scenarios participants have to interpret information about immigration and its effect on crime rates, and gender quotas for boards of corporations and its effect on performance. We hypothesize that people in the time pressure treatment will be more prone to engage in motivated reasoning. In this paper we investigate how time pressure influences motivated reasoning. We try to enrich the competing hypotheses of motivated reasoning-as-feelings and motivated reasoning-as-analysis. We use an experimental approach and include measures of intuitiveness as well as cognitive abilities.

Lipman, Stefan

“Living up to expectations – Experimental tests of subjective life expectancy as reference-point in time trade-off and standard gamble”

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Aim: Time trade-off (TTO) and standard gamble (SG) are methods used to elicit the utility of health states. Earlier work has suggested that subjective life expectancy (SLE) affects health state utility in TTO, arguably because SLE functions as reference-point (RP) in TTO exercises. It is posited that because life years in TTO typically occur below SLE, loss aversion may bias decision-making. In this study, we provide the theoretical foundation for this yet unverified claim, test it empirically and also report the first test of SLE effects for standard gamble (SG).

Method: We derive predictions from a model based on prospect theory with SLE as RP and test these in an experiment. Subjects (N = 102) first reported their SLE which was used to construct different versions of TTO and SG, operationalized via choice lists. Depending on the version, their remaining 10 years of life occurred either completely above or completely below their SLE. If SLE functions as RP, the former involves gains in life duration while the latter involves losses in life duration.

Results: We confirm our theoretical predictions: both TTO and SG weights were affected by SLE. Moving gauge duration below SLE in both methods increased utility assigned to health states, i.e. subjects gave up fewer years and were less risk-tolerant for losses. As predicted by our theoretical model, this effect of SLE was stronger for TTO compared to SG.

Conclusion: Both TTO and SG involving losses in life years compared to SLE yield higher health state utility. Our design suggests SLE functioned as RP, as other explanations, such

as discounting are unlikely to have explained our findings. This study may be relevant for economic evaluations and may provide insights for other work on RPs in decisions about health.

We report the first experimental test of subjective life expecta

Lipman, Stefan

“One size fits all? A proof of principle test for designing financial incentives tailored to individual preferences.”

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Aim: Financial incentives are often used to stimulate health behavior, and are typically designed to capitalize on biases in decision-making, such as present bias (commitment contracts) or probability weighting (lottery incentives). Typically, these incentives are ‘one-size-fits-all’, even though the literature has documented large heterogeneity in these preferences. This study reports a proof of principle experiment aimed at designing incentive schemes to reflect his heterogeneity, by tailoring incentive schemes to individuals’ economic preferences.

Method: This experiment employed a student sample (n = 189), that was presented with a hypothetical scenario in which their employer offered a 100\$ financial incentive to increase physical exercise. Incentives could be tailored by individuals on several levels: a) self-

commitment of personal funds, b) the temporal spacing of payouts, and c) the risk/reward ratio of payouts. Afterwards, subjects completed a preference elicitation task and filled out several surveys, which measured inter alia: loss aversion, probabilistic sensitivity, time discounting, present bias, and a wide array of psychological and behavioral traits.

Results: As expected, large heterogeneity exists when allowing individuals to tailor incentives to individual preferences. Surprisingly, preliminary analyses suggest that this heterogeneity in self-selected incentives is not or poorly predicted by the individual characteristics measured (i.e. economic preferences and psychological traits).

Conclusion: The lack of association between self-selected incentives and pre

Liu, Dawn

“The role of affect and inference in attribute framing: A novel design to test two theories explaining the framing effect”

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Positive attribute frames (e.g., 75% lean) are robustly judged as better than equivalent negative frames (e.g., 25% fat). However, the mechanisms driving this framing effect and the conditions that moderate it are still widely debated. In four well-powered, pre-registered studies (N = 190, 335, 294, and 408), we compared two theoretical accounts for the framing effect: affective encoding and pragmatic inference, and manipulated two aspects of a quantifier, format (verbal vs. numerical; between-subjects) and magnitude (e.g., low vs. high; within-subjects). In our experiments, we used a novel framing design: whereas in traditional framing designs, attribute frames are crafted using two quantities whose magnitudes are complements (e.g., 80% success vs. 20% failure), we kept quantifier magnitude consistent across the frame and varied only the attribute valence (‘energy’ vs. ‘calories’) between subjects. This allowed us to manipulate the quantifier format and magnitude orthogonally, and control for inter-individual variability in translations of verbal quantifiers. We found a robust framing effect, with low and high quantifiers displaying opposite directions of the effect, and verbal quantifiers magnifying the effect compared to numerical quantifiers at low quantities. Both the affect associated with the attribute frame and inferences about whether a speaker recommended the product partially mediated the framing effect. Thus, our results support an integrated explanation for attribute framing that draws on both affective encoding and pragmatic inference accounts.

Liu, Ning

“Mostly Fair-minded Co-workers”

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This paper investigates co-workers’ fairness norms when workloads are exogenously determined. Egalitarianism and the equity norm usually give similar predictions in distribution experiments. Our design allows us to identify individuals following egalitarianism, reward equality, equity, and self-interest principles by exploiting within-

subject variation of exogenous workloads. The equity norm accounts for most of the co-workers' behaviors in our sample. Our findings with laboratory participants are replicated in experiments with online workers with more heterogeneous demographic characteristics. In a specular setting where co-workers allocate workload given exogenous reward plans, the equity norm is even more homogeneously shared by the co-workers.

Løhre, Erik

"The effect of frames on perceived expert disagreement"

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Lay people often rely on expert advice when making complex decision, but following expert advice becomes more complicated when experts disagree. While many studies show that agreement and disagreement between expert statements can influence lay people's beliefs, there is little research on what is perceived as a disagreement. We report a series of experiments where people rated agreement between pairs of probabilistic statements about environmental events, attributed to two different experts or to the same expert at two different points in time. Probability statements that differed in probability level (45% vs. 55% probability that smog will have negative health effects), but were given in the same frame, were perceived as agreeing more than when the same statements were presented in opposite frames (45% probability that the smog will vs. 45% probability that the smog will not have negative health effects). Approximate probabilities can be framed in yet another way by indicating reference values they are "over" or "under". Statements that differ in their direction (over vs. under 50%) indicated greater disagreement than statements with the same direction but different probability levels (over 50% vs. over 70%). These findings are in line with pragmatic approaches to framing effects, and have clear implications for experts communicating risk and uncertainty.

López, Jorge

"Decision-making about organ donation of a bereaved relative: results of an empirical study in real settings"

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BACKGROUND. Family decision about organ donation of a deceased relative is a critical barrier for organ procurement. Our team has recently formulated an Integrated Model of Relatives Decision about Organ Donation (IMROD) which structures those factors that condition family decision-making. OBJECTIVES: To apply IMROD model to the empirical analysis of bereaved relatives' decision about organ donation. METHODS: Observational study comprising 421 cases of family decision processes about donation through a previously validated instrument in Spanish hospitals. Indicators of the following factors were retrieved: family final decision; deceased's characteristics; circumstances of death; bereaved relatives' characteristics, beliefs, and expressions about the decision process; behaviour of health and coordination staff; family's emotional responses. RESULTS: Logistic Regression Modelling showed 87,6% of correct prediction of family decision (Global -2LLR=

228,4; $p < .001$) and yielded relevant relationships between family decision and contextual factors that reveal the use of heuristic decision making (knowledge of deceased's wishes, satisfaction with medical attention, satisfaction with personal treatment). Emotional responses of relatives during the process were also related to family final decision. Analysis of interaction terms show that contextual factors and family emotional reactions yield stronger relationships with family decision when deceased wishes are unknown. **CONCLUSIONS:** Family decision can be predicted in a remarkable degree on the basis of factors that are related to the use of heuristic rules based mainly on relatives' beliefs about deceased wishes on donation and concurrent factors related with healthy staff behaviour and family emotional reactions.

Lu, Jingyi

"A Relational Mindset: Choosing for Others Increases Weight of Comparative Utility"

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How tradeoffs are made between absolute and comparative utilities is a central question to judgment and decision making. The current research investigates the differences in weight that individuals assign to absolute and comparative utilities when making decisions for themselves versus for others. We propose a relational mindset in choosing for others that fosters stronger preferences for immediate satisfaction from decision recipients. Given that comparative (vs. absolute) utility is more likely to promote immediate satisfaction, we hypothesize that choosing for others (vs. oneself) will increase the weight of comparative utility. Across five studies, the predicted self-other differences were observed in both hypothetical (Studies 1 and 2) and realistic (Study 3) settings; when reactions from decision recipients were unobservable (Study 4) and when relationships between decision makers and recipients were unaffected by decision outcomes (Study 5), the self-other differences disappeared or were diminished. These findings highlight interpersonal causes of self-other differences in decision making.

Luckman, Ashley

"Using response times to distinguish between attribute-wise and alternate-wise inter-temporal choice processes."

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An important distinction in the inter-temporal choice literature is between attribute-wise and alternate-wise comparison processes. The former assume that decisions are made by comparing attribute levels across options, that is comparing the delays involved and the amounts involved. The latter assume the decision is made by calculating a holistic value for each option separately, then comparing these values. Recent research using process tracing has found mixed support for attribute-wise comparisons. We suggest a new method to distinguish between these processes using response time (RT) predictions from sequential sampling models with racing accumulators. In an alternate-wise model we assume that each accumulator is based on the overall value of one of the options under

consideration, while in attribute-wise models we assume each accumulator corresponds to one of the differences in attributes (i.e. delay or amount). With these two models it is possible to test attribute-wise processes against alternative-wise processes as they make divergent RT predictions. In particular, in a choice between a smaller sooner (SS) and larger later amount of money, both models predict that preference for the SS option will increase, as its amount increases. However, an alternate-wise model will predict decreasing RTs, because the drift rate of the SS option's accumulator will increase, while an attribute-wise model will predict increasing RTs, as the drift rate for the amount difference will decrease. In an experiment we find support for an attribute-wise process, with RTs increasing as SS amount increases. However, we also find a strong effect of choice difficulty with faster RTs for easier choices. The study illustrates the benefits of RTs for theory development in inter-temporal choice.

Luo, Xiyueyao

"Incentive Designs with Uncertainty: Keep the Hope Alive"

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Previous research suggests that people exert more effort for uncertain payoffs than for certain ones. Adding to this literature, this paper takes a unique perspective and compares different incentive designs that have uncertainty in an effort-score-payoff system. Specifically, we contrast the effectiveness of two uncertain-incentive designs while controlling for the overall conversion rate from effort to payoff. One is a first-degree uncertainty design in which uncertainty occurs between effort and score; the other is a second-degree uncertainty design in which uncertainty occurs between score and payoff. In the first-degree uncertainty design, people press a key, and each press may or may not earn them a point, but every point they earn can be exchanged for payments for sure. In the second-degree uncertainty design, people press a key and earn a point per press, but not every point they earn can be exchanged for payments. A series of experiments using this key-pressing task demonstrated the robust effect that the second-degree incentive design is more motivating (i.e., the process data showed that people in the later-uncertainty design pressed keys faster and thus pressed more keys). The experiments ruled out explanations including zero-aversion, medium maximization, and beliefs in magical thinking (i.e., "the harder I work, the better the luck I will have"). This effect can be explained with the notion of "keep the hope alive". Specifically, a second-degree uncertainty (that occurs between score and payoff) leaves room for the hope of achieving the best possible outcome. The research adds nuanced understandings of how people respond to uncertain outcomes and enriches the JDM literature on risk and uncertainty. Prior JDM research found that people exert more effort for uncertain (vs. certain) payoffs. Yet how can marketers best utilize uncertainty in an effort-score-payoff system? We find that adding uncertainty to score-payoff (vs. effort-score) is more effective in boosting motivation.

LV, Jieyu

“Can empathy promote dyadic cooperation with strangers, when there is inequality of resources involved.”

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Does empathy-induced altruism promote dyadic cooperation with strangers when individuals were obsessed with equal resources and unequal resources? To address this question, three laboratory experiments are designed to examine whether empathy induction promotes dyadic cooperation with strangers. These experiments indicated that empathy promotes cooperation when a sense of fairness maintains; empathy only works effectively towards a specific field of cooperative behaviour. This study will extend empathy-altruism hypothesis and fairness heuristic theory.

LV, Jieyu

“Praising Your Partner Promotes Dyadic Cooperation”

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Can praise promote cooperation in social dilemma? This study is aimed to address this research question by three laboratory experiments. Experiment 1 was designed to examine that allowing the communication platform for praising during the game will lead to a higher likelihood of dyadic cooperation. Experiment 2 was designed to examine that receiving praises during the game do not increase the likelihood of reaching mutual cooperation in 2-player public goods game. Experiment 3 was designed to examine that expressing praises towards your partner increases the likelihood of reaching mutual cooperation in 2-player public goods game. These experiments indicated that praising on specific task-related (cooperation) action is the most effective way and expressing praise towards others increase cooperative behavior.

LV, Jieyu

“Empathizing towards the Collective Increases Laboratory Cooperation and Tax Compliance Behavior”

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The concept of collective identity, which is the main difference between dyadic cooperation and group cooperation. Therefore, this study is to examine empathizing towards the collective identity promote cooperative behavior in a group paradigm public goods game. Experiment 1: empathizing towards the collective identity will increase laboratory cooperation compared to control group; making the collective identity salient also will not increase laboratory cooperation compared to control group. Experiment 2: empathizing towards the collective identity will increase individuals' voluntarily tax compliance willingness, but not individuals' enforced tax compliance willingness. Experiment 3: empathizing towards the collective (e.g., the government) will increase firms' tax compliance behavior. Therefore, this study indicated that manipulating empathy toward the

collective (e.g., the government, party) will increase group cooperative behavior and tax compliance behavior. Empathizing towards the Collective Increases Laboratory Cooperation and Tax Compliance Behavior

M

MacDonald, Tyler

"Perceptions of Numeric Magnitude & Time Relate to Present Bias"

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Individuals tend to choose smaller, immediate amounts over larger, later amounts (i.e. present bias). This tendency has implications, e.g., for debt and savings. In this research, we demonstrated that one's sensitivity to numeric magnitudes, how big one number feels compared to another, helps explain this phenomenon and related time perceptions. In two studies, we found that those with more precise sense of numeric magnitude exhibit less present bias and perceive time more linearly, controlling for numeric competencies and cognitive reflection. These results are the first to examine perceptions of time and numeric magnitudes together as potential determinants of present bias. Individuals prefer outcomes in the present. In this research, we demonstrated that one's sensitivity to numeric magnitudes explains this phenomenon. We found that those with more precise sense of numeric magnitude exhibit less present bias and perceive time more linearly.

Macko, Anna

"Trust dynamics after an apology: gender differences"

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The study examined gender differences in the effectiveness of the most basic form of an apology – expression of regret, and in the pace of trust restoration. Women responded relatively better than men to an apology but restored trust more slowly.

Mangiarulo, Marta

"The effect of evidential impact on perceptual probabilistic judgments"

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In a series of three behavioral experiments, we showed a systematic distortion of probability judgments concerning elementary visual stimuli. Participants were briefly presented with sets of figures that had two features (e.g., a geometric shape and a color) with two possible values (e.g., triangle or circle and white or black). For each set, one figure was randomly drawn, and participants had to predict the value of one of its features (e.g., whether the figure was "white" vs. "black") after being informed about the value of the other (e.g., that the figure was a "circle"). By varying the statistical association between features in the various sets of figures, we orthogonally manipulated the probability of a feature given the evidence of another (i.e., the posterior probability of hypothesis "white" given the evidence "circle") as well as the support provided by a feature to the hypothesis of another (i.e., the impact of

evidence “circle” on the hypothesis “white”). Results indicated that participants’ judgments were greatly affected by impact values, although normatively they should have depended only on the probability distributions over the features, and that the dissociation between evidential impact and posterior probability increased the number of errors. In addition to this general effect, we also found bottom-up influence of the features involved on choice patterns in two out of three experiments. The implications of these novel findings for lower- and higher-level cognitive models will be discussed.

Markiewicz, Łukasz

“Morality’s role in cheating behavior”

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We extend Becker’s (1968) model to incorporate moral considerations into an equation alongside purely economic factors (temptation, punishment, and probability). Based on the assumed shape of a proposed disutility of immoral behavior function, and the familiar shape of a decision maker’s (DM’s) monetary value function, a series of three studies shows that people cheat more when temptation is greater (H1), and when given a loss frame rather than a gain frame (H2). Cheating also increased in situations involving lower sensitivity to moral aspects (such as task ambiguity), and where personal sensitivity was limited (in children).

Marten, Finja

“Therapists’ Decisions to use Empirically Supported Treatments: The Impact of Attitudes”

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Empirically supported treatments (ESTs) are protocolized psychological treatments that, in randomized controlled trials, have been proven to be efficacious (APA, 2006). Nevertheless, many therapists do not use them (Waller, Stringer, & Meyer, 2012). The main reason for this seems to be that in general, therapists have a rather negative attitude towards ESTs. For example, they think that ESTs undermine the importance of the therapeutic relation. This study will examine how many therapists use ESTs, both in Germany and the Netherlands. Second, we will look on what arguments they base their decision whether to use ESTs. To answer these questions, quantitative and qualitative methods will be combined. First, therapists will receive questionnaires asking about their attitudes and knowledge of ESTs. Those questionnaires are based on a previous questionnaire developed by Addis and Krasnow (2000). The findings of the questionnaires will be analyzed using principal component analysis, to unravel the factors influencing the decision to use ESTs. Additionally, we will examine the effect of different variables, such as previous usage of ESTs or years of clinical experience, on the attitudes towards ESTs by implementing ANOVAs and correlation analyses. Then, in each country, the results of those questionnaires will be discussed in focus groups with each seven people. Both therapists that use ESTs in their daily practice and therapists that do not use them will be included. The focus group discussions will be analyzed using thematic analysis. We will present and discuss our results regarding the therapists’ decision to use ESTs in the Netherlands and Germany, and their attitudes towards ESTs in general.

McDonald, Rebecca

“Comparison-specific preferences for time and risk”

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Everyday risky or intertemporal decisions often involve comparing options that differ in many ways, not just in the degree of risk or the delay until the outcomes are received. Yet most experimental investigations into risk and time preferences isolate that dimension as the only distinguishing feature of the options. We conduct experiments that vary whether comparisons are unimodal (options vary only in their risk or delay) or crossmodal (options differ in risk or delay but also in what the outcomes actually are). We show that risk and delay play significantly smaller roles when comparisons are crossmodal. This suggests that usual lab experiments overestimate both risk aversion and time discounting. More profoundly, our results cannot be reconciled with any typical weighted-value models of risky and intertemporal preference (including EUT, Prospect Theory, DU models and Quasi hyperbolic discounting). Instead, the process of making judgements about value differences must be attribute-based, with the weight on any dimension inversely related to the number of attributes along which the options differ. We propose a simple multi-attribute account of judgements of valuation incorporating this ‘dilution effect’, and which is applicable across a variety of multi-attribute settings including, but not limited to, settings where options are modified by delay or by risk. Our findings complement the growing literature on multi-attribute choice processes where attention is limited, and demonstrates a new application to tasks involving judgements of value difference.

McDowell, Michelle

“How do people judge a variety of everyday risks? A study of six European countries.”

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Studies on risk estimation have found that people are generally good at estimating the relative ranking (mapping knowledge) but err in estimating the absolute magnitude of risks (metric knowledge). The present study addresses a number of open questions: examined a heterogeneous set of risks, differences in estimates for personal and societal risks, and how ratings of fear relate to personal versus societal risk estimates. The study was conducted in six European countries. Participants were recruited from large representative survey panels from Germany, UK, Spain, France, Poland and Sweden. A set of 15 risks included mortality (e.g., cancer, car accident), victimhood (e.g., robbery, identity theft), and emergent (e.g., privacy intrusion) risks. Participants were randomised to estimate risks for their country (societal) or for people of their same age and gender in their country (personal) over the past 12 months, and then provided fear ratings for each risk. Reliable estimates of actual risk rates could be found for 12 of the 15 risks and stratified by age and gender for 6. Participants appeared to have good mapping knowledge similar to studies of estimation in other domains (e.g., population size). Results varied across countries, with the highest mapping knowledge and lowest fear ratings in Germany and Sweden. Consistent with prior

work, preliminary analyses suggest that fear is not a good predictor of risk estimates but of actual risk. People seem to be able to map the relative frequency of a variety of everyday risks, in line with research in other domains. There were cross-country differences in mapping knowledge and fear ratings. Difficulty obtaining reliable risk estimates for the broad range of risks for six countries limited those that could be analysed.

Meyer, Joachim

"Theoretical, measured and subjective responsibility in the interaction with automation"

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Advanced automation and decision support have become part of many aspects of our life. They are involved in information collection and evaluation, in decision-making and in the implementation of choices. Questions arise regarding human responsibility for outcomes when using automation. We developed an information-theory-based responsibility quantification (ResQu) model of human responsibility (Douer & Meyer, 2018) to address this issue. To test the predictive value of the model, we conducted controlled lab experiments on decisions using automation. We computed the user's actual measured responsibility and subjective perceptions of responsibility and compared them to the theoretical values of responsibility, computed with the ResQu model. The measured responsibility generally corresponded to the theoretical responsibility. The values differed when participants overestimated their own capabilities, compared to those of the automation, which led them take on greater than optimal responsibility by intervening more than needed. The subjective assessments of responsibility matched the measured responsibility. Thus participants correctly assessed their actual relative contribution. When evaluating their own responsibility, compared to that of another person performing the same task, participants' responses resembled the "fundamental attribution error". Our results provide empirical support for the ResQu-model-based measure and show that it has descriptive value, both for predicting actual responsibility and subjective perceptions of responsibility. However, both objective and subjective measures show evidence of systematic deviations that need to be considered when designing human-automation interaction.

Millroth, Philip

"The Decision Paradoxes Motivating Prospect Theory: The Prevalence of the Paradoxes Increases with Numerical Ability"

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Prospect Theory (PT: Kahneman & Tversky, 1979) of risky decision making is based on psychological phenomena (paradoxes) that motivate assumptions about how people react to gains and losses, and how they weight outcomes with probabilities. Recent studies suggest that people's numeracy affect their decision making. We therefore conducted a large-scale conceptual replication of the seminal study by Kahneman and Tversky (1979), where we targeted participants with larger variability in numeracy. Because people low in numeracy may be more dependent on anchors in the form of other judgments we also

manipulated design type (within-subject design, vs. single-stimuli design, where participants assess only one problem). The results from app. 1,800 participants showed that design type had no effect on the modal choices. The rate of replication of the paradoxes in Kahneman and Tversky was poor and positively related to the participants' numeracy. The Probabilistic Insurance Effect was observed at all levels of numeracy. The Reflection Effects explained by Loss Aversion were not replicated at any numeracy level. The Certainty and Isolation Effects explained by nonlinear probability weighting were only replicated at high numeracy. No participant exhibited all 9 paradoxes and more than 50 % of the participants exhibited at most three of the 9 paradoxes. The choices by the participants with low numeracy were consistent with a shift towards a cautionary non-compensatory strategy of minimizing the risk of receiving the worst possible outcome. We discuss the implications for the psychological assumptions of PT.

Mol, Jantsje

"Flood risk misperceptions in The Netherlands"

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We study the flood risk misperceptions of floodplain residents in the Netherlands. We examine how perceptions of flood probability and damage relate to objective risk information in a lab-in-the-field experiment. We relate these to self-reported coping responses, worry and trust.

Montal-Rosenberg, Ronit

"Seeking less efficient help: Exploring decisions to seek help from outperforming envied peers"

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In this research, we explore effects of malicious envy towards outperforming others on people's help seeking decisions. In three studies we manipulate malicious envy, and examine participants' intentions and actual decisions to seek help. We primarily focus on the type of help they choose to seek – namely, "dependent help" whereby the helper is requested to provide the solution to an immediate problem only, or "autonomous help", whereby the helper is asked to provide an explanation of the means leading to the solution. Consistent with a cost-benefit account, we find that people are less likely to seek help, particularly autonomous help from outperforming peers who instigate feelings of malicious envy. We further find that the reduced tendency to seek autonomous help from an outperforming maliciously envied peer is mediated by a desire to minimize feelings of inferiority relative to that peer, which in turn leads to avoiding situations that might empower him or her.

Moon, Alice

"Self-Other Biases in the Perception of Values and Preferences"

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People often make judgments about their own and others' valuation and preferences. Across five studies, we find that judgments about how much others like or dislike the experience exhibit a robust bias such that people tend to believe that others have more intense experiences than they themselves do. We argue that this overestimation of others' valuation and preferences are guided by the most intuitive, core representation of the experience itself. We first demonstrate that the overestimation bias is pervasive in judgments about others' valuation and preferences for a wide range of positive (Study 1 in the lab; Study 2 in the field) and negative experiences (Study 3). We further demonstrate that the overestimation bias ultimately forms a paradox in how people think that others tradeoff between valuation and utility. Specifically, people believe that an identically-paying other would enjoy an experience more than they would, while simultaneously believing that an identically-enjoying other would pay more for the same experience (Study 4). Moreover, consistent with an explanation about the core representation of experiences, explicitly prompting people to consider the entire distribution of others' valuation or liking significantly reduced or eliminated the bias (Study 5). These findings suggest that social judgments about others' valuation and preferences are not only largely biased, but they also ignore how others make tradeoffs between evaluative metrics.

Moore, Jordan

"Optimal Investment Management for Prospect Theory Investors"

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This paper examines a strategy to increase the savings rate by optimizing investment management decisions about the timing of investment inflows and outflows. How should an investment manager allocate her client's contributions throughout the year? How should she allocate her own management fees throughout the year? I assume her client has prospect theory preferences and measures gains and losses as changes in his account balance including contributions and fees. The optimal strategy for allocating contributions is to offset small portfolio losses. On the other hand, the optimal strategy for charging fees is to reduce large portfolio gains. I compare the optimal strategies to strategies that provide the same expected utility and allocate contributions or charge fees equally every quarter or month. When the manager makes quarterly decisions, the client is indifferent between contributing 1.4% per year allocated equally and contributing 1% per year allocated optimally. The client is indifferent between paying fees of only 0.7% per year assessed equally and paying fees of 1% per year assessed optimally. When the manager makes monthly decisions, the client is indifferent between contributing 1.6% per year allocated equally and contributing 1% allocated optimally. The client is indifferent between paying fees of only 0.6% assessed equally and paying fees of 1% assessed optimally. The results are robust to using several alternative distributions for expected portfolio returns. Investment managers who apply behavioral insights to structure contributions and fees can increase their own earnings and

still make their clients happier. This increase in client satisfaction has the potential to increase the savings rate and improve financial outcomes for individual investors.

Mosannenzadeh, Farnaz

“Functional Brain Connectivity in Decision-Making Under Probability Versus Time-Ambiguity”

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Many real-life decisions include choosing between options that are ambiguous in the timing and/or the probability of their consequences. To better understand how ambiguity influences decision-making, we currently investigate how functional connectivity between brain areas is influenced by the presence versus absence of time- versus probability-ambiguity, and how the brain encodes systematic variations in the magnitude of time-versus probability-ambiguity. Based on their performance in an online decision-making task, 80 participants are invited to an fMRI session to complete a decision-making task that presents risky and intertemporal choices, each with and without ambiguity: During each of 200 trials, participants choose between a constant fixed option versus a variable option that systematically varies across trials in the magnitude and either the probability and probability-ambiguity (risky trials) or the delay and time-ambiguity (intertemporal trials) of the reward. The effects of time-ambiguity, probability-ambiguity, and their interaction on connectivity patterns between brain areas will be investigated using psychophysiological interaction analyses. The results will help to better understand the neural representations of decision-making under ambiguity in the probability and the time domains.

Motsenok, Marina

“Weak Alone, Strong Together? The Effect of Perceived Physical Vulnerability on Prosocial Behavior”

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Our research examines the relationship between perceived personal physical vulnerability and participation in volunteering activities. In Study 1 we examined whether a sense of physical vulnerability during an armed conflict was correlated with prosocial activities and with increased willingness to help others who were more affected. Study 2 examined, under normal conditions, the relationship between perceived overall physical vulnerability and willingness to volunteer and donate money to a health-related organization. The relationship between subjective physical vulnerability and willingness to donate to charity was further examined in Study 3. Together, the findings of Studies 1-3 suggest that higher subjective assessment of personal physical vulnerability is associated with higher likelihood to engage in related prosocial activities. Studies 4 and 5 offer preliminary evidence of the direction of causality between those two factors, by manipulating perceived risk, and eliciting likelihood of donations under low and high vulnerability conditions. The results of these studies suggest that the sense of being vulnerable promotes willingness to act prosocially towards others.

Moyal, Adiel

“The Effects of Contest Participation and Contest Outcome on Prosocial Behavior”

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Contests are abundantly present in our daily lives, as well as throughout history. Following previous research on various aspects of contests as competitive situations, in the current research we aim to explore how taking part in a contest affects behavior in a separate, subsequent interaction. Specifically, we focus on whether the very experience of having just competed in a contest would have an impact on other-regarding decisions towards an individual who was not part of the previous contest. In addition, and in light of inconclusive results in the existing literature regarding the effect of the outcome of such a contest on subsequent prosociality, we reexamine this effect.

Our hypothesis that participation in a contest reduces prosocial decision making in an ostensibly unrelated situation was examined and endorsed via experiments that involved monetary and non-monetary prosocial measurements. Additionally, we found that winning a contest reduced both monetary and non-monetary aspects of prosociality, but only when decisions were framed as “giving” decisions and not as “dividing” decisions.

The findings suggest that taking part in a contest diminishes prosocial behavior, and that the effect of the contest outcome in this regard is complex and may depend on specific elements of the presented situations.

Muda, Rafał

“Thinking in a foreign language decreases the accuracy of logical thinking”

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Processing in a foreign language (L2) may reduce decision biases because it promotes more rational thinking. To test this, we used reasoning task measuring the logic index. Contrary to hypothesis, two studies revealed reduced logical thinking when processing in L2.

Müller-Dethard, Jan

“Portfolio Composition and Investment Decisions”

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Does portfolio composition, i.e. the number of winner and loser assets within a portfolio, affect investor satisfaction and investment behavior? We find experimental evidence that indicates that individuals are more satisfied with and allocate larger investments to more favorably composed portfolios, those with more winner than loser assets, relative to alternative portfolios with identical overall risk-return characteristics. A larger winner-to-loser-asset ratio corresponds not only to higher levels of satisfaction and larger investments, but also to more optimistic return expectations and a lower perception of the

riskiness of the portfolio. The findings are as if individuals use portfolio composition as an indicator for future performance. Our findings have implications for trading behavior on the stock level (e.g. the disposition effect), aggregated risk taking and return expectations on the market level (e.g. leading market indices) and behavioral asset pricing in general.

Müller-Trede, Johannes

“Risky Sure Things”

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Most models associate risk with outcome variability. But we observe that even sure things, which have zero outcome variability, are perceived as risky from risky reference points. For example, when an equal chance at \$385 and \$65 is the reference point, receiving \$200 for sure is judged relatively risky; after all, it can yield a relative loss or gain. The observation of risky sure things helps explain why risky reference points attenuate the preference for sure things. Sure things have special appeal when they enable risk avoidance. By rendering sure things risky, risky reference points eliminate this special appeal.

Mullett, Tim

“Attention and Evidence Accumulation – Diverging effects in simple vs complex choice”

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When deliberating between choice options, individuals must shift their attention between both options and attributes. Many models of choice assume that whilst visual attention is focussed upon an option or attribute, evidence is accumulated based upon the value of that option/attribute, or evidence accumulation is biased by the currently attended information. This assumption has meant that when models have been fitted to data they have included terms representing the value of the options, and that represents the biasing effect of attention upon perceived item value. However, they have not included a term representing a mere exposure effect, essentially omitting a main effect of attention from their analyses. We present the results from a number of eye tracking experiments using simple choice tasks. These are tasks such as snack choice, where options are simply food images, and subjects do not have to shift visual attention between different attributes. When choice is predicted using a full model the biasing effect predicted by evidence accumulation models is absent or small. Instead, the mere exposure effect is found to be a strong predictor. However, in more complex tasks, where options are represented by multiple attributes in separate locations on the screen, this biasing effect is present. These results have significant implications for models of choice: the effect of attention upon choice is qualitatively different in single vs multi-attribute choice tasks, and in simpler choice the role of attention in choice is not that predicted by existing models. Data from the UK police, and NHS England shows that there is no spike in alcohol related incidents around common monthly paydays, even after controlling for wealth/income. Previous reports are instead attributable to effects specific to Christmas.

N

Navarro-Martinez, Daniel

"The Endowment Effect in the Future: How Time Shapes Buying and Selling Prices"

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It has been widely documented that people tend to give a higher value to objects just because they own them. This pattern has been called the endowment effect (Thaler, 1980) and it is typically explained using the notion of loss aversion. The endowment effect is one of the most prominent phenomena in behavioral economics and it has important implications for a variety of situations related to buying and selling. However, virtually all research on this effect investigates transactions that take place in the present. This is a significant limitation, given that many real-world transactions have a temporal dimension. In many circumstances, people agree on a purchase or a sale and the transaction does not materialize until a later time in the future (e.g., in online buying and selling).

In this paper, we explore how transaction timing affects the endowment effect. We conducted four experiments in which the transaction timing of different products was systematically changed for buyers and sellers. We found that delaying transactions into the future systematically increases the endowment effect across a variety of products, and we show that this pattern is produced by gains being discounted in time substantially more than losses.

Nett, Tillmann

"Bayesian analysis of information used during decision making"

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In research on decision making, the behavior of a person is usually analyzed by fitting different strategies to the observed data. Such strategies define both WHICH information is used (e.g. most valid cue only or all cues) as well as HOW this information is used (e.g. uniform weighting of cues vs. different weights depending on validity). In paradigms where all information is provided, the question of how information is employed can be determined by using standard methods of strategy classification. However, with more ambiguous types of information that are also highly relevant in research and practice, it is much less obvious how this information is used. For example, salience information can be used both by trusting more salient cues more as well as by becoming more skeptical of more salient cues. Similarly, in hiring decisions the gender of an applicant can both be used by preferring men as well as by preferring women. Thus, fitting strategies in these scenarios using standard methods is harder to perform. We propose a different analysis method, which allows analyzing which information is used during decision making without making any

assumptions on how this information is used. This allows us to calculate Bayes factors for each type of information indicating how likely this information was used by a participant. In addition, the mathematical structure of this method only requires users to define simple hypotheses (e.g. "Gender information was used") and the more complex hypotheses can be automatically computed from these (e.g. "Gender information and first cue were used"). In a simulation study, we demonstrate the high reliability of this method (area under ROC curve $> .92$) and we give an example of how this method may be used to analyze data from an experiment.

Neumann-Böhme, Sebastian

"Trust me; I know what I am doing Does specialist training reduce preference reversals in decision making for others?"

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This paper examines if people with specialist training, e.g. in the field of medicine or finance, show fewer preferences reversals in their respective areas of expertise. Furthermore, we investigate different approaches to reduce the degree of preference reversals in the context of decision making for others. Preference reversals refer to the situation that people prefer A over B in one exercise or situation, but B over A in another. These reversals have been shown quite common, both for decisions for oneself and others. However, they pose multiple problems, also in the field of health care, for instance when dealing with treatment choices or with health state valuations. We used a sample (N=245) of medical and business administration/economics students, asking about medical and financial decision making for others. Preliminary results indicate that people with specialist training show fewer preference reversals in their area of expertise. Using Choice Lists in the valuation task reduced the degree of preference reversals in both settings, while natural frequencies only reduced reversals in the financial setting. Simplifying valuation tasks seems to help respondents to state more consistent preferences across procedures.

Neunhoeffer, Frieder

"The Inequality Trap: How High Stakes Fuel Overestimation and Equality Aversion"

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Increasing income inequality meets a declining demand for fiscal redistribution beginning in the 1970's. What seems counter-intuitive in the first place – as less redistribution further spreads an income gap according to theory – appears to emerge on global scale. The present work contributes to elucidate this paradoxical phenomenon. Using an experimental setup and applying real-world conditions we study how people's preferences for redistribution change with the level of income inequality and information about the own income position. Our data states greater demand for redistribution when the individual income position is known. We suggest that this is due to overestimation of the like. A novel finding is that overestimation intensifies when income inequality mimics conditions in South Africa (high inequality) in comparison to those in Switzerland (low inequality). Additionally, the data

reveals an influence of existing income disparity on inequality preferences. Biased by greater pre-tax inequality subjects seem to prefer relatively more post-tax inequality. These results combined propose an inequality trap: Initial inequality stimulates income overestimation winding up in less demand for redistribution and eventually resulting in augmented inequality.

Newall, Philip

"Gambling innovation"

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The UK sports betting market has changed significantly since 1999, as new technology and a permissive regulatory environment have changed the landscape of available gambling opportunities. Innovative firms drive economic growth, employment, and improve people's lives, according to the traditional economic view. By contrast, an emerging view in behavioral economics claims that firms may in some instances innovate new products to deceive biased consumers. We focus on one new betting product "request-a-bet" services, which allow gamblers to request and bet on custom bets, e.g., in soccer: "Romelu Lukaku to score a header and Manchester United to win, and Harry Kane to score a header and Tottenham to win."

We scraped 2,889 bet requests sent into the bookmaker William Hill in August and September 2017 using the StreamR package. Customer mostly requested unlikely bets. The average bet request would return £56.5 per £1 risked, if successful. Tracking soccer outcomes and bet payoffs over the season revealed a bookmaker profit margin of 43.6%, which is roughly ten times higher than the current profit margin on conventional soccer bets (Buhagiar, Cortis, & Newall, 2018). The bookmaker profit margin increased for the most extreme longshots. Only three out of 723 requests with returns of £30 or more per £1 risked paid off, corresponding to an even higher bookmaker profit margin of 74.5%. A total of six bookmakers advertised request-a-bet products on TV over the 2018 soccer World Cup, including two bookmakers who provided financial incentives to the winning request-a-bet at the highest odds.

Behaviorally-biased consumers may well require greater consumer protection against new gambling products than they are currently being offered in the current UK regulatory environment.

Nicholson, Ann

"BARD: A structured technique for group elicitation of Bayesian networks to support analytic reasoning"

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BARD (Bayesian Argumentation via Delphi) has been developed with 10 million dollar funding from the US Government via the IARPA CREATE (Crowdsourcing Evidence, Argumentation, Thinking and Evaluation) research program. The BARD project focused on

researching and designing new means of building and interacting with causal Bayesian networks (CBN) to improve reasoning and generate causal explanations. BARD is both an application and a methodology that applies (1) causal Bayesian networks as the underlying structured representations for argument analysis and (2) Delphi-style processes, to bring groups of analysts or domain experts to a consensus representation for a scenario or problem. BARD provides a variety of tools in an easy-to-use web-based software platform for building and reasoning with CBN, including an automated explanation tool to assist effective report writing. These are embedded in a social process that supports collaborative problem-solving, including facilitated discussion within teams. The result is an end-to-end platform for understanding and analysing a problem, building a model of its underlying causal structure, validating and reasoning with the causal model, and using it to write up an analytic report. Initial experimental results demonstrate that BARD aids in problem solving, reasoning and collaboration.

BARD applies (1) causal Bayesian networks as the underlying structured representations for argument analysis and (2) Delphi-style processes, to bring groups of analysts or domain experts to a consensus representation for a scenario or problem.

Nieper, Annika

“Power and Cooperation: A Meta-Analytic Review of Economic Games and Distributive Negotiations”

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Power is a fundamental dimension underlying social interactions that can offer profound insights for understanding how people cooperate. Yet thus far, past research offers conflicting evidence on the relation between power and cooperation. We meta-analyze experimental studies of power and cooperation using economic games and negotiation paradigms, both of which are situations in which people are in a conflict between maximizing their own outcomes and providing a benefit to others. Across 85 studies and 104 effect sizes, we find that power has an overall detrimental impact on cooperation ($d = -0.313$, $N = 14,998$). Certain experimental manipulations of power show a significant negative impact on cooperation (veto power, endowment heterogeneity, different punishment ratios, and role assignments), whereas others have no significant effect on cooperation (asymmetric alternatives and recalling a powerful time). We further investigate whether manipulations that influence power structurally (i.e., participants have more power) have a different impact than manipulations solely targeting the sense of power (i.e., participants feel more powerful). The results show that both types of manipulations had a comparable impact. We find a lower impact of power on cooperation in public goods games, and a higher one in delta games. Finally, we test for additional moderators such as the type of payment, percentage of male participants, and whether the game is played one-shot or iterated, which had no impact on the relationship between power and cooperation. We discuss the theoretical implications, add suggestions for the methodologies used to study power, and propose directions for future research. We meta-analyze experimental studies of power and cooperation using economic games and negotiation paradigms, and investigate several moderators on the relation between power and cooperation. Overall, power decreases cooperation ($d = -0.313$, $N = 14,998$).

Nikolic, Milena

“Prospective Feedback in Health Self-Monitoring Devices”

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Prospective feedback is a projection of the effects of people's future behaviour based on their current behaviour. We show that supplementing standard feedback being provided by self-monitoring devices with prospective feedback significantly helps users control their weight loss.

Niszczoła, Paweł

“The foreign language effect and risk-taking in heavily regretful decisions”

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The foreign language effect is a phenomenon, in which the mere presentation of a problem in a foreign language causes people to make different decisions than if the same problem was presented in their native language. The aim of the study was to assess whether the foreign language effect affects risk-taking in a visceral (heavily regretful) decision problem and meaningful domain, and to test whether this relationship is due to shifts in anticipated regret. In two experiments, we studied the responses of 307 participants, who were presented a problem concerning fetal testing during pregnancy. The problem was chosen to make it easier for participants to emerge in a decision problem, facilitating elicitation of emotional reactions (in contrast to, e.g., gambles). Participants were randomly allocated to either the native or foreign language condition and had to decide between a safe and risky prenatal test, with the latter introducing the possibility of causing a miscarriage. In both experiments, presenting the problem in participants' foreign language caused people to take on more risk, i.e. they stated that they would be willing to accept a higher probability of a miscarriage. Additionally, we found limited support that a foreign language might reduce anticipated regret connected to obtaining an adverse outcome after choosing the riskier option. Our study is the first to show a relationship between the language of presentation and risk-taking in a meaningful domain, showing that in certain circumstances the mere fact that information is presented to the decision maker in a foreign language can lead to more risk-taking. Our study lays the tracks for new research on the phenomenon, highlighting how language might influence negativity bias.

O

O'Connor, Rod

“Simple hidden things’: A model to identify what is needed for making better big decisions”

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Aim:

People are dying (war), the world is dying (environment), and this reflects human decisions. We have accomplished much, but if we are to survive we may need to improve our life-changing decisions, our big decisions. This study aims to identify how our thinking guides our decisions, the mistakes we make in our thinking, and the steps needed if our big decisions are to be good ones.

Method:

Articles on awareness, reasoning, emotion and creativity were gathered and reviewed, supplemented with individual accounts of personal decision making, and material from imaginative literature (novels).

Results:

Practices prima-facie likely to encourage mistakes were identified as:

- Ignoring evidence of a hazardous situation*
- Failing to understand a complex problem*
- Thinking we understand people when we don't*
- Following our leaders and peer groups blindly, even if this contradicts our own values*

Odermatt, Reto

“Psychological Opportunity Costs: The Effect of Opportunity Costs on Post-Choice Utility”

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A fundamental assumption in economics is that opportunity costs are only relevant in the decision-making process, but do not matter for post-choice utility. We hypothesize that opportunity costs created by the forgone alternative can reduce the experienced utility from the selected option, even in the absence of regret. We denote the extent to which opportunity costs matter for post-choice utility as psychological opportunity costs (POCs). We test this hypothesis in 3 experiments and provide evidence for the existence of POCs by showing that opportunity costs significantly decrease post-choice satisfaction.

Okan, Yasmina

“Using the Short Graph Literacy scale to predict precursors of health behavior change”

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Graphical displays can facilitate risk communication and promote better health choices. Their effectiveness in improving risk comprehension is influenced by graph literacy. However, the construct of graph literacy is still insufficiently understood. This is partly because existing objective measures of graph literacy are either too difficult or too long for the general population. We conducted secondary analyses to construct a new 4-item Short Graph Literacy (SGL) scale, which we adapted from an existing 13-item scale. The initial construction was based on data collected in a laboratory setting. We then validated the SGL scale using data from nationally representative samples in Germany and the US. We also examined how SGL scores relate to key cognitive, affective, and conative precursors of behavior change described in theories of health behavior. To this end, we performed secondary analyses of a third study involving a nationwide US sample comprised of 47% racial/ethnic minorities and 46% with limited formal education. Graph literacy was significantly associated with cognitive precursors in theoretically expected ways (e.g., positive associations with risk comprehension and response efficacy, and a negative association with cognitive risk perception). Results for affective precursors generally mirrored those for cognitive precursors, although numeracy was a stronger predictor than graph literacy for some affective factors (e.g., feelings of risk). Additionally, graph literacy (but not numeracy) predicted key conative precursors such as defensive processing. Our data suggest that the SGL scale is a fast and psychometrically valid method for measuring objective graph literacy. Our findings also highlight the theoretical and practical relevance of this construct.

Okan, Yasmina

“Does iconicity really matter? Examining how the design of icon arrays affects key outcomes for health decisions”

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Graphs are increasingly used and recommended to facilitate risk communication and support decision making. Icon arrays in particular can substantially improve risk understanding and reduce common judgment biases. Such displays can vary in their level of iconicity, ranging from more concrete, high-iconicity arrays (e.g., person-like icons) to more abstract, low-iconicity arrays (e.g., plain circles). Theoretically, high-iconicity arrays could facilitate recall of risk information owing to their pictorial nature and to their more direct links to the object they represent. However, previous work examining iconicity effects has yielded mixed results. We conducted three experiments to shed light on this issue. Participants (n= 3,136 across experiments) were presented with icon arrays depicting the risk of being diagnosed with Type 2 diabetes or a hypothetical virus. The arrays contained either plain circles, smiley/frowny faces, or person-like icons. Experiment 1 also included a control numerical-only condition. We assessed participants' numeracy and graph literacy, as there is some evidence that such cognitive abilities may moderate iconicity effects.

Supporting previous work, we found that icon arrays improved risk recall relative to numerical information. However, we found no consistent main effects of iconicity or interactions with cognitive abilities for risk recall, risk perceptions, and affective reactions. Smileys were rated as more familiar than the other icon types, but often received more negative evaluations, particularly relative to person-like icons. Taken together, our results suggest that icon arrays are an effective method to improve risk recall, but their beneficial effect may be largely independent of iconicity.

Okutur, Nazli

“Allocating Money to Multiple Charities Simultaneously”

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Recent innovations in fundraising platforms make it easy for people to donate passively, repeatedly, and to multiple charities. Although a large body of research on charitable giving has advanced our understanding of how individuals make donation decisions when faced with a single charitable appeal, we know little about how individuals make donation decisions when able to choose more than one charity at a time (except, see Baron & Szymanska, 2011). In this paper, we investigate how individuals determine total monetary allocations to a portfolio of charities that they choose to support. In particular, we look at two methods for budgeting for charitable giving: one where individuals allocate a budget in advance of knowing which charities to support, and a second in which individuals first choose the charities to support and then decide on their total budget. Across 5 studies (N = 2,748), including both hypothetical and incentive-compatible contexts, we find evidence for a strong decision order effect when allocating money to multiple charities. Specifically, we find that choosing which charities to support in advance of setting a budget leads individuals to allocate greater amounts of money to charitable giving than the reverse. We additionally find that these effects hold only when individuals can donate to multiple charities, and not when individuals are restricted to donate to a single charity, suggesting that the results are due to self-signalling concerns; individuals are hesitant to split small amounts of money across multiple charities for fear of feeling cheap.

Olschewski, Sebastian

“Numeric Cognition and Experience-Based Economic Valuation”

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The perception and integration of information in a sequence of symbolic numbers to come to an overall magnitude judgment is a complex task. Furthermore, it is a prerequisite for experience-based economic choices, and yet it is usually not part of economic decision theory. To better understand the process of number integration and its impact on economic behavior, we performed three experimental studies that examined the estimation and

valuation of continuous outcome distributions. Results show that participants valued random outcome distributions below their respective arithmetic means and valued a distribution as lower when its outcome variance increased, indicating risk aversion. A similar though less pronounced pattern also occurred in a matched estimation task where accuracy was incentivized and preferences played no role. This indicates that part of the seemingly risk-averse preference can be attributed to regularities in the estimation of numbers. Likewise, participants' apparent economic preference for right-skewed outcome distributions could be attributed mainly to estimation biases. Finally, neither in estimation nor in valuation did answers depend on the mean. We discuss the compressed mental number line and several sample weighting models to explain the estimation results. Together, evidence speaks more in favor of some kind of sample weighting and the similar results in valuation show that basic cognitive processes in perceiving and integrating number sequences should also be accounted for in experience-based economic behavior. The perception and integration of information in a sequence of symbolic numbers to come to an overall magnitude judgment is a complex task. Furthermore, it is a prerequisite for experience-based economic choices, and yet it is usually not part of economic decision theory. To better understand the process of number integration and its impact on economic behavior, we performed three experimental studies that examined the estimation and valuation

Olsson, Henrik

"Predicting the 2018 US House of Representatives elections based on social-circle expectations, state-expectations, and Bayesian Truth Serum"

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The majority of election polls ask people which candidate they will vote for (own intentions). The accuracy of election predictions, however, can be improved over and above these own-intention questions by asking people who they expect will win the election (winner expectations; Graefe, 2014). A related approach recently studied by Galesic et al. (2018) is to ask people about the voting intentions of their close social contacts (social-circle expectations). These questions were better than own intentions and winner expectations in predicting two recent presidential elections in the US and France. Another, complementary approach is to assign more weight to more credible answers. The Bayesian Truth Serum is a scoring system that penalizes careless or dishonest answers and may therefore also serve as an index of respondent quality (Prelec, 2004). In a national longitudinal survey (N>4,000), we compared predictions of the 2018 US House of Representatives elections based on own intentions, state-winner expectations, social-circle expectations, and Bayesian Truth Serum based on either own intentions or social-circle expectations. Social-circle expectation questions outperformed own-intention questions at the national and state levels in predicting the vote-share distribution (in two waves) and the margin between Democrats and Republicans (in all three waves). They outperformed state-winner expectations in all three waves. Additional improvements were achieved when social-circle expectations were combined with the Bayesian Truth Serum. Social-circle expectations and

the Bayesian Truth Serum show promise as an alternative to own-intention and winner-expectation questions.

Omerzu, Tjasa

“Establishing judgment policies in the absence of feedback”

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In daily judgment situations, for instance when employees prioritize daily duties according to urgency and importance, individuals often evaluate the object under consideration based upon subjective standards without receiving objective feedback. Our study aimed to disentangle which statistical properties of the environment attract people's attention in the absence of feedback and to infer the degree to which participants jointly consider several pieces of information. To investigate these questions, participants intuitively judged abstract objects consisting of three cues on a self-defined scale from 0 to 100. The results suggest that on average participants developed highly consistent judgments during the experiment but judged the same stimuli less consistently in conditions in which the cues provided less variable information. The analysis also revealed that participants weighted all cues equally in their judgment. Yet, it is possible that the judgment policies people establish in the absence of feedback are highly idiosyncratic and, thus, another person will be unable to pick up this judgment policy. Comparing these judgment policies also provides insights into the question of whether people focus on the same pieces of information when learning to make judgments with or without feedback. In a follow-up study, we asked another group of participants to learn to make judgments receiving as a feedback the judgments from one previous participant. Results revealed that participants were on average less consistent than participants establishing their own judgment policy. Still, they weighted the cues in a similar fashion. Taken together, these results suggest participants can establish consistent judgment policies based on their own criteria in the absence of feedback.

Onculer, Ayse

“The Future Ambiguity Effect: How Narrow Payoff Ranges Increase Future Payoff Appeal”

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Increasing a current payoff's ambiguity from a precise value (e.g., \$150) to a range (e.g., \$140-\$160) generally reduces the payoff's appeal, as does delaying the payoff from, for example, now to one year from now. However, we report five studies in which adding small ranges to future payoffs increases future payoff appeal, an emergent property designated the future ambiguity effect. This effect generalizes across various choice sets, payoff levels, and delays, and prevails even when a future smaller ambiguous payoff is preferred more than a future larger precise payoff. Two underlying processes are proposed and supported: (1) Payoff ambiguity's explicit risk of receiving a smaller payoff distracts people from the future's larger implicit risk of receiving nothing, while (2) payoff ambiguity restores some of the excitement lost to the future's psychological distance. Nonetheless, the future ambiguity

effect is not universal, given that larger ranges can reduce and even eliminate it (boundary condition).

P

Palumbo, Helena

“THE INFLUENCE OF SELF-OBJECTIFICATION ON MORAL JUDGEMENTS AND DECISION MAKING”

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Self-objectification occurs when individuals perceive themselves as objects, reduce themselves to some specific body parts or see themselves as a tool to achieve an objective. This occurs when people internalize others' perspective or societal ideals. We argue that self-objectification changes people's deontological moral judgments: they are more likely to consider situations where they are treated as a commodity as morally acceptable. We expect this to be especially likely for women, because they tend to have more experiences being the target of objectification. In our study, we triggered self-objectification by asking participants to look at a picture of themselves and describe their physical appearance. In the control group they had to describe their personality. Then participants indicated their level of acceptance of situations where they were commodified, and a deontological moral judgment was involved. (Eg: to be paid for tattooing a brand's logo in their body). Female participants in the treatment group were more likely to accept these situations than those in the control group. We also asked for their level of acceptance of control situations: individuals were commodified and an utilitarian moral judgment was involved (eg: selling organs). Individuals were commodified, and no moral judgment was involved (eg: selling hair). Individuals were not commodified, and a deontological moral judgment was involved (eg: accepting boss abusive behavior). And situations with no moral judgment and no commodification involved (eg: selling a piece of art that they did). Any of these showed significant differences. We hope that this research can contribute to understanding the role of practices that produce self-objectification (such as the “selfie” culture) on people's moral judgments. We predict that when self-objectifying, people evaluate morally questionable business practices that break a deontological moral rule as more acceptable. We conducted a laboratory experiment. Female participants in the self-objectification condition reported higher acceptance of these situations

Pe'er, Eyal

"Nudge me right:  Personalizing online nudges to people's decision-making styles"

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Nudges are simple and effective means to help people make decisions that could benefit themselves or society. However, effects of nudges are limited to local maxima, as they are almost always designed with the "average" person in mind, instead of being tailored to different individuals. Such "nudge personalization" has been advocated before, but its actual potency and feasibility has never been systematically investigated. Using the ubiquitous area of online password nudges as our testbed, we present a novel approach that utilizes people's decision-making style to personalize the online nudge they receive. In two large-scale studies, we show how and when personalized nudges can lead to considerably stronger and more secure passwords, compared to administering "one-size-fits-all" nudges. We therefore contend that more efforts by researchers and policy-makers should and could be made to guarantee that each individual is nudged in a way most right for them.

Peng, Cong

"Money is sweet when it says love"

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Money is not appreciated as a gift, partly because money lacks social meanings that expresses relational values to the receiver. We tested an idea that money can turn to be acceptable when its amount signals a social meaning of love. Specifically, Study 1 (N = 240, pre-registered) showed that Chinese appreciate 520RMB cash more than both 500RMB and 550RMB as a Valentine's Day gift, when 520 means I Love You in Chinese. We replicated this finding in Study 2 (N = 468, pre-registered) by comparing 520RMB with 510RMB and 530RMB, and found the causal mediating effect of gratitude (but not indebtedness). Moreover, this effect exists only for people who believe in the association between 520 and love, but not for those who don't believe in this association. In Study 3, (N = 204, pre-registered), we found that Chinese receivers chose 520RMB over 530RMB as a birthday gift. This preference for a lower but meaningful amount is particularly salient when the gift comes from close others compared to from strangers. In conclusion, even though money is often unfavorable as a gift, it can become favorable when it carries relational values.

Perales, José

"Is intelligence related to the strength of causal attribution biases in gamblers?"

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Problem gamblers are prone to endorse strongly biased beliefs about the causes of gambling outcomes. These biases involve overestimating their ability to influence or predict outcomes' probabilities (illusion of control, IC; predictive control, PC), and reinterpreting losses (interpretative bias, IB).

Previous research has documented a weak, but significant negative relationship between intellectual ability and gambling severity, but no studies to date have explored the relationship of intelligence estimates with gambling-related causal biases. On the one hand, intelligence could signal stronger biases, if these emerged from poor numerical/reasoning skills. On the other hand, the motivated reasoning approach, applied to gambling behavior, conceptualizes gambling-related biases as complex elaborations to justify decisions to gamble, and thus does not predict intelligence to protect gamblers from cognitive biases.

These opposite hypotheses were tested in two samples of 98 treatment-seeking patients with gambling disorder, and 82 non-problem gamblers. Causal biases were assessed with the 14, IC, PC, and IB items from the GRCS, and gambling severity with the SOGS questionnaire. In none of the samples the analyses performed yielded any relationship between intelligence and either gambling symptoms severity or causal reasoning biases, which undermines the intellectual ability account of these biases. An analysis restricted to recreational gamblers having experienced at least one negative consequence attributable to gambling (at-risk gamblers, $n=29$) revealed a curvilinear relationship between estimated intelligence and causal bias, with gamblers with intermediate-high estimate intelligence showing stronger biases than low and very high-intelligence ones, which supports the motivated reasoning hypothesis of gambling-related cognitive biases.

Pighin, Stefania

"Post-decisional counterfactual thinking in social dilemma games"

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We report two experiments to examine how people think about how things could have turned out differently after a decision in a cooperative interaction. The aim was to examine an "actor-reader effect" in moral decisions, i.e., whether people imagine alternatives to controllable actions when they read about other people's moral decisions, but imagine alternatives to actions outside their control when they themselves make moral decisions. The experiments employed two social dilemma games (the prisoner's dilemma and the stag hunt). The participants were university students ($N = 152$ and $N = 156$). We compared the counterfactual thoughts produced by participants who read a story about a fictional protagonist to those produced by participants who actually took part in the game. When the outcome was bad, participants had to indicate how things could have been better and when it was good, how things could have been worst. The results showed that people created different counterfactuals when they read about a game that turned out badly compared to when they actually experienced one: most readers imagined an alternative to the protagonist's own decision within her control, e.g., "things would have been better if only she had decided not to cooperate..." (68% in Exp. 1 and 92% in Exp. 2), whereas most actors imagined an alternative to the other person's decision outside their control, e.g., "things would have been better if only the other person had decided to cooperate..." (70% in Exp. 1 and 71% in Exp. 2). However, when things turned out well, most participants imagined an alternative to the other person's decision outside their control, whether they read about the game or acted in it. The results have implications for preparatory theories of counterfactual thinking. We report two experiments to examine how people think about how things could

have turned out differently after a decision in a cooperative interaction. The aim was to examine an “actor-reader effect” in moral decisions, i.e., whether people imagine alternatives to contro

Pipergias Analytis, Pantelis

“Make-or-break: chasing risky goals or settling for safe rewards”

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Humans regularly pursue activities characterized by dramatic success or failure outcomes where, critically, the chances of success depend on the time invested. How should people allocate time between such make-or-break challenges and safe alternatives, where rewards are more predictable (e.g., linear) functions of performance? We present a formal framework for studying time allocation between these two types of activities, and explore optimal behavior in both one-shot and dynamic versions of the problem. In the one-shot version, we illustrate striking discontinuities in the optimal time allocation policy as we gradually change the parameters of the decision-making problem. In the dynamic version, we formulate the optimal strategy—defined by a giving-up threshold—which adaptively dictates when people should stop pursuing the make-or-break goal. We then show that this strategy is computationally inaccessible for humans, and explore boundedly rational alternatives. We compare the performance of the optimal model against i) a myopic giving-up threshold that is simpler to compute, and even simpler heuristic strategies that either ii) only decide whether or not to start pursuing the goal and never give-up or iii) consider giving up at a fixed number of control points. Comparing strategies across environments we investigate the cost and behavioral implications of sidestepping the computational burden of full rationality.

Plonsky, Ori

“Best to be last: Serial position effects in legal decisions in the field and in the lab”

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Many legal decisions, such as bail or parole decisions, are made as part of a sequence of similar but independent decisions. Does the serial position of a case within a sequence influence the decision? Previous research in non-legal domains mostly suggests that cases appearing later in the sequence are likely to be judged more favorably than cases appearing early in the sequence. Yet, analysis of real-world parole decisions found an opposite pattern: parole requests made later in a sequence were rejected at much higher rates than requests made early (at least until the judge takes her lunch break). Yet, it was later suggested that the ordering of the parole cases analyzed is not truly random and therefore it is unclear if the observed effect was truly a serial position effect. To check for the effect of serial position in legal decisions, we take a dual approach. First, we analyze a real-world dataset of refugee asylum court cases over a period of 33 years ($N = 386,109$). The results show that asylum requests presented later in the day are granted with much higher rates than those presented earlier in the day, in line with sequential decisions research in other domains. Though we show that cases in the asylum courts are likely to be randomly-ordered, we cannot be

certain that they are. To complement the findings, we run three controlled experiments in which laymen face sequences of legal cases and are asked to make hypothetical choices. The results of all three experiments show the same pattern: decisions get more favorable later in the sequence. Our dual analysis of real-world observational data and carefully designed controlled experiments thus suggests that from the point of view of the affected individual, it is best to be last.

Polyportis, Athanasios

"I'm not impatient; - I got suspicious." On the effect of suspicion on predicted utility and information search."

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The present research unveils the effect of suspicion on the subsequent information search and predicted utility.

Pulford, Briony

"Evidence for the Confidence Heuristic in common-interest games with asymmetric information"

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According to the confidence heuristic, when people communicate beliefs to one another, they generally express confidence proportional to their degree of certainty, based on their relevant knowledge, and recipients tend to judge the persuasiveness of the communication according to the confidence with which it is expressed. Previous experiments have investigated the confidence-persuasiveness aspect of the heuristic but not the full knowledge-confidence-persuasiveness hypothesis. We report 3 experiments to test the confidence heuristic using incentivized interactive decisions with financial outcomes in which participants attempted to identify target stimuli after conferring with a partner who was also seeking the right answer and who had either stronger or weaker information about the target. Experiment 1, using a facial identification task, confirmed the confidence heuristic. Experiment 2, using geometric shapes as stimuli, found a much larger confidence heuristic effect. Experiment 3 found similar confidence heuristic effects through face-to-face and computer-mediated communication channels, suggesting that verbal rather than nonverbal communication drives the heuristic. Suggesting an answer first was typical of pair members with strong evidence and may therefore be a dominant cue that persuades. Our results establish the confidence heuristic with dissimilar classes of stimuli and through different communication channels.

R

Rabinovitch, Hagai

"The intuitive weighting of "irrelevant" information in selection processes"

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Choosing between candidates for a position can be tricky, especially when the selection test is affected by irrelevant characteristics (such as reading speed or native language). In this case, one needs to correct for this irrelevant attribute by "penalizing" those who have unjustifiably benefited from it.

We examined whether people intuitively understand the effect of such attributes.

We conducted two studies (n=245) in which participants were asked to select out of two candidates for a certain position according to a score achieved on a selection test. Both candidates had achieved the same score on a selection test, but one of them was higher on an irrelevant attribute, and thus had a biased advantage. A normative model would treat this irrelevant attribute as a suppressor variable and weigh it negatively in the model to reduce its effect, but does intuition concur with this suggestion? We hypothesized that participants would fail to correct for the biased advantage, because the process needed is complex and counter-intuitive.

We found that participants showed a substantial preference for the candidate high on the irrelevant attribute, thus making the wrong decision. This finding was moderated by intuitive thinking. For participants high on intuitive thinking, this erroneous preference increased according to the extent by which the test was affected by the irrelevant attribute, whereas for participants low on intuitive thinking style a reverse pattern was found.

These results support our hypothesis that participants' intuitive understanding fall short of the prediction suggested by a normative model.

Rachubik, Joanna

"The representativeness heuristic and the choice of lottery tickets: A field experiment"

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The representativeness heuristic (RH) has been proposed to be at the root of several types of biases in judgment. In this project, we study if RH is helpful in organizing data describing two kinds of choices in the context of gambling. Specifically, in a field experiment with naturalistic stimuli and a potentially extremely high monetary pay-out, we give each of our subjects a choice between a lottery ticket with a random-looking number sequence and a ticket with a patterned sequence; we subsequently offer them a small cash bonus if they switch to the other ticket. In the second task, we investigate the gambler's fallacy, asking subjects what they believe the outcome of a fourth coin toss after a sequence of three

identical outcomes will be. We find that most subjects prefer “random” sequences, and that approximately half believe in dependence between subsequent coin tosses. There is no correlation, though, between the initial choice of the lottery ticket and the prediction of the coin toss. Nonetheless, subjects who have a strong preference for certain number combinations (i.e., subjects who are willing to forgo the cash bonus and remain with their initial choice) also tend to predict a specific outcome (in particular a reversal, corresponding to the gambler’s fallacy) in the coin task.

Rahal, Rima-Maria

“Eyes on Morals: Investigating the Cognitive Processes Underlying Moral Decision Making via Eye Tracking”

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The nature of moral decisions has long been at the center of theoretical debates.

Testing process predictions derived from the dual process theory of moral judgment and a competing choice discriminability account, we ran a pre-registered eye tracking study, showing decision makers’ attentional foci, their decision effort and conflictedness during their decisions in incentivized third-party helping dilemmas. Results challenge the dual process theory, and instead support a more nuanced view incorporating moral preferences. Deontologists fixated not only on characteristically deontological information on morally relevant actions, but in fact took outcome-related information into account more than utilitarians. Decision effort measured via reaction times, number of fixations and number of inspected information was not only low for extreme deontologists but lowest for participants with strong utilitarian moral preferences. Preferential attention across the decision process indicated that preference-consistent choices were made with less decision conflict. Implications for theories of moral judgment are discussed.

Rakow, Tim

“Do decision makers’ valuations of time show reference dependence?”

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We examined the subjective value that decision makers place upon time by examining risk preferences over choices about time in which event durations vary, comparing risk preferences across two equivalent sets of choices (time vs. money), and using prospect theory as a lens to explore whether valuations of time are reference dependent in a similar way to those for money. A large sample (N = 265) completed an online survey with 16 two-option choice problems, each having ‘sure’ and risky options. Eight monetary (temporal) choices presented alternative options differing in the cost (duration) of a journey, with outcomes in the domain of gains (savings of money or time) or losses (additional time taken or costs incurred). We found standard patterns of risk preference for both money and time: (1) more risk aversion for gains than for losses, a pattern that reversed when the probability of the most extreme outcomes was small (the fourfold pattern of risk preference); (2) loss

aversion in choices over mixed gambles; (3) when the same final outcomes states were framed in different ways, preferences altered consistent with standard loss-gain framing effects. To a small yet significant degree, choices about time were more consistent with prospect theory than choices about money ($d = .22$). These findings suggest that reference-dependent valuation affects choices about time at least as much as it affects choices about money. This is surprising because time and money have several objective differences: time cannot be transferred, traded or re-gained after being lost in the same way as money. Yet, it appears that decision makers readily treat time as a resource that can be lost or gained in the same way as tangible resources (e.g., money), and choose accordingly.

Rakow, Tim

“Using a handful of possible futures to communicate distributional information”

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Showing a “handful of possible futures” – a representative sample of only five outcome values – can communicate basic distributional information about possible outcomes. This simple format provides information sufficiently detailed to inform planning, while acknowledging uncertainty in outcomes.

Ramasubramanian, Madhuri

“Numeracy Predicts Domain General And Specific Risk Perceptions: An Investigation Of Flood Risk Communication”

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Flooding is the costliest natural disaster in the United States. The current study developed a paradigm to communicate flood risk information and measure stable individual differences in risk perceptions. Results indicate that numeracy significantly predicted risk comprehension and subsequent decision-making.

Rao, Li-Lin

“The timing of the gaze-contingent decision prompts influences risky choices”

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Risky decisions are ubiquitous in daily life and are central to human behavior. Extant research primarily focused on investigating the underlying process of decision making under risk. However, little attention has been devoted to exploring the temporal dynamics of risky choice and whether risky choice can be influenced by gaze direction. In the current study, we used the gaze-contingent manipulation to manipulate individuals' gaze while they decided between two risky options and examined whether risky decisions could be biased toward a randomly determined target. We found that participants' risky choices were biased toward a randomly determined target when participants were manipulated to gaze longer at

the target option (Study 1, N = 37) or at the target outcome dimension (Study 2, N = 37). We also found that both the relative time advantage and the location of the last fixation mediated the effect of the gaze-contingent manipulation on risky choice. However, the gaze-contingent manipulation was effective only when the decision-prompt rules were satisfied. Our findings demonstrate that manipulating individuals' gaze while they make a decision can affect their risky decisions. In the current study, we used the gaze-contingent manipulation to manipulate individuals' gaze while they decided between two risky options and examined whether risky decisions could be biased toward a randomly determined target. We found that participants' risky choices were biased toward a randomly determined target when participants were manipulated to gaze longer at the target option (Study 1, N = 37) or at the target outcome dimension (Study 2, N = 37). We also found that both the relative time advantage and the location of the last fixation mediated the effect of the gaze-contingent manipulation on risky choice. However, the gaze-contingent manipulation was effective only when the decision-prompt rules were satisfied. Our findings demonstrate that manipulating individuals' gaze while they make a decision can affect their risky decisions.

Read, Daniel

"Age brings patience to the rich but impatience to the poor"

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We investigate time discounting with a new data set drawn from a large representative international sample, using a novel measure of time preference we included in WIN/Gallup's 2015 End of Year survey, obtaining measures from 64 countries and over 45,000 respondents. We also had unfettered access to the complete survey, including a range of personal measures from each respondent. We summarise these data with particular attention to the interaction between income, age and time discounting. Theories of time preference generally suggest that discounting will vary with income in that poorer people will be less patient than wealthier ones. With respect to age, theories (and empirical results) are much more diverse. Overall we find that people get more impatient with age, but that this effect is restricted to those who are relatively poorer. Wealthier people get more patient with age. This age-by-income interaction is found by looking at income differences within countries, but not between countries, suggesting that patience is related to relative income (older people who are poor relative to others in their country get more impatient with age) but not absolute income. We propose discounting may display a parallel to the "Easterlin paradox" in which relative income is related to changes in patience with age, but absolute income is not.

Reeck, Crystal

"Search Strategies Moderate Patience in Intertemporal Choice"

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People often discount future rewards, making them less attractive than lower-value rewards delivered sooner. Search strategies – how and in what order people acquire

information – offer insight into the heuristics used in intertemporal decision making. Our previous research (Reeck, Wall, & Johnson, 2017, PNAS) identified two main types of search strategies in intertemporal choice and demonstrated that use of these two search strategies predicts overall patience as well as framing effects in intertemporal choice. Building on these earlier findings, the present research pursues two aims. First, we demonstrate that other individual differences associated with patience do not predict search strategy use. Specifically, we show that numeracy and financial literacy do not predict search strategy and that the observed relationship between search and patience remains even when incorporating these measures into analyses. Second, we show that search strategy use moderates the influence of amount magnitudes on patience in intertemporal choice, such that comparative search strategies are associated with larger exhibited magnitude effects. These findings are consistent with our prior research demonstrating that integrative search diminishes the expression of other contextual effects on intertemporal choice. Taken together, findings from these two studies reveal that search strategy use is distinct from other cognitive individual differences that have been examined in intertemporal choice and extends the contextual effects in intertemporal choice that are moderated by search strategy.

Riege, Anine

“Communicating scientific disagreement in health policy decisions and its effect on public perception”

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Disagreement is normal and expected in scientific research, yet it is seen as an indicator of ignorance by the public. Little is known about what constitutes scientific disagreement or how it affects public opinion. The present work explores what constitutes scientific disagreement in health-related policy decisions, and how policy decisions affect public perception of the decision maker.

The experiment had three main aims: 1) Investigate what constitutes scientific agreement and disagreement using open questions, varying the type of disagreement (no effect vs. opposite effect); 2) Investigate the effect of disagreement magnitude (all 10 research groups agree vs. 9-1 vs. 7-3) and type of disagreement (no effect vs. opposite effect) on support for policy; 3) Effect of policy choice (yes vs. no) and disagreement magnitude (10-0 vs. 9-1 vs. 7-3) on public opinion. Two different health related policy topics were used, namely mandatory flu vaccine for healthcare workers and recommending vaping as smoking cessation.

The results indicated that for the two scenarios, around 80% agreement amongst researchers constituted scientific agreement. Some scientific disagreement was acceptable, but less when the disagreeing scientists claimed that the policy would have the opposite of the intended effect. Larger disagreements affect support for the policy and public opinion more negatively than small disagreements, and interestingly, deciding not to introduce the policies seemed to affect public opinion more negatively than instigating the policies.

Rilke, Rainer

“Peer selection, cooperation, and performance – A natural field experiment”

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We run a natural field experiment to study the influence of two peer selection mechanisms on team performance. Participants of the experiment, students of a microeconomics class, either have to choose a study partner themselves, or they are assigned a study partner randomly to form a study group. During the experiment study groups have to work on different exercise sets that determine their final grade. We observe that group performance is higher on average and varies less when partners are assigned randomly. With the help of application data – gathered before students start their study program – we are able to pin down a reason for this result: assortative matching on ability. Good students get more able study partners leaving bad students with less able study partners.

Ringdal, Charlotte

“Household consumption decisions: An experiment in Kenya”

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More than half of the world's population live in urban areas, including more than a billion children. Urban life may offer many benefits for children such as access to schools, health and sanitation facilities. However, many children still grow up in households that lack access to these and other basic services (UNICEF, 2012).

We invite married couples to participate in a lab experiment. In the first part of the experiment, each spouse makes individual decisions where they choose between money for themselves and nutritious meals for one of their children. In the second part of the experiment, the spouses sit together and make the same decisions but between money for the two of them as a couple and nutritious meals.

The set-up of the experimental choices is such that we can do a revealed preference test both at the individual level and at the couple level. This allows us to check whether the individuals behave rationally and whether the couples make Pareto efficient choices when deciding together. Second, by comparing the individual expenditures on meals for children of both husband and wife, we can observe for each couple who has the stronger preferences for expenditures on children. Third, by analyzing the differences for the expenditures on these same meals between the individual choices and the joint decisions, we can conclude which spouse has more say.

Our preliminary results suggest that about 85% of both men and women behave rationally when making decisions individually. Furthermore, when the decision is made jointly, approximately 75% of couples confirm to the collective household mode. Finally, men always allocate more to their child's nutrition than women.

Robinson, Peter

“A theoretical and experimental study of charity hazard: The effect of risky and uncertain government compensation on flood insurance demand”

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We derive theoretical predictions of the influence on flood insurance demand of risk and ambiguity preferences and the availability of different forms of government compensation for disaster damage, which is called charity hazard. An incentivized economic experiment tests these predictions. Certain and risky government compensation crowd out demand, confirming charity hazard, but this is not observed for uncertain compensation. Ambiguity averse subjects have higher insurance demand when government compensation is uncertain relative to risky. Risk preferences elicited with stated preferences better predict insurance demand than risk preferences elicited with multiple price lists. Policy recommendations are discussed to overcome charity hazard.

Rodriguez, Nuria

“An intuitive Laffer’s Curve? Results from an experiment on taxation”

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In this study, we test the existence of a behavioral Laffer’s Curve. The approach from behavioral economics is of special interest, given the limitations from other sources. The results will help determine if there exists a behavioral Laffer curve.

Rodriguez-Priego, Nuria

“Does losses loom greater than gains in online security messages?”

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Online security is influenced by natural events, technical failures and malicious threats, but human mistakes also play an important role. The purpose of this research is to contribute to policy actions that lead consumers to increase online security. It tests several warning messages based on the literature of behavioural insights that may persuade consumers to behave more securely while online, thus diminishing their chances of suffering a cyber-attack. We observed five security behaviors. Each decision could increase the probability of suffering a cyber-attack at the end of the experiment and make the participants loose part of their variable incentive. Results show the advantage of loss vs. gain-framed messages on participants’ security behavior. We discuss policy and academic implications.

Rohde, Kirsten

“Social risk attitudes for health and money”

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Many risks have a social as well as an individual dimension. This paper studies attitudes towards social risks for health and money. In an experiment, participants are asked to report their certainty equivalents of risks that are distributed over individuals in society. In every society, all individuals face the same risks. Societies differ regarding the correlations of risks across individuals. Attitudes towards such correlations shed light onto people's concerns for inequality and collective risk (Rohde and Rohde, 2015). In this study we compare decisions for social risks concerning health and money. We also compare social risks framed in terms of gains and losses. The participants in our experiment had a clear preference for risks to be independent between people in society. This seems to be partly driven by feelings of responsibility. We found a difference between gains and losses but none between health and money.

Ronzani, Piero

“Psychology of poverty, financial incentives and parental investment in early childhood”

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While the role played by parents in the human capital development of children has been widely emphasized, little is known on the determinants of parental investment. Empirical evidence indicates a strong correlation between socio-economic status and parental investment, commonly attributed to lack of knowledge or wrong beliefs on returns on investment. This paper tests an alternative mechanism. Recent experimental evidence indicates that poverty taxes mental resources and shifts focus towards pressing needs, at the expense of decisions with long-term consequences. In these lines, this paper tests if financial concerns decrease investment in human capital, and if they change how parents respond to a financial incentive which reduces the cost of investment goods. Parents are first exposed to a prime inducing financial worries associated with poverty, and then allocate a budget between goods proxying investment in human capital, pressing needs and temptation. Half of participants receive a 50% discount on the price of investment goods. Among lower income parents, the discount increases investment only if financial concerns were not primed. When primed, parents do not invest more and use the discount to demand more pressing needs goods. When the discount is not offered, priming financial concerns decreases investment only among parents with low self-reported parenting practices. Among higher income participants, the prime does not have any impact on behavior. The results suggest that policies aimed at increasing parental investment are less likely to succeed in times of high financial instability.

Rosenbaum, David

“Intuitive averaging and statistical estimations of rapid numerical sequences”

E-mail: David Rosenbaum

We examined the ability to estimate statistical properties of rapid numerical sequences in three experiments, complemented by computational analysis. We distinguish between intuitive processing and analytical processing. We find an impressive ability to estimate sequence-average and SD, using intuitive processing, subject to attentional weighting.

Roth, Yefim

"The impact of not checking or forgetting on consumer's financial wellbeing"

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A significant proportion of households have major debt levels. For example according to CNBC survey, a whopping 77% of the USA population have some kind of debt. What leads households to high debt levels? There are many known contributors to consumers over-spending and not enough savings. On the one hand, marketers, use various techniques to entice consumers to spend more. On the other hand, different behavioral finance biases, including the most known documented financial anomalies (the equity premium puzzle and the disposition effect) lead people to poor financial decisions. In this research, we highlight the role of two under studied contributors to consumers debts – namely "not enough checking" and forgetting. We show that many of the poor financial decisions can be explained as either a failure to collect information (e.g., compare prices of the different offerings), or forgetfulness. For example a consumer might intended to switch to a cheaper service provider (e.g., cell phone provider) when his current deal is over, and simply forget to do it, when the time for action come. We establish the importance of these contributors using a self report questionnaire and in a laboratory settings. We also propose, simple nudge – interventions (reminders), that significantly improve consumers behavior.

Rotman Argaman, Elisheva

"Becoming Pollyanna: Positivity and negativity biases in memory depend on event mixing"

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Previous studies have found that people show greater recall of positive than negative events. On the other hand, findings indicate a negativity bias in people's cognitive performance. We suggest that the driving force behind the negativity bias is attentional, and therefore a negativity bias should appear in memory recall as well, but only when positive and negative experiences are not intermixed. In Studies 1 and 2 we found that when individuals faced a mixed set of positive and negative outcomes in a decision task, they showed a robust positivity bias in their recollections. In Study 3 we examined a task with non-mixed positive or negative outcomes, and observed a negativity bias in recollections as well response time. In Study 4 we compared mixed and blocked schedules of positive and negative outcomes with the results showing that mixing trials eliminated the negativity bias. The findings indicate that humans show both positivity and negativity biases depending on the intermixture of events, supporting an attentional account for the negativity bias. Our

study addresses the conditions under which positivity and negativity biases occur in memory. We show that both positivity and negativity biases may appear, dependent on the intermixture of events, thus supporting an attentional account for the negativity bias.

Rubinstein-Levi, Ravit

“Decision-Making in Defined Contribution Pension Plans”

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Most employees avoid making decisions regarding their pension savings due to lack of knowledge. This research suggests that employees wish to resort to 'government protection' and providing them with counseling from a state counselor will motivate them to make decisions.

Rudnicki, Konrad

“Does gossiping promote making more trusting decisions? The role of individual differences.”

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Previous research suggests that gossip serves several functions in regulating group dynamics (e.g. bonding, entertainment) and is preferentially used by prosocial individuals to protect the group from exploitation. However, it is still unclear what mechanisms underlie these functions and compel prosocial people to gossip. Because gossip provides information about the attitudes and moral views of an interaction partner we hypothesized that for prosocial individuals it functions as a cue that enables trust to be established, even among strangers. We conducted an experiment with 122 female participants who did not know each other prior to the study. They were asked to gossip about celebrities (the most likely form of gossip between strangers) or perform a creativity task for 20 minutes in pairs before playing a trust game. Participants were categorized as prosocial or proself based on their social value orientation (SVO). To additionally test if the effect of gossip on trust differs in real-life interactions and online, participants interacted either face-to-face and online. The results show that, irrespective of the environment, prosocial women trusted their interaction partners more after gossiping, whereas proself women trusted their partners less.

Rusou, Zohar

“The Psychology of task management: The Small Tasks Trap”

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The simultaneous pursuit of multiple tasks appears to be the norm in everyday life and the implications of scheduling tasks effectively—or failing to do so—are considerable. This study examined how people behave in such multi-tasking environments and whether their

behavior consistently strays from the normative bench mark (i.e., optimal behavior). When people are confronted with multiple tasks, normatively, priority should be given to the most effective task. However, a large body of evidence in behavioral economics indicates that people manage their tasks in sub-optimal ways. Our central hypothesis was that people are primarily motivated to address smaller (less effortful) tasks first, regardless of their benefit, and that this preference might lead to suboptimal performance and reduced benefit as compared to normative strategies of tasks' handling (the small tasks trap phenomenon) In addition, we hypothesized that this behavior is likely to depend on differences in cognitive thinking style. That is, individuals low in rational thinking should be more prone to the small tasks trap than individuals high in rational thinking. To test this hypothesis, we developed an incentive-compatible task management game in which participants are saddled with multiple tasks and have to decide how to handle them. The findings indicate that people consistently choose to start with a smaller task, and consequently, tend to spend too much time on less effective tasks. Participants low in rational thinking were prone to this small tasks trap more than participants high in rational thinking. We discuss the theoretical and practical implications of these findings, and suggest possible interventions to improve task management.

S

Sabato, Hagit

"Pleasure or meaning: Subjective well-being and donations to identified and general targets"

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The identifiable victim effect refers to people's greater willingness to share resources with identified targets (about whom they have some identifying information) than to share with unidentified or statistical targets. Previous research suggests that identifiable targets arouse in the perceiver an intense feeling of distress that, in turn, increases sharing. In the current research we examine the correlation between people's subjective well-being and their pro-sociality toward identified target versus unidentified recipients. We explore this correlation by examining the association between donation decisions and two distinct orientations of well-being—hedonism (maximizing pleasure and minimizing pain) and eudemonia (fulfillment of one's potential and a desire for meaningful life). In two studies, we examined the interaction between the two orientations and the nature of the recipient in donation decision: first, in a correlative design, by measuring individual differences in levels of hedonism and eudemonia (Study 1). Second, by experimentally enhancing the salience of the two orientations using a priming manipulation (Study 2). we found a significant interaction between the two orientations and the nature of the recipient, such that hedonism was found to be positively linked to donations—especially when a specific identified recipient is presented—while eudemonia predicted greater donations to more general causes. Results of a moderated mediation analysis suggest that the intense emotional reaction sparked by identified victims mediates the above interaction.

Sahar, Limor

"Wisdom of the crowd or people like me? Inconsistent preferences between volume and similarity in online reviews"

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When seeking for online advice, people sometimes need to choose between following the "wisdom of the crowd" vs. following a subset group of people that are more "like them". Both the volume of reviews (i.e., "wisdom of the crowd"), and similarity between consumers and reviewers (i.e., "people like me") have been found to be critical for consumer choices. However, they cannot be mutually maximized and people must tradeoff one to gain the other. Therefore, the question is whether people are willing to sacrifice the amount of reviews in order to gain advices that are more relevant to them and if so, under which conditions? In four online experiments we show that people do tradeoff volume vs. similarity and are willing to sacrifice volume of reviews in order to gain relevancy (reviews from people like them) when they feel that the proportion of those similar others is significant enough. Additionally, people are more sensitive to the percent of similar others than to the actual number of this group meaning that, peoples' preferences are inconsistent and may be affected by choice architecture. Changes in the amount of similar others' format could lead to substantial differences in whether people will follow the advice of the "wisdom of the crowd" vs. those who are more similar to them that may, eventually, affects their level of satisfaction from their actual decision. Implications to real life interventions will be further discussed.

Salmen, Karolin

"Individual Belief Updating Depends on the Distance to Other Estimates and Being an Outlier to Different Social Groups"

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How do individuals integrate discordant advice with prior estimates? This study tests a two-step model of individual belief updating. The first step determines whether individuals take advice into account or reject it completely. In the second step, individuals that decided to take advice integrate it. We hypothesized that the first step is influenced by whether the initial estimate is an outlier to the advice, while the second step is influenced by the distance between the mean of advice and the initial estimate. This model is tested in a context in which advice is provided by members of either the majority, the participant's ingroup, or an outgroup perceived as competent. This allows to investigate the influence of majority conformity, ingroup conformity and group-level competence on both steps of belief updating. After collecting answers to 28 socio-demographic questions about the EU in a series of pre-studies (N = 120), these were presented as advice in four within-participant conditions to 40 British participants.

The results of linear mixed-effects modelling support the two-step model of belief updating as superior to models of advice integration proposed by the literature. In addition, factoring in the influence of different social groups improved model performance in both steps through accounting for inter-individual differences in the weighting of advice from different groups. We conclude that the two-step model of belief updating not only allows better

predictions of updating, but also the opportunity to test the influence of advisor-, advice-taker- and advice-level influences on both steps.

Saporta-Sorozon, Kelly

“The Effect of Similarity Between A Product's Packaging Color and the Benefit Offered on Judgments and Preferences”

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Studies show a product's color affects consumer behavior. Yet the basic principle that governs color effects is unclear. In this study, we fill this gap. We demonstrate that causal-reasoning considerations govern color effects. Specifically, people expect that a cause and its effect should exhibit some degree of resemblance or congruency (“like causes like”), which leads them to use the “law of similarity” heuristic. In two studies, using various products, we focused on an irrelevant aspect of the product's color—the color of its packaging. We demonstrate that the same ad (e.g., a patch that prevents mosquito bites) was more persuasive (willingness to purchase the product – henceforth WTP, and preference) when the product's packaging color was congruent (pinkish) with the effect promised (calm skin) than when it was not (red).

We strengthen the notion that leaning on a cause-effect-similarity heuristic is very basic, by showing that individual differences in thinking style have a very small effect on moderating this tendency.

In line with other studies, which shows that causal-reasoning considerations (as previous knowledge and metal causal structure) govern judgment and choice on artifacts (products), the present study demonstrates that causal-reasoning considerations govern judgment and choice concerning cause-effect similarity heuristic as well.

Schäfer, Lena

“Dynamic Processes in the ‘Hot’ Columbia Card Task”

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We demonstrate the existence of systematic dynamic processes in the ‘hot’ version of the Columbia Card Task. Specifically, participants’ risk taking is sensitive to outcomes of prior trials and also generally decreases over the course of the task.

Scharf, Sophie

“Coherence Effects on Information Search: The Influence of Attractiveness Ratings”

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The integrated coherence-based decisions and search model (iCodes) predicts that participants show a tendency to search for information on the option that is currently

supported by the already available evidence, a prediction coined as the Attraction Search Effect. An open question is whether the strength of the attractiveness influence on search can be experimentally manipulated. One possible approach is to strengthen the role of attractiveness in the information search process by increasing participants' awareness of differences in attractiveness of the choice options. To increase this awareness, we asked half of the participants in our experiment to rate options' attractiveness based on already available information before their subsequent search. Indeed, rating options' attractiveness increased the tendency to search for the more attractive option compared to not rating options' attractiveness. The effect of these ratings is further reflected in an individually fitted parameter representing the relative influence of attractiveness compared to validity in the information search process. Parameter values of participants who rate options' attractiveness show that their search is influenced more strongly by attractiveness than participants in the no attractiveness condition. The results of this project show not only that information search behavior can be manipulated by simply rating options' attractiveness but also that iCodes is able to capture the effect of such a manipulation in a model parameter. Thus, this project further validates the assumed information search process and emphasizes the role of the already available evidence in information search but also takes systematic differences in the size of the effect into account.

Schlegelmilch, René

"The influence of reward magnitude on stimulus memory and stimulus generalization in categorization decisions"

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The aim of our studies is to test how differences in reward magnitude during category learning affect categorization accuracy. Categorization accuracy might be improved for stimuli, which render high reward, because high reward has been suggested to improve declarative memory. However, reward learning mechanisms could also influence stimulus generalization, e.g. leading to an over-generalization of high reward stimuli. Such an effect would impede learning about low-reward stimuli, as they contribute less information to category inference. To delineate these hypotheses, we conducted three studies. Participants underwent a category learning phase, in which correct decisions rendered high vs. low rewards for specific training items. A test phase followed including novel stimuli. Item-specific performance was compared to a baseline condition with equal rewards. Introducing differences in reward magnitude decreased learning speed and accuracy for low-reward exemplars without increasing accuracy for high-reward exemplars. In line with these results Bayesian analyses of the test phase decisions using the generalized context model revealed that participants' choices are better described by an over-generalization of high-reward exemplars, rather than differences in exemplar memory strength. In additional tasks (Study 1 & 3) participants estimated the likelihood that presented stimuli will render high reward. Exemplar-based generalization during the categorizations coincided with the presence of reward value generalization in the judgment task. Overall, the results suggest a close link between the cognitive processes underlying exemplar-based category inference and the generalization of stimulus value.

Schlösser, Thomas

“He that has plenty of goods shall have more”? The interaction of group members’ social status with trust, trustworthiness and expectations.”

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Research has mainly focused on the connection between a person holding a social status and its willingness to trust some (generalized) other. In 2 small group studies (N=18, N=28, = 1062 decisions on trust and 1062 on trustworthiness) we elicited participants’ decisions to trust and to act trustworthy in mutual inter-individual incentivized Trust Games among the group’s members. Also, the respective expectations were measured. Participants were asked about their own subjective and the interaction-partners objective social status. This allowed us to explore the dynamics between individuals that differ in social status to understand the causality (and not only the correlation) of such interactions. Results: the higher the participants’ objective social status, the more trust and trustworthiness they received. Plus, the higher the participants’ objective social status, the more they were expected to act trustful and trustworthy. But, participants’ trust decisions and trustworthiness were not connected to their objective social status. Furthermore, the difference of subjective minus objective social status is a measure of the subjective anticipated status evaluation of the partners in one dyad. The higher this measure of both partners and, additionally, the more the trustor perceived himself as status-higher compared to his partner, the more this trustor was prone to trust. This interaction effect translates into a cartel of trust among the subjectively status-high participants. In this sense, the saying “He that has plenty of goods shall have more” is filled with an unexpected meaning. Implications for the inequality debate and aspects of trust repair will be discussed, also based on further studies in the field (e.g. real sport teams).

Schmidt, Ulrich

“First Food, Then Morals - The Impact of Food Deprivation on Social Behavior”

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The proverb “First Food, Then Morals” by the German poet Bert Brecht suggests that social behavior may vary with one’s metabolic state. We provide an experimental test of this proverb by investigating how social behavior is altered by the physiological and emotional state associated with a short-term food deprivation. Subjects had to refrain from eating for 18 hours and subsequently went through a behavioral economics task battery measuring various aspects of social behavior. We found consistent and robust evidence that food-deprived subjects exhibited lower social preferences, cooperated less and complied less with social norms than a control group.

Schödler, Cathrin

“How the influence of power and social values on inequity aversion differs for relative gains and losses”

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An extensive literature in behavioral economics suggests that people derive satisfaction from fair distributions above and beyond the value of the distributed reward. In contrast, unequal reward distributions cause inequity aversion, the extent of which varies depending on whether the distribution results in a relative loss or a relative gain. Unlike loss aversion, inequity aversion persists in losses and gains, but it is understandably less strong for gains because having more than others is desirable from a self-interest point of view. Here we investigate how intrinsic prosocial values and externally imposed power influence the (dis)liking of unequal distributions that result in relative gains or losses.

In a behavioral experiment, we assign participants to work in dyads and manipulate their feeling of power by giving each partner in the dyad the role of a leader (high power), subordinate (low power), or teammate (no power). After completion of the joint work, each participant is asked to evaluate a series of monetary distributions (ranging from equal to highly unequal in the gain- and loss domains) between themselves and their work partner. The results indicate that having a prosocial value orientation increases inequity aversion, but only in the gain domain. Compared to no power, high power increases, and low power decreases inequity aversion, especially for relative losses. For relative gains, the effect of power mainly depends on values, with high power making prosocials more, and non-prosocials less inequity averse.

Schulze, Christin

“Smart Babies, Stupid Adults? A Description–Experience Gap in Statistical Intuitions”

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Comparison of different lines of research on statistical intuitions and probabilistic reasoning reveals several puzzling contradictions. Whereas babies seem to be intuitive statisticians, surprisingly capable of statistical learning and inference, adults' statistical inferences have been found to be inconsistent with the rules of probability theory and statistics. Whereas researchers in the 1960s concluded that people's probability updating is “conservatively” proportional to normative predictions, probability updating research in the 1970s suggested that people are incapable of following Bayes's rule. And whereas animals appear to be strikingly risk savvy, humans often seem “irrational” when dealing with probabilistic information. Drawing on research on the description–experience gap in risky choice, we offer—and critically test—a unifying theoretical framework for reconciling these contradictory conclusions. We show that a key factor in understanding discrepancies in research on statistical intuitions is whether the studied inferences are based on symbolic, abstract descriptions or on the direct experience of statistical information. In order to capture the full scope of human statistical intuition, we conclude, research on probabilistic reasoning across the lifespan, across species, and across research traditions needs to

consider that experience and symbolic description of the world may engage systematically distinct cognitive processes.

Schupak, Hilla

“Cognitive ability as a moderation to the choice overload effect among children”

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The effect of assortment size on post-choice satisfaction has been widely tested among adults, but not among children. In a series of controlled studies, children from three age groups were asked to choose an item out of an assortment. Assortments contained either 3, 6, 12 or 18 items. After choosing their preferred item, children rated their post-choice satisfaction on a visual-analogue scale, and then were asked whether they would like to exchange their chosen item with another one that was not in the original set. Additionally, their cognitive ability (inhibitory control) was measured. Our results demonstrate a moderating effect for the influence of set size on post-choice satisfaction among preschool children (ages 4–5) in which average-low cognitive ability was related to a decrease in post-choice satisfaction if chosen from a large vs. a smaller set of choices. In contrast, fourth-graders (ages 10–11) with average cognitive ability demonstrated higher post-choice satisfaction as set size increased. First graders (ages 6–7) showed a mixed trend that may be explained by other cognitive abilities that emerge around this stage such as cognitive flexibility. These results also challenge understandings of choice overload in adults. One of the main current explanations is that it stems from the feeling of regret. However, since regret is cognitively and emotionally hardly possible in children at a preschool developmental stage, these findings demonstrate an example of choice overload in an environment free of regret.

Schurr, Amos

“The morality of swerving in autonomous vs. regular cars”

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As use of automation technologies grows, defaults play an increasing role in our lives. Focusing on the case of autonomous vehicles (AVs) we explore the role of defaults in determining perceived morality of drivers in AVs vs. regular cars who face an unavoidable accident and perform the same action. In four experiments, we find people have different (in)action expectations from drivers in autonomous versus regular vehicles, and subsequently evaluate drivers' utilitarian decisions to swerve and hit one instead of five individuals as more moral when they involve overriding AVs' defaults than when driving regular cars. Importantly, the more favorable appraisals of AV drivers were apparent even when controlling for perceived responsibility for getting into the unavoidable accident situation, and were found to occur because people regard unexpected acts of overriding a default as more intentional and as taking greater responsibility over the situation, than merely acting as expected.

Sejas Portillo, Rodolfo

"Inattention in the Housing Market: Evidence from Energy Efficiency Ratings"

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We study inattention and heuristic decision-making in the housing market. We analyse the effect that energy efficiency (EE) information has on the final sale price of a property and we show that the provision of simplified information in the form of EE rating-bands leads to price discontinuities at the rating-band thresholds. Recent research suggests that individuals rely on heuristic principles that reduce complex information processing tasks to simpler judgemental operations. This paper aims at contributing to the literature by providing evidence of inattention and heuristic decision-making in markets of long-term investment products.

We analyse over 3 million residential property sales in the UK. Each transaction in our dataset contains the sale price, property characteristics, location and energy performance certificate (EPC). The EPC includes an energy cost rating (SAP rating) as a measure of the energy cost requirements of the property (ranging from 1 to 100) and is assigned to a predefined fixed colour coded rating-band from green A (most efficient) to red G (least efficient).

Applying a Regression Discontinuity Design (RDD) we identify and estimate statistically significant discontinuities at the rating-band thresholds and we provide estimates of the inattention parameter. The presence of price discontinuities suggests that individuals are more attentive to the less precise, more salient and simpler colour coded rating band and partially inattentive to the more precise SPA rating.

We propose that while providing simplified information (e.g. colour coded rating-bands) may help individuals evaluate product features, in some settings it may lead to sub-optimal market interactions. We conclude with policy recommendations.

Sejdiu, Vulnet

"St. Petersburg Paradox vs. Allais Paradox: How Cumulative Prospect Theory is torn between the two most famous Paradoxes in Decision Theory"

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Cumulative Prospect Theory (CPT) cannot explain both the Allais paradox and the St. Petersburg paradox at the same time – regardless of the parameterization of the value and probability weighting function. Using both paradoxes as litmus tests, CPT loses its superior predictive power over Expected Utility Theory.

Shaddy, Franklin

“When and Why People Prefer Markets Versus Lotteries”

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How should scarce goods and services be allocated? On the one hand, people often subscribe to an equality norm—everyone should be given an equal chance to acquire things. For example, lotteries reflect an equality norm. On the other hand, people also often subscribe to a preference norm—things should be allocated to those who have the strongest want or need for them. Markets reflect a preference norm, in which WTP is assumed to signal preferences. Given these competing norms, when might people prefer to use markets versus lotteries?

We suggest people consider how much preference variance there is within a group. If all members of a group have similar preferences, then people will endorse lotteries. But if members of a group have different preferences, then people will endorse markets.

This is because people want markets to sort people based on their preferences, such that higher WTP is associated (albeit imperfectly) with greater want or need. But when everyone wants or needs something to a similar degree, there is less “signal” to detect; WTP and preferences are no longer correlated. Thus, we argue that when preference variance is low, people will perceive markets as unfair, endorsing lotteries instead.

Across five studies (N=2,405), we found that participants endorsed the use of a market when preferences and WTP varied (preferring a lottery otherwise), that this relationship extends to real-world products and services, and that the desire to achieve allocative efficiency (i.e., make sure those with the strongest preferences get things) plays a mediating role.

People often disagree about when markets are appropriate, but our research suggests a surprising malleability: People survey the nature of preferences within a group and choose an allocation system to fit it.

Shahrabani, Shosh

“Factors influencing the decision of older adults in Israel to undergo routine dental examinations and treatments”

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Aim: Routine dental examinations are important for early diagnosis and treatment of dental problems among older adults in order to improve quality of life and avoid costly future treatments. In Israel, a significant percentage of adults do not seek dental care. The objective of the study was to examine the factors influencing the decision of older adults in Israel to undergo routine dental examinations and treatments.

Methods: The study has two parts : (a) Based on 2013 SHARE (Survey of Health, Aging and Retirement in Europe) data for older adults in Israel we identified differences in socio-demographic and other factors between those who do and do not take care of their teeth, (b)

Based on a 2017 telephone survey conducted among people age 50–75 in different population groups in Israel we examined their health beliefs and attitudes toward dental treatments.

Results: The results show that among older adults the decision to undergo dental checkups is affected by their socio-demographic status and their health beliefs with respect to dental health. Lower age, higher income levels, and Jewish religion predicted higher chances of getting frequent checkups. In addition, the chances of getting frequent checkups are greater when perceived benefits of dental checkups, perceived availability of dentists and level of health motivation are higher.

Conclusions: Planning for dental health services for the third-age population should be based upon the accepted beliefs and values of this population group. Moreover, systematic health education through media and health maintenance organizations should target this population group in order to increase the frequency of dental checkups among the third-age population in Israel.

Shahrabani, Shosh

“The Impact of Prior Combat Military Service on Israeli Women's Self-Efficacy and Risk Attitudes”

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Aim: to examine how combat service influences Israeli women risk attitude, self-efficacy and decision-making. 24 in-depth retrospective interviews with women who served in combat units in the Israel Defense Forces were used. Results: the perceived self-efficacy was reinforced as a result of this service. In addition, combat experience makes interviewees more willing to take risks in general, and physical risks in particular. Conclusion: Understanding the implications of mixed-gender combat army service may help in designing the content of military training courses for men and women that will prepare them for the challenges of their joint service.

Shani, Yaniv

“Gift-Giving Motivations at Social Events, Event Enjoyment, and Monetary Gift Amount”

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Culturally mandated social events such as weddings, christenings, and birthdays carry social and economic significance (Belk & Coon 1993). They commemorate noteworthy occasions and they enable hosts and guests to rejoice with and honor each other (Cavanaugh 2016; Cheal 1987; Ruth, Otnes, & Brunel 1999). Today, many hosts are asking guests for money, instead of presents, as gifts at such events. The present research examines the psychology of guests' monetary gift giving. More specifically, it examines how guests' gift-giving motivations interact with their expected or experienced event enjoyment to influence gift amount. The research distinguishes between guests that want to give and those that feel they have to give. Friends of the hosts report higher levels of wanting to give, while acquaintances report higher levels of having to give. Results show expected event

enjoyment and gift amount are positively related for guests reporting high levels of wanting to give, but are not related for guests reporting low levels of having to give. Consistent with research showing a stronger effect of actual than imagined experience on behavior, close friends give more after experiencing an enjoyable event than before experiencing it. Finally, results show that only friends who are high on dispositional communal orientation, which is associated with non-contingent helping and support of others, report intentions to give more at an imagined wedding where gifts are given at the weddings end than at its beginning. The study of monetary gift-giving is both timely and important. It is timely because monetary gifts are ubiquitous but have received little research attention. It is important because it teaches us new things about the psychological outcomes of mixing money and friendship.

Shapira, Zur

"Intuition vs. data integration in predicting stock prices under varying volatility rates"

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*Intuition vs. data integration in predicting stock prices under
varying volatility rates*

Short abstract

Conley and Shapira

The efficient market hypothesis claims that stock price movements are random and cannot be predicted, yet investors and an industry of analysts regularly make such predictions. Using historical stock price information on a variety of companies, we examine experimentally how several factors influence perceptions of stock price behavior as well as future price predictions and analyze the prediction mechanisms. In a series of experiments, undergraduate, graduate, and graduate executive risk management students viewed historical stock price information to predict future stock prices and indicate perceptions of randomness and volatility. Both the data context (e.g. series of raw numbers versus actual stocks) and the periodicity of reporting of the data (monthly versus daily prices) affected perceptions of volatility. Objective stock and market volatility affected prediction mechanisms and information integration methods did not improve prediction accuracy. Stock market experience also influenced perceptions of behavior, price prediction mechanisms, and relative prediction accuracy.

Shen, Luxi

"Risk Averse In Prospect, Risk Seeking In Process"

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Judgment and decision-making research has documented a wide spectrum of risk preferences. For example, Gneezy et al. (2009) find that people value an uncertain incentive even less than its lowest payoff, a behavioral pattern suggesting "extreme risk aversion." Yet Shen et al. (2015) show that people can also exhibit "extreme risk seeking"; they work even harder for an uncertain incentive than for its best payoff. How can people display both

extreme risk aversion and extreme risk seeking? The present research offers an answer to this puzzle. To do so, it distinguishes two types of decisions: decisions in prospect (decisions made at a time point in advance of a task) and decisions in process (decisions made across the time period of an ongoing task). Three incentive-compatible experiments find that the opposite risk preferences do exist but, crucially, not in the same circumstance: people display risk aversion in prospect and risk seeking in process. In one experiment, for example, when workers were asked to choose in prospect whether to work for a specific payment scheme, fewer chose to work for an uncertain payment than a certain payment, as one would expect. But workers who were engaged in the activity and thus in process chose to continue working longer for the uncertain payment, even when it was strictly financially worse than the certain payment. In other words, uncertain incentives are not attractive in prospect but are motivating in process. This research aims to make two unique contributions: (a) to identify an important distinction for decision-making literature: in prospect versus in process, and (b) to reconcile the two opposing risk preferences with the in-prospect/in-process distinction.

Shi Tan, Li

“Excessive Selectivity Bias in Decision Making: The Belief that Being Selective Increases Luck”

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When people can select multiple options from a large number of risky options with positive expected value, economic theory predicts that they should choose all available options for which the expected value of the option is higher than the cost involved in choosing that option. However, four studies (including one pre-registered study) documented that people exhibit an excessive selectivity bias, the general tendency to not choose all available risky options even when the cost of selecting an additional option is minimal and when the expected value of the risky option substantially exceeds the cost incurred to choose that option. This bias can be traced to a false causation belief, the idea that being selective (i.e., not choosing all options) increases luck. The current research thus identifies a novel bias in risky decision making that can be traced to a magical belief.

Shlefer, Shirley

“Feeling good about doing good: The role of affect in responses to repeated requests for donations”

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Most of the current research on donation behavior has focused on one-off donation decisions. However, we all encounter repeated requests for donations on a daily basis. In this paper, we present three studies into people's reactions to repeated requests for donations. Study 1, is a longitudinal, field experiment, in which students are asked for a donation on two consecutive occasions. In studies 2 and 3, participants are randomly assigned to donors and non-donors at Time 1, and asked for donations at Time 2. Finally, in study 4 participants' general feeling following the initial donation decision is being manipulated (rather than reported). The results suggest that overall, donors are more likely than non-donors to donate again. However, responses to the second donation request may

be best predicted by the interaction between the response to the initial request (to donate or not) and the general affective reaction accompanying that decision. Specifically, feeling good about the initial decision (to donate or not) encourages similar behavior in response to a subsequent request. Conversely, experiencing negative emotions following the initial decision is likely to result in the opposite course of action. This pattern occurs beyond the perceived importance of the donation causes. We discuss theoretical and practical implications of these findings.

Shuster, Shaked

"The link between aspiring to feel pride versus joy and the type of help we choose to provide."

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Demonstrating a link between distinct positive emotions, pride and joy, and distinct helping behaviors: autonomous-help versus dependent-help, we find providing autonomous-help is more strongly associated with pride than joy, and individuals' inherent pride aspirations predict their tendency to provide autonomous-help.

Sirota, Miroslav

"Shaping the public's expectations for antibiotics: A test of a utility-based signal detection model."

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A better understanding of people's expectations for antibiotics is critical for educational campaigns tackling antibiotic resistance. We propose and test a model-driven approach for understanding a person's antibiotic expectations and decision to request antibiotics derived from an integrated framework of signal detection theory and prospect theory (Lynn & Barrett, 2014; Lynn, Wormwood, Barrett, & Quigley, 2015). People expect antibiotics that are clinically inappropriate if they have adopted a liberal criterion for establishing a target (a bacterial infection for which antibiotics could help) compared to a foil (a viral infection for which antibiotics could not help). Such a situation might occur, inter alia, due to signal perceptual uncertainty (or signal conceptual confusion) and/or due to the payoff structure, for instance when people are oblivious to the costs associated with inappropriate antibiotic use (i.e., antibiotic resistance). To test this, we devised three interventions – i) signal-noise conceptual clarification (viral vs. bacterial illness aetiology), (ii) stressing the personal costs associated with inappropriate antibiotic use, and (iii) stressing the costs linked with inappropriate antibiotic use for others – which we expected to reduce antibiotic expectations and, in turn, requests compared with a baseline condition. Across three experiments (n = 1880), the interventions significantly decreased the inappropriate expectations and requests for antibiotics compared with the baseline condition. The integrated utility-based signal detection model can explain why people expect antibiotics even when they do not need them. In addition to providing knowledge about antibiotic efficacy, public campaigns could focus on the costs of inappropriate antibiotic use.

Sisso, Itay

"Psychological Opportunity Costs: The Effect of Opportunity Costs on Post-Choice Utility"

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A fundamental assumption in economics is that opportunity costs are only relevant in the decision-making process. In this study, we consider the possibility that the opportunity costs created by the forgone alternative may reduce the experienced utility from consumption of the selected option, even when the forgone alternative is inferior to the selected one (i.e. without experiencing regret). We denote the extent to which opportunity costs matter for post-choice utility as psychological opportunity costs (POC) and hypothesize that POCs are positively related to the utility of the non-chosen alternative. Furthermore, while opportunity costs are defined as the value of only the best forgone alternative when making a decision, we hypothesize that POCs could also be influenced by the number of forgone alternatives. We test these predictions in 3 experiments and find that post-choice satisfaction is indeed significantly reduced with increasing opportunity costs, operationalized as an inferior (albeit desirable) forgone option(s). In sum, we find evidence for the existence of POCs that cannot entirely be explained by alternative explanations such as regret or decision difficulty, and identify some moderators of the effect.

Sisso, Itay

"When in Rome: The Effects of Activity in Financial Markets on Maximizing Tendencies"

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Individual differences in maximizing tendencies are of the most well studied traits in behavioral decision making. While dozens of papers have studied the consequences and correlates of this trait, as well as different ways to define and measure it, we know very little about what causes it. We hypothesize that in the context of economic interactions people will display stronger maximizing tendencies. We test and confirm this hypothesis using a large-scale field experiment in the UK (N=2703), in which individuals were randomly assigned real/virtual financial assets (£50) that they could trade on our platform for a period of 6 weeks.

Sleboda, Patrycja

"The inverse relation between risk and benefits: the impact of individual differences in thinking style."

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Extant research has shown that evaluations of the risks and benefits of various hazards to be inversely related. Affect heuristic explains the negative relation between risk and benefit to be based on the strength of positive or negative affect associated with different hazards. Research on affect heuristic previously focused on the impact of individual differences in expertise on risk and benefits perception but found no conclusive differences. Drawing on affect heuristic framework to be affect-based mechanism within the experiential thinking

style, we propose that individual differences in risk-benefit perception can be examined through the lens of thinking style: affect-based, experiential vs. analytical and deliberative thinking. We examined the extent to which dominant thinking styles can predict risk-benefit relation of hazards in medical and food application of modern technologies. Using Need for Cognition Scale (NFC), psychometric-based risk scale and explicit measure of affect in a representative sample of 3228 Swedes we found that high NFC group judged risk and benefits of hazards to be inversely related. In contrast, low NFC judged risk and benefits to be positively related. The results were confirmed across all studied hazards by applying moderated moderation analysis and provide challenge to current formulation of affect heuristic.

Sleboda, Patrycja

“The impact of personalized information treatment on attitude and willingness to buy genetically modified food.”

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Genetic modification have been shown to evoke strong (negative) attitudes among members of the general public as well as among consumers, especially when they relate to food. Given the recent development in genome editing and other recent applications of biotechnology, it is relevant to examine how communication tailored to specific individual needs of technology information (of style, content and complexity) relate to technology acceptance. We aim to explore the effectiveness of personalized (attitude-matched) messages on attitude change towards genetically modified food, and the level of acceptance and willingness to buy GM products. We have conducted two-wave study. In both waves, we tested attitude and willingness to buy/level of acceptance of GM products. As a treatment in between waves, we have presented participants with persuasive messages about genetically modified product. Treatments matched pre-tested participants' attitude, and perceived risks-benefits of GM food (higher benefits frame vs. lower danger frames). Additionally, within each group participants were randomly assign to either strong argument or weak argument group (in line with Elaboration Likelihood Model). We found attitude change and change in willingness to buy in two out of four treatment conditions. In post treatment, participants in strong arguments groups, both within higher benefits and within lower risk frames, were found to declare significantly more positive attitude towards GM food. Similar change was found in the choice experiment.

Smeets, Paul

“Get Real! Individuals Prefer More Sustainable Investments”

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Do people put their pension savings on the table to promote sustainability? We answer this question in a large-scale field experiment (n = 3,256). The pension fund in our study gave its members a real vote for more or less sustainable investments. A comparison group made the same decision, but hypothetically. We find that 66.7% of the participants favor to invest

their pension savings in a sustainable manner. This choice is driven by social preferences. As a result of these strong social preferences we find no difference between the real and hypothetical treatment groups. We rule out financial beliefs, confusion, or a lack of information as explanation. Institutional investors benefit from taking their clients' social preferences seriously, with consequences for asset prices and the fulfillment of the United Nations Sustainable Development Goals.

Sobkow, Agata

“Does mental number line training work? The effects of cognitive training on real-life mathematics, numeracy, and decision making.”

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We developed and validated intervention aimed at enhancing numeracy (the ability to understand and use the concept of probability and statistical information) and decision making. One hundred and twenty-two participants were randomly assigned to a Mental Number Line Training condition or an Arithmetic Training - Active Control condition. Response mode (a slider anchored within the current response range vs. a numerical keyboard) was the only, and essential, difference between experimental conditions. After Mental Number Line Training participants developed a more precise mapping of numbers onto the mental number line. However, the results regarding the transfer of this effect to performance in other cognitive tasks were mixed. We observed the transfer to an ability to quickly estimate the sum of numerical quantities (measured by the precision of estimates for the total price of everyday products), but we did not find evidence that Mental Number Line Training, as compared to the control condition, improved performance on numerical competencies measures or decision making tasks. Interestingly, we found that both Mental Number Line Training and Arithmetic Training resulted in higher subjective numeracy as well as normatively better financial decisions, and valuation of risky prospects. Developing more exact symbolic-number mapping may be a promising direction of future research on improving decision making skills.

Sobolev, Michael

“Personalized Digital Nudge for Digital Overload”

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Digital overload on mobile devices is a growing problem in everyday life. This talk outlines a personalized digital nudge that combines reminders and negative reinforcement that nudges a user to reduce their digital overload by using phone vibration. We evaluated the digital nudge through two randomized control trials with 200 participants using a crowdsourcing platform. Findings show digital nudge reduces digital consumption by over 20% during the interventions period and when applied longer even after intervention is removed. We discuss design implications of episodically applying our intervention in specific everyday contexts such as education, sleep, and work. Our findings advance

understanding of how to curb digital overload and promote digital well-being using technology itself.

Sokolowska, Joanna

“Risk preferences in bull and bear markets: the role of aspirations and sensation seeking”

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The goal of this research was to determine whether there were differences in investors' objectives in bear and bull markets and how such differences impacted risk preferences. The impact of individual differences in sensation seeking (measured with the aid of SSS-V) on risk preferences was also investigated.

The experiment was carried out via the Internet with 300 individual investors assigned to one of two groups. The first group chose one of two 5-outcome investments in bull markets, whereas the second group chose an investment in bear markets. Market trends were described by 4 macroeconomic and 3 stock market indices. Respondents' objectives were defined by the return rates that they considered to be good, satisfactory and bad return rates.

The choice options were constructed such as Option A represented MiniMax or Short shot and Option B represented MaxiMax or Long shot. The expected values, the CPT values, and standard deviations were controlled. Respondents rated perceived risk and attractiveness of each option on a response scale from 1 to 10.

Risk rates confirmed that Options A was perceived as less risky. Rates of risk and attractiveness were not correlated. Risk judgments were correlated with the SSS score in bear markets but not in bull markets. For aggregated data, risk judgment was described best by the model that included CPT, EV, probability of the best outcome and amount of the worst outcome. When subjective evaluations of risk and attractiveness were taken into account, it was found that a majority of respondents chose less risky options but some chose more attractive option even though they were more risky. This point at individual differences in focus on security and potential as assumed in the SP/A and BPT models.

Sonderegger, Silvia

“It's not a lie if you believe it: Lying and belief distortion under norm uncertainty”

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The age-old dilemma between lying and honest behavior has been the focus of much attention in the experimental literature, and a number of recent works (such as Abeler et al. 2018 and Gneezy et al. 2018) have emphasized the role of image concerns as a driver for honest behavior. This paper takes a complementary approach and focuses on normative considerations in the sense of Bicchieri (2006): a norm for honesty exists if enough people abstain from lying and disapprove of it. To gather insights about what makes it harder/easier to lie, we exploit the idea that subjects might use self-belief manipulation in order to lie more easily. We employ a two-stage variant of Fischbacher & Heusi (2013), in which subjects'

beliefs are elicited in stage 1 before performing the die task in stage 2. We vary several dimensions across treatments. In particular, in stage 1: a) we elicit the subjects' beliefs about majoritarian (i) behavior or (ii) moral conviction in a previous session, and b) we vary whether participants are (i) aware or (ii) unaware of the upcoming opportunity to lie. Our findings indicate that belief manipulation happens, and takes the form of people convincing themselves that lying is widespread, since believing that lying is rare inhibits own lying behavior. Our second finding is that beliefs about the moral convictions of others are not distorted; believing that the majority disapproves of lying does not inhibit own lying. These findings are consistent with a model where widespread honest behavior is a strong indicator of moral disapproval of lying, but the opposite doesn't hold: widespread disapproval of lying is not necessarily a strong indicator that most people behave honestly.

Soraperra, Ivan

"Shooting the messenger. Supply and demand of ignorance in prosocial decisions"

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Willful ignorance is a strategy aimed at avoiding accountability and at reducing moral costs of dishonest, inappropriate, or immoral actions. Most of the literature focuses on the demand side of willful ignorance and does not consider that, in many cases, ignorance comes from the decision of a different agent, e.g., advisor, newspapers' editor, etc., to share or communicate information. With this project we experimentally study whether and how informed agents, i.e., advisors, decide to suppress information about potentially negative consequences of decision makers' actions for non-strategic reasons—when advisors are not in competition—and for strategic reasons—when they advisors compete to advise. The results of the experiment show that: (i) advisors are willing to suppress information in the absence of competition and suppression depends on their personal preferences to be informed; (ii) Suppression of news with and without competition are not statistically different.

Soria-Oliver, María

"Measuring quality of organizational decision making: reliability analysis and structure validation of the short version of DMQ scale"

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BACKGROUND: Our team has previously developed the Decision Making Questionnaire (DMQ) which records the extent to which qualified strategies of DM are implemented in organizational settings. Its yields a global score and scores on 3 scales/factors (Task, Subject, and Context Subscales). DMQ has shown consistent internal validity and high rates of reliability but its length (64 items), makes pertinent the elaboration of a short version. OBJECTIVES: To design on empirical basis a short version of DMQ (DMQs), to analyze its reliability and internal structure. METHODS: Application, global and item reliability analysis,

elaboration of a 24-item version of DMQ (DMQs) based on reliability indicators and confirmatory factor analysis based on latent variable equation modeling. A global sample of 175 workers was used. RESULTS: Reliability indicators (Cronbach's alpha) were: DMQ-Global Scale = .94, DMQ-Task Subscale=.87, DMQ-Subject Subscale= .83 and DMQ Context Subscale =.73. Item correlation and Cronbach's alpha change in relation to DMQ Global Scales and Subscales was used to select 24 items to design DMQs. Reliability analysis (Cronbach's alpha) of DMQs yielded excellent indicators for Global Scale (.87) and good indicators for Subject Subscale (.77), Task Subscale (.70) and Environment Subscale (= .71). Latent variable confirmatory analysis of DMQs showed acceptable goodness of fit indexes for single factor model (CFMIN/DF= 3,311; RMSEA=.116) and the three factors model (CFMIN/DF= 3,320; RMSEA=.115), revealing that both structures may be compatible to explain internal relationships. CONCLUSIONS: DMQs Global Scale and Subscales yield adequate psychometric properties and internal validity, allowing their application to the evaluation of quality of DM in organizational settings.

Spälti, Anna

"Proxy vs. Direct Cues of Decision Process Information on Character Evaluations"

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We judge people based on the decisions they make. This may be particularly true of moral decisions in which a person is confronted with doing the "right" thing and personal gain (i.e. a taboo trade-off). Previous research in moral psychology (Critcher et al., 2011; Tetlock et al., 2000) has shown that decision makers are not only evaluated by the choice they make, but are also evaluated based on the time it took to make the choice. As such, decision time is thought to provide an insight into the mind of the decision maker. We hypothesize that decision time is only a proxy for more direct cues of decision process information, such as difficulty, doubt, and effort. In our experiment, we test whether direct cues lead to stronger effects on character evaluations of decision makers in taboo trade-offs than the proxy cue of decision time. In our experiment (N = 871), we test the effects of the different process information cues (time, difficulty, doubt, effort, and a control condition; between-subjects) on competence, warmth, and morality ratings of the decision maker in multiple scenarios (within-subjects). Using multilevel analysis, find that direct measures have a larger effect on competence ratings than the proxy measure of time. However, this is not the case for warmth and morality ratings, where proxy and direct measures have similar effects on evaluations. Our research indicates, that competence may require more direct and specific information than warmth and morality for character evaluations to get an insight into the decision maker's mind.

Spiliopoulos, Leonidas

“Heuristics can withstand environmental and strategic uncertainty”

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The ecological rationality of simple heuristics has been extensively investigated in the domain of individual decision making. In strategic decision making, however, the focus has been on repeated games (e.g., the Axelrod tournaments), and there is a lack of research on one-shot games, where opponents and the game can vary from one interaction to another. Mapping the performance of simple versus more complex decision policies (or strategies) from the experimental game theory literature is an important first step in this direction. We investigate how well 10 policies fare conditional on strategic characteristics of the games and two classes of uncertainty. The strategic characteristics are the complexity (number of actions) and the degree of harmony (or competitiveness) of the games. The first class of uncertainty is environmental (or payoff) uncertainty, arising from missing game payoff values. The second class is strategic uncertainty about the type of opponent a player is facing. Policies' performance was measured by two criteria, a mean criterion averaging over the whole set of opponent policies and a minmax criterion capturing a worst-case scenario. Heuristics performed well and were more robust than complex policies such as the Nash equilibrium, whilst simultaneously requiring significantly less information and computational resources. Importantly, our ranking of the decision policies' performance was closely aligned to the prevalence of these policies in experimental studies of games. In particular, the Level-1 policy, which completely ignores an opponent's payoffs and uses equal-weighting to determine the expected payoffs of different actions, exhibited a robust beauty.

Starke, Alain

“Crafting normative messages to promote energy conservation in a recommender system”

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We test the effectiveness of descriptive norms to boost the adaptation of tailored energy recommendations. Such descriptive norms have proven their merit, e.g. Goldstein et al. (2008) showed that towel re-use can be boosted when communicating that 75% of other hotel guests also do so. However, such norms have yet to be tested for a more diverse set of energy-saving measures, as their effectiveness to steer energy-saving decisions might decrease for more challenging and uncommon measures. For example, stating that 20% of citizens have adopted Solar PV is unlikely to boost their adoption, particularly when communicated in a set of recommendations also containing measures with higher descriptive norm percentages.

To work around such low adoption rates, we have used the psychometric Rasch model to craft normative messages with higher norm percentages. We use a set of descriptive norms to boost the adoption of energy-saving measures: ‘Global’ norms (“% of others do X”), ‘Similar’ norms (“% of others who perform the same measures as you do X”), and ‘Experienced’ norms (“% of others who perform more measures than you do X”), compared

to a baseline that emphasizes kWh savings. We tested these norms in a recommender study among smart thermostat owners (N = 207), which revealed that descriptive norms did not directly boost the number of chosen measures, but increased the perceived feasibility of recommended measures and, in turn, the number of choices. Moreover, we found that within a set of tailored recommendations, measures explained through higher norm percentages were more likely to be chosen. We discuss that the effectiveness of descriptive norms might not apply to all types of energy-saving measures and their additional benefit within a personalized list might be small.

Steiner, Markus

“Mapping the Cognitive Processes Underlying Self-Reported Risk-Taking Propensity”

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People’s risk-taking propensity is regularly assessed in large scale panel studies (e.g., Falk et al., 2016; Linnér et al., 2018; Wagner et al., 1993), and, in Europe, it is mandatory for financial institutions to measure their clients’ risk preferences to sell financial products. These assessments are often carried out by means of self-report measures, i.e., participants or clients are asked to state their risk-taking propensity. To date there have been no investigations of how people arrive at ratings of their risk-taking propensity. We present a series of studies aimed at closing this gap. Based on the assumption that people retrieve information from their autobiographical memory to form their judgments, we make use of the methodology “aspect listing” as a process-tracing tool (e.g., Johnson, Häubl, & Keinan, 2007). We model the influence of a) the number of aspects listed in favor of taking risks and b) against taking risks, c) the order of aspects, and d) the strength of evidence of these aspects. In a first study, we explored basic properties of the aspect-retrieval process and how it relates to participants’ self-reported risk-taking propensity. Based on this information we conducted systematic simulation analyses to compare a series of cognitive models, which we test in a second study. Finally, a third study consists of a retest at an interval of two months, in order to quantify the extent to which the high stability of self-reported risk-taking propensity hinges on the stability of the retrieved aspects. Our results shed light onto the cognitive processes of self-reported risk-taking propensity and thus have implications for the interpretation of these measures.

Stewart, Neil

“On the prominence of number: Using very large datasets to explore the categorical representation of number”

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We develop the theory of the prominence of number. We use very large datasets of credit card and stockbroking transactions to produce the first estimate of the prominence of numbers. While credit card repayments can be anywhere between the minimum repayment and the full balance, a very small set of prominent numbers dominates (e.g., £50, £100, and £200). Similarly, a stock purchase can be for any quantity, but almost all quantities are one

of a small set of prominent numbers. A natural experiment as credit card balances change sees repayments at exactly £150.00 jump as the minimum increases through £100.00, ruling it out as a repayment option. Another natural experiment occurs when stocks are split, for example by a factor of seven. While 100 stocks is a very prominent purchase before the split, no one spends the same amount and buys 700 stocks after the split---instead people buy 500 or 1,000 stocks. However, the population level average is that 700 stocks are purchased. These experiments allow us to separate the economic factors from the effect of the prominence of number, and illustrate that, because people represent number as a discrete set of prominent amounts, their economic behaviour can be very discontinuous. Economic valuation should be regarded as a discrete choice over a small set of prominent numbers, not as a choice from a continuous scale.

Stojic, Hrvoje

“Rewards and uncertainty jointly drive attention dynamics in reinforcement learning”

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There has been surprisingly little work addressing how attention, learning and choice processes interact in the context of reinforcement learning. We investigated a prediction of probabilistic associative learning accounts of attention, as well as an implication of approximately optimal solutions to the exploration-exploitation dilemma in choice, that both values and estimation uncertainty guide attention. In our experiment, thirty-six participants completed two multi-armed bandit tasks where they repeatedly made choices, learning about options' values, while we monitored their attention with eye tracking. We found that visual attention was guided by both trial-by-trial estimated values and estimation uncertainty, which are the two outputs of an approximate Bayesian (Kalman filter) learning model. Moreover, adopting a stochastic upper confidence bound choice rule, we found a bidirectional effect: paying attention to options increases the probability of choosing them, and attention also modulates the magnitude of updates in the learning process. Importantly, estimation uncertainty plays an important role in choice even after accounting for overt attention in the choice and learning processes. These results provide support for probabilistic associative learning accounts that ground attention in efficient computations rather than constraints, and establish a relationship with approximately optimal resolutions of the exploration-exploitation trade-off.

Stone, Eric

“Do people decide differently for others versus for themselves? A meta-analysis of decision making under risk”

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Do we take more or less risk for others than we do for ourselves? This question has become of increasing interest to researchers in a wide variety of fields. Yet, there is no consensus answer, with some researchers claiming that the field shows that people make more risk-averse decisions for others, and other researchers claiming that people make more risk-

taking decisions for others. We thus conducted a meta-analysis to quantitatively compare the results of existing published and unpublished studies and examine sources of heterogeneity.

*In addition to examining the overall pattern of self-other differences, we also examined a number of potential moderators, including (1) domain (financial, health/physical, social/relationship); (2) relationship type (professional, personal, no relationship); (3) gains vs. losses vs mixed gambles; (4) expected value (greater for risky option, same for both); and (5) risk preference for self (risk averse for self, risk seeking for self, risk neutral). Effect sizes were extracted as the standardized difference in means (Cohen's *d*), using procedures recommended by Lakens (2013), and were then converted to Hedge's *g*.*

Sixty-one effect sizes from 54 separate manuscripts were included in the meta-analysis. Overall, choices for self and others did not differ in risk propensity. All of the above variables produced significant moderation, with the strongest moderator being domain. We relate these findings to a number of existing theories in the literature, including risk-as-feelings, social values theory, and construal-level theory, as well as introduce an extension of a new theoretical account based on the work of Atanasov (2015), the relational theory of surrogate risk taking.

Summers, Barbara

"The effects of time pressure on managerial decision making"

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Research in organizational psychology shows that people often feel there are insufficient hours in the day and that they have to work longer and harder than ever before (Menziez, 2005). However, there has been little interest in the effects of time pressure on key managerial activities such as decision making. This is surprising given that laboratory-based research shows that time pressure affects the processes and the outcomes of decision making, often in detrimental ways (Ordonez, Benson & Pittarello, 2015; Svenson & Maule, 1993).

The objectives of this study are to investigate whether the strategies used to adapt to time pressure identified in laboratory research (e.g. filtering, acceleration) are used by experienced managers and, if so, the impact these have on decision outcomes and the emotional state of the decision maker.

Our findings confirm that strategies for coping with time pressure identified in laboratory research are used by experienced managers in the workplace and we identify two further strategies. We also reveal two different ways that time pressure is appraised (challenge and hindrance) each linked with a different emotional state and strategy choice.

Sun, Qizhang

“Unpacking the Privacy Paradox for the Internet of Things (IoT) by Tracing Mental Decision Processes”

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The privacy paradox shows that people actually disclose a lot of personal information (behavior) despite reporting high concerns about privacy (intention). In two studies, we explore the mechanisms of the phenomenon by measuring and manipulating cognitive decision processes using an aspect listing task. We found a reverse privacy paradox in the Internet of Things domain. Participants disclosed less information for behavior than for intention questions, which was mediated by decreased number of positive aspects listed for behavior. Moreover, the intention-behavior gap vanishes if we query participants to think about both positive (benefits) and negative aspects (risks), irrespective of query order.

Szollosi, Aba

“What do people learn under uncertainty?”

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When making decisions under uncertainty, people exhibit sequential effects in their behavior even in static environments. For example, they seem to believe that rare events are more likely to happen when they have not occurred for a while than when they have occurred recently. In the current study, we investigated whether the ineffective learning of the sequential distribution of binary outcomes could be a reason for the sequential dependencies in people's behavior. Participants first experienced stochastic binary outcomes in an experience-based decision task in which we manipulated outcome probabilities across three between-subjects conditions. We then asked participants to generate a sequence of outcomes that was representative of what they have observed in the decision making task. We were interested in whether the sequence of outcomes the participants generated had the same distributional properties as the sequences that participants observed, or the true distribution of the sequence-lengths, the Geometric distribution. They did not. We found that although the sequences that participants produced had similar average lengths, their variance was substantially smaller and their shape was often different compared to the distribution that participants observed (or the true distribution). We argue that this type of imperfect learning of the sequential aspects of the environment is partly responsible for the sequential effects in people's behavior in probabilistic environments. The results also pose a problem for some current models of learning which assume that people focus only on the frequency of probabilistic outcomes.

T

Takemura, Kazuhisa

“Escaping from bad decisions: Computer simulation and experimental study of two phased decision strategies”

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Bad decisions are made even in serious situations (Takemura, 2014,2018). A computer simulation study was conducted to examine two-stage multi-attribute decision strategies in different condition. An experimental study was also conducted to assess the accuracy and cognitive effort of each of the two-stage decision strategies that participants were asked to apply. Each elementary strategy was combined with every elementary strategy to make a two stage decision strategy. The result suggested that comparatively effortless and accurate strategies to avoid bad decisions was the two-phased strategy that used lexicographic strategy to eliminate until a few alternatives in the first stage and used weighted additive strategy in the second stage. The experimenter told 32 participants that their tasks were try to apply the two-stage decision-making strategy assigned them as accurately as possible in making the choices among sets of laptop computers. The strategies used in the experiment was the same as the simulation. We compare the results of conjoint analysis and output of selecting alternative by participants. Interestingly, 19 percent of additive strategy chose the worst and second worst alternatives and 28 percent of the additive strategy chose the below average alternative, although 25 percent of the additive strategy chose the best alternative. There was no decision that indicated the worst choice and the second-worst choice in the two-stage strategy in which lexicographic in the first stage and weighted additive strategy in the second stage. The most important thing to avoid bad decisions is to consider the most important attribute in the decision situations. If this is ensured, the decision makers can avoid making bad decisions even if they use simple heuristics.

Tamari, Yuki

“Estimating decision strategies by using topic model and computer simulation”

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Previous research reveals various decision strategies and describes contingency decision-making (Payne, Bettman, and Johnson, 1993). It is still difficult to detect decision strategies from process tracing technique data. This study conducted a simulation to detect decision strategies specifically. A survey was administered and garnered responses from 98 participants. Participants were asked to (1) draw pictures of two cities, (2) describe adjectives relating to the cities, and (3) answer modified risk perception scale questions based on Slovic (1987) about nine risks. The analysis simulated multi-attribute decision-making for 6 decision strategies. This simulation needed a degree of importance for attributes and a payoff matrix. The importance was estimated by probabilistic latent indexing (PLSI; Hofmann, 1999). Each word was treated as an attribute and the payoff matrix was

constructed. In each trial, scanned attributes, alternatives, and the scan order were recorded. We aggregated frequencies of words in each decision strategy and calculated correlation coefficients between estimated frequencies and frequencies from text data. The results showed that the lexicographic type had the highest correlation coefficient. The additive type and the additive difference type had the second highest correlation coefficients. The analysis indicated that the information process in this survey would be similar to the lexicographic type, and the additive or additive difference types. This task facilitated the clarifying of differences and comparison of two alternatives to enable processing. The result suggested that our method could detect specific decision strategies. This method could be applied to other process tracing techniques. This study conducted a survey and a simulation to detect decision strategies. The analysis indicated that the information process in this survey would be similar to the lexicographic type. The result suggested that our method could detect specific decision strategies

Tamlyn, Guy

“Central preference of consumer items and eye-tracking: Evidence for a central preference heuristic but not gaze cascade effects”

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When presented with a range of similar options people show a bias toward selecting the option in the middle. We explored the heuristic and gaze explanations of the middle bias by manipulating the top-down goal of the task, via a change in task instructions, whilst measuring participants' eye movements as they selected one of three options of consumer items. These were three slightly different versions of an item class (e.g., tennis rackets, or mobile phones) shown on a computer screen. The instructions were manipulated by asking participants to 'think carefully' when selecting items in one block and in another block to 'use gut feeling'. We replicated the middle bias for preferences when it was a 'gut' decision but not when it was a 'think' decision. At the same time, eye-movement patterns were the same across both instruction conditions: participants fixated longer and more often on the middle items regardless of instructions, and overall, they made more and longer fixations in the 'think' condition. These results are the first to report influence of instructions on the middle preference for non-identical consumer items and support the view that a top-down decision heuristic, rather than bottom-up gaze allocation, causes the middle bias. People selecting from three options of consumer items were asked to 'think' or to 'use gut feeling', showing a middle bias for the latter only, but eye-movement patterns were the same across both instruction conditions, indicating a top-down decision heuristic.

Täuber, Susanne

“Consumers' inconsistency about hypocrisy: Revisiting the concept of corporate hypocrisy”

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Aiming to give new impetus to the study of corporate hypocrisy, we challenge commonly held beliefs that factual inconsistency between saying and doing leads to perceived corporate hypocrisy in a straightforward manner. Combining philosophers' observation that perceptions of hypocrisy are aggravated when a person evinces an air of superiority with insights into consumer behavior and organization science, we propose that organizational

virtuousness (reflected, for instance, by companies' moral positioning) aggravates the association between companies' inconsistency and consumers' perceptions of corporate hypocrisy. We tested this proposition in two high-powered studies (N = 458 MTurkers, and a representative sample of N = 522 Dutch consumers), and report first evidence for the predicted effect. The studies converge in the finding that hypocrisy is rooted in inconsistency, but only when inconsistency involves a transgression, and when acting inconsistently involved a moral, as opposed to competent, company (Study 1) or brand (Study 2). Various intriguing strands of potential research flow from the presented findings, including the underlying processes of this effect and their modulation by individual differences in perception and reasoning between consumers. Our analysis offers a strong pointer towards the benefits of combining insights from different disciplines to advance scholarly understanding of corporate hypocrisy.

Taylor, Andrea

"Exploring public responses to impact-based weather warnings in the UK"

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The UK Met Office issues impact-based severe weather warnings. Unlike earlier phenomena-based warnings, they are based on the local impacts of severe weather rather than meteorological conditions alone. To decrease risk from severe weather, it is important to understand how members of the UK public interpret and act on these warnings. This paper addresses this through a post-event survey (n=552) conducted following Storm Doris, a 2017 winter storm during which wind warnings were issued across much of the UK. Survey questions examined 1) understanding of impact-based wind warnings; 2) predictors of perceived forecast trustworthiness; and 3) predictors of recalled and anticipated action. We find that UK residents generally understand that weather warnings are based on potential weather impacts. However, many do not realize that the conditions needed to trigger a warning in one area may be different to those in another. This could lead some to underestimate the risk implied by local weather warnings. Forecast trustworthiness is predicted by trust in the Met Office, perceived "understandability" and receiving a more severe warning. Recalled and anticipated protective responses are associated with prior experience of strong wind, level of concern evoked by the warning and interest in weather. Trust in the Met Office additionally predicts anticipated protective response. Differences in local warning level were not found to affect either recalled or intended behavior response. This study highlights the importance of institutional trust in the effective communication of severe weather warnings, and a need for education on impact-based weather warnings. Above all, it demonstrates the need for further exploration of the effect of weather warnings on protective behavior.

Tentori, Katya

“Forecasting accuracy: From formal models to human intuitions and back”

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This study provides an empirical evaluation of the descriptive adequacy of the three most popular models for quantifying the accuracy of probabilistic forecasts. Taken altogether, the results of our two experiments suggest that participants' judgments best agree with the logarithmic scoring rule. However, they also show that there are classes of scenarios for which participants' naïve judgments of forecasting accuracy – although normatively sound – systematically depart from what is expected by all formal models. During our presentation, we will discuss the results of the application of machine learning techniques to the detection of the common patterns in these critical scenarios, which might provide helpful insights for refining existing scoring rules.

Teodorescu, Kinneret

“exploring the effects of practice on exploration of strategies and performance”

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The problem of insufficient exploration of new strategies can arise from the frequent costs trying new strategies usually entails (e.g. the hot stove effect). A common solution to this problem is practice, e.g. flight simulators, sports training, workshops to improve social skills, etc. Practice can mitigate the problem, as it enables exploration of strategies without realization of the frequent costs. One prevailing dilemma both trainers and trainees face, is when to terminate the practice phase and move over to real decisions. Using a simplified exploration task, we examined the effect of practice on performance, while keeping the amount of experience constant. Participants played two games with the same underlying payoff structure. No-practice participants played both games for real money. Forced-practice participants played only Game2 for real money (Game1 as practice), and Free-practice participants could switch from practice to playing for real money whenever they wanted during Game1. Performance was compared on Game2 (which was the same for all participants): Forced-practice participants performed significantly better than No-practice participants, demonstrating the suggested benefit of practice. Although the Free-practice group terminated their practice at the middle of Game1 (on average, resulting in medium amount of practice trials), their performance was lower than the other two groups. Moreover, the 3 groups exhibited qualitatively different strategies, suggesting that strategy selection was affected not only (positively) by the amount of practice, but also (negatively) by the possibility to flexibly terminate practice. Implications to education, acquisition of skills and learning are further discussed.

Tereick, Benjamin

"The Wisdom of Self-Aggregating Crowds"

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How best to form a single judgment out of many is an age-old problem in decision theory. I investigate how well a group of individuals can solve this problem on its own and aggregate its own judgments. I address this question both theoretically and experimentally, focusing on the case in which there is no previously known track record of individuals.

I first build a model in which individuals form beliefs about a state of the world and about the beliefs of others. Under self-aggregation, respondents are asked which state they think is most likely and also for a conditional response based on the responses of others. I compare the theoretical and experimental performance of this aggregation method with alternatives, in particular with a variety of models based on individual confidence and with the Surprisingly Popular Algorithm (SPA), a new proposal by Prelec, Seung and McCoy (Nature, 2017).

In the model, individuals behave as approximate Bayesians, whose updating can be distorted by random noise or by systematic deviations. Self-aggregation is predicted to outperform under fully Bayesian updating and under minor distortion.

The experimental test consists of a series of studies, in each of which respondents solve a binary decision problem in a stylized urn experiment in which responses and aggregation results can be directly compared to the Bayesian prescription.

The results show that while the meta-cognitive abilities of individuals are challenged by complex methods such as self-aggregation and the SPA, responses contain sufficient information to outperform methods based on less challenging questions. Self-aggregation is thus a promising new way of judgment aggregation.

Tesic, Marko

"Explaining away: probability interpretations and diagnostic reasoning"

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Explaining away is a pattern of inference that occurs in situations where independent causes compete to account for an effect. Despite being widely addressed in the literature of causal reasoning and argumentation, the phenomenon of explaining away remains highly elusive. Majority of empirical studies have found that people 'insufficiently' explain away.

Several potential explanations of this insufficiency have been put forward thus far. At present, we explore the novel possibility that it may be driven by (i) differential interpretations of probabilities and (ii) an erroneous diagnostic reasoning strategy. In particular, we test for the possibility that some people interpret probabilities as propensities. This probability interpretation may lead to a lack of probability updating and to

insufficient explaining away behaviour. Also, we test a 'diagnostic split' hypothesis, which predicts that in diagnostic reasoning, people erroneously split the probability space between the two causes, leading to inaccurate explaining away.

We empirically tested these hypotheses by varying (i) the characteristics of scenarios and (ii) the prior probabilities of the causes. Results suggested an overall insufficiency of explaining away. In one large cluster participants did not update their estimates of the causes throughout the task (while providing elaborate explanations of their responses). The proportion of these participants in the sample varied between conditions, which is in accordance with the propensity hypothesis. In another large participants' diagnostic reasoning responses partially suggested they utilised a specific strategy that fit the diagnostic split hypothesis. Further results are discussed, as well as their implications in relation to the previous literature.

Thielmann, Isabel

"Utility Matters: On the Role of Objective and Subjective Incentive Size on Dishonest Behavior"

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Most theories of dishonest behavior emphasize the importance of potential payoffs, typically implying that the willingness to lie increases with larger incentives. However, evidence on the influence of payoff magnitude on dishonesty appears to disconfirm this intuition. The goal of the presented experiments was to provide critical tests of these prior findings and the role of incentives for dishonest behavior in general. Using well-established cheating paradigms, we manipulated either the objective or the subjectively perceived incentive size and investigated their influence on lying. More specifically, in two experiments, we tested whether dishonesty in a die-roll task may increase with increasing (objective) incentives once substantial payoffs of up to 150€ are at stake. In a third experiment, we manipulated the subjective incentive size by implementing different mechanisms generating the endowment at stake in the subsequent coin-toss task. For objective incentives, we found that payoff magnitude indeed matters for some, albeit not all individuals: Whereas some individuals became more willing to lie the higher the incentives, others became less willing to lie, and even others were not affected by the size of incentives at all (either being consistently honest or brazenly dishonest). For subjective incentives, in turn, results showed that the opportunity to avoid a loss increased the willingness to lie as compared to the opportunity to obtain a gain, and – descriptively – the proportion of dishonest individuals was highest if the money at stake had to be earned previously through exerting effort. Overall, the results show that higher incentives can indeed increase the willingness to lie, ultimately providing support for utility-based models of dishonesty.

Tho Pesch, Fiona
“Seeing Moral Transgressions”
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Third-party punishment games model the phenomenon that some people intervene against others' norm violations despite costs to themselves. However, in real life, bystanders are interrupted in their current goal pursuit whenever confronted with someone's transgression. In a line of studies, we will investigate if attentional avoidance of norm violations can partially account for non-intervention, and whether such avoidance strategies are linked to social preferences and personality traits.

In a first study, we tested an adapted third-party punishment game. Critically, the computer screen was split into a lower half displaying outcomes of dictator games played by other participants, and an upper half displaying mazes to be solved in the MAZE condition. In the noMAZE condition, the upper half of the screen was empty. As third parties, our participants could punish dictators, reducing their payoff at a fixed cost to themselves. Participants (N = 190) completed an online questionnaire before coming to the lab, containing several personality measures. As predicted, intervention decreased in the MAZE condition ($OR = .046, p < .001$). This can be interpreted as reluctant altruism, i.e. the human tendency to avoid behaving prosocially whenever possible by exploiting moral wiggle room. Though SVO does predict intervention regardless of the condition ($OR = 1.182, p < .001$), it does so better in the noMAZE condition ($OR = .891, p = .009$). One interpretation of this result is that SVO does not capture reluctance in altruism.

This set-up will be the basis of a line of study using eye-tracking in order to get some insights into interindividual differences in information processing. We hypothesise that some people will strategically avoid the information about outcomes of the dictator game and as a result punish less.

Thoma, Volker
“Brain stimulation of right dorso-lateral prefrontal cortex increases cognitive reflection performance”
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Transcranial direct current stimulation (tDCS) was used to investigate whether stimulating the left or right dorso-lateral pre-frontal cortex (DLPFC) compared to a sham group modulated performance on a number of judgment and thinking tasks. There were 3 tasks: vignettes measuring heuristic thinking, logic syllogisms, and the cognitive reflection test (CRT). Fifty-four participants were recruited. Results showed that anodal tDCS to the right DLPFC was associated with an increase in cognitive reflection performance (Type 2 processing) as compared to left DLPFC and to sham. Logic thinking was reduced following anodal tDCS to the left DLPFC. A second experiment confirmed these results for the right DLPFC, with repeated (two sessions) stimulation also increasing performance in the CRT.

These findings are broadly consistent with a dual process framework, and cannot be explained by individual differences in cognitive ability and thinking style. The results demonstrate the involvement of the right DLPFC in cognitive reflection and suggest the possibility of improving cognitive reflection performance through tDCS. Transcranial direct current stimulation of the right but not the left dorso-lateral pre-frontal cortex (DLPFC) compared to a sham group modulated cognitive reflection performance. A second experiment confirmed these results with repeated (two sessions) stimulation also increasing performance.

Thorpe, Alistair

“Action bias and inappropriate decisions to take antibiotics”

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Aim. Public misuse of antibiotics drives resistance. We first aimed to establish whether people display a bias for taking antibiotics. We then explored whether such desires are associated with an action bias before testing an intervention aimed at countering the action bias. Methods. We employed a between-subjects experimental approach with imagined scenarios of a consultation with a family physician. Participants (Exp. 1, n = 424; Exp. 2, n = 434) were assigned to one of two conditions (control: viral information only vs. full information: viral and antibiotic information), then expressed their preferred treatment decision: Take antibiotics or Rest. Participants in the full information conditions were then asked to express their agreement to items on four cognitive biases. In Experiment 3 (n = 732), the presentation of the treatment options was manipulated in a between-subjects design (baseline: rest as inaction vs. intervention: rest as action), with preferred treatment decision (Take antibiotics or Rest) as the dependent variable. Results. We found reliable evidence of a bias for taking antibiotics, which was most associated with an action bias (Exp. 1, $rpb = .68$, $p < .001$, 95% CI[0.62, 0.74]; Exp. 2, $rpb = .56$, $p < .001$, 95% CI[0.48, 0.63]). However, the intervention aiming to combat the action bias failed to significantly decrease inappropriate desires for antibiotics (Exp. 3, $\chi^2(1) = 0.94$, $p = .333$, $\phi = .04$). Conclusions. We establish the presence of a systematic action bias that may underpin suboptimal antibiotic behaviour from the general public. Future research should identify effective strategies to counter inappropriate expectations for antibiotics when full information is available.

Tiede, Kevin

“When does presenting incremental risks improve medical decision making compared to presenting separate total risks?”

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Good medical decisions require understanding the additional benefits and risks of treatments compared to a control group. The incremental risk format has been introduced to improve the understanding of such information. As research on the benefits of this format

with regard to knowledge is scarce, the first aim of our research was to provide further insights into the benefits of the incremental risk format. The second aim was to examine conditions under which the risk formats performs better or similarly as a more common risk format. Participants were provided with the benefits and risks of medical treatments, following knowledge questions and subjective accessibility and attractiveness ratings. In Study 1 (N = 99), information was presented in either the total risk format or the incremental risk format and recall was measured. In Study 2 (N = 222), participants repeatedly compared medical treatments. Besides risk format, the complexity of the judgment environment and the presence of feedback were manipulated. In Study 1, the incremental risk format (vs. total risk format) led to lower knowledge and recall scores and was rated as less accessible and attractive. In Study 2, the incremental risk format improved knowledge only for gist knowledge or after getting used to the format. Complexity and feedback did not moderate the effect of risk format. Further, subjective ratings of the incremental risk format improved after getting used to it. In conclusion, the incremental risk format is a promising format to communicate medical benefits and risks, although situational conditions must be considered. Further, our work emphasizes the importance of examining learning and environmental factors as potential moderators in risk communication.

Ting, ChihChung

"Not learning performance but learned-option preference is changed by incidental anxiety"

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Previous studies have shown that anxiety influences decision-making and alters risk attitude. However, it is still unclear how anxiety is involved in decisions that are based on recent experiences, which involves learning and is important for gain maximization and loss avoidance. Although recent studies indicated that anxiety asymmetrically biases reward and avoidance learning (Berghorst, Bogdan, Frank, & Pizzagalli, 2013; Lighthall, Gorlick, Schoeke, Frank, & Mather, 2013) and decreases the flexibility of negative value updating (Browning, Behrens, Jocham, O'Reilly, & Bishop, 2015), no comprehensive framework is able to explain the mechanisms through which anxiety impacts learning. To address this issue, we conducted two experiments in which incidental anxiety was induced via the threat of unpredictable electric shock in the context of a well-established probabilistic reinforcement learning task (Palminteri et al., 2015). This task allowed us to assess the impact of anxiety on learning in two valence conditions (gains and losses), as well as to assess learned preferences via a post-learning task.

While anxiety was successfully established in our subjects (increased electrodermal arousal and self-reported anxiety), it did not impact learning, as indicated by non-significant main and interaction effects for both valence and threat. Learned preferences, however, were significantly impacted by the anxiety manipulation: subjects preferred symbols associated with a small chance of losing (i.e., Loss 25%) to symbols associated with a small chance of winning (Gain 25%), even though the expected value of latter (G25) is higher than that of the former (L25). This context-dependent effect was enhanced when learning about symbol values took place in the context of anxiety. We also report results from reinforcement learning models that separately capture the impact of anxiety on prediction

error updating for gains and losses. In sum, our results suggest that incidental anxiety has specific, but subtle effects on learning by changing learned-option preferences and the reliance on positive compared to negative prediction errors. The current study aims to investigate how anxiety is involved in experience-based decisions, which is important for maximization of gains and avoidance of losses. While anxiety was successfully established by electric shocks during reinforcement learning

Traczyk, Jakub

“Does fear increase search effort in more numerate people? A study investigating information acquisition in a decision from experience task”

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We investigated the effect of numeracy and fear on the decision-making process. While previous research demonstrated that these factors are independently related to search effort, search policy and choice in a decision from experience task, less is known about how their interaction contributes to processing information under uncertainty. In the present study, we hypothesized that more numerate people would sample more information about a decision problem and that the effect of fear would depend on the source of this emotion: whether it is integral (i.e., relevant) or incidental (i.e., irrelevant) to a decision problem. In two experiments, we used a sampling paradigm to measure search effort, search policy and choice in nine binary problems included in a decision from experience task. In Experiment 1, before the sampling task we elicited incidental fear by asking participants to recall fearful events from their life. In Experiment 2, integral fear was elicited by asking participants to make choices concerning medical treatment. We found that more numerate people sampled more information about a decision problem and switched less frequently between alternatives. Incidental fear marginally predicted search effort. Integral fear led to larger sample sizes, but only among more numerate people. Neither numeracy nor fear were related to the number of choices that maximized expected values. However, across two experiments sample sizes predicted the number of choices that maximized experienced mean returns. The findings suggest that people with high numeracy may be more sensitive to integral emotions; this may result in more effortful sampling of relevant information leading to choices maximizing experienced returns.

Trendl, Anna

“A zero attraction effect in naturalistic choice”

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In the attraction effect, adding a dominated third option to a choice set of two options can reverse the preference for the original two options, and even increase one of the option's choice share. This constitutes a violation of the axioms of regularity and independence from irrelevant alternatives, which are core properties of any choice model in which the utility of each option is stable across choice sets. Consequently, in the past 20 years, the attraction effect has driven the development of a set of influential models of multiattribute choice. However, Frederick, Lee, and Baskin (2014) have recently claimed that the attraction effect is only limited to options with numerical attributes, and does not hold for choices between naturalistic options (e.g., snacks, movies) — a claim which would severely undermine its

theoretical importance. Huber, Payne, and Puto (2014) criticised Frederick et al.'s experiments, laying down a set of criteria that should be met by any experiment wishing to test for the attraction effect in real-world consumer choices. This article presents the first experiment that meets these criteria. The results show a precisely zero attraction effect.

Whether the attraction effect extends to choices involving naturalistic options has been the subject of debate in the literature. We present the first rigorous test of the attraction effect in choices with complex options, and find a precise null effect.

Tsuzuki, Takashi

“A Time-series Saccades Analysis of the Attraction and Compromise Effects Based on the Final Decision in Multi-alternative Decision Making”

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In both effect conditions, the frequencies of the alternative-wise saccades were higher for the target-competitor comparison in the fourth (final) phase. Especially in the third phase, the frequencies of the three types of comparisons were different in the two conditions.

U

Ungemach, Christoph

“How much to pay the piper? The effects of disclosing labor cost information on consumer preferences”

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Firms are generally reluctant to disclose information regarding the costs of their products and services to consumers. In a series of studies, we examined under what conditions making the cost of labor transparent can lead to favorable (or unfavorable) consumer responses. Specifically, we showed that paying service providers a fair share of the price can increase consumers' preference for the service if this information was disclosed. This effect was replicated above and beyond any quality-related perceptions. Furthermore, a mediation model revealed that participants' increased purchase intent for the offer that pays their service provider a higher wage can be explained by feelings of warm glow and guilt that go along with choosing such a service. Finally, we also showed that these social preferences are moderated by descriptive norms regarding labor costs. Overall, this research offers a first step toward understanding the behavioral consequences of disclosing the costs of labor in a service setting. These effects show that consumers are also concerned about service providers. More broadly, our findings highlight potential conditions under which increasing labor costs can increase demand.

V

Vacondio, Martina

“The compromise effect for prosocial and consumption decisions: Processes underlying multiattribute trade-offs.”

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This project examines the decision-making process underlying the compromise effect in prosocial and consumption choices. The compromise effect is a contextual decision-making bias leading to alternatives gaining more market share when they constitute a middle or compromise option in a choice set. Research on the compromise effect has mainly focused on consumer behavior. However, also prosocial behaviors (such as donations) may be influenced by this contextual effect. For example, charity fundraising campaigns often present the option to donate in a ternary choice set, expecting donors to align with the compromise effect as consumers do. Given that consumers and donors are driven by different motivations when it comes to their economic endeavors, it is unclear whether the compromise effect will surface to the same extent in charitable giving contexts. We conducted three studies to examine the behavioral differences and underlying processes.

In the first study we obtained results demonstrating a reversed compromise effect for donation choices, such that extreme options were preferred over the middle option. The findings of the additional experiments confirmed this behavioral difference. While in the consumption condition the most preferred option was the compromise, in the donation condition the cheapest option was usually preferred. These results are explained by people in the donation condition placing less weight on the quality and more weight on the cost of the choice, generating a higher preference for the cheapest option. Theoretical and practical implications are discussed, including how the determinants of multiattribute trade-offs influence prosocial decisions and how it can be used by charity organizations to improve fundraising campaigns.

Vallée-Tourangeau, Gaëlle

“Can you take a break if you have work to do? Momentary emotional wellbeing and prospective hedonic judgments of leisure”

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We examined whether the perceived hedonic advantage of a “post-work” vacation is moderated by people’s emotional well-being at the time of judgment. The first study was a pre-registered direct replication of Study 1d in O’Brien and Roney (2017). We hypothesised that late vacations would be judged more favourably than early vacations. We also wanted to explore whether this effect could be moderated by momentary emotional well-being. The final sample ($n = 264$) mean age was 31.74 years ($SD = 13.15$) and included 128 females, 114 males, and 22 who preferred not to specify their gender. We observed a significant

interaction effect as momentary emotional well-being moderated the effect on the vacation timing on prospective hedonic judgments. Specifically, the timing of vacation only impacted the prospective hedonic judgments of individuals who reported lower scores of momentary emotional well-being. Prospective hedonic judgments of happier respondents were unaffected by the vacation timing manipulation. In a second pre-registered follow-up study, we aimed to replicate the moderating effect of momentary emotional well-being and explored the possible moderating impact of individuals' propensity to commit the planning fallacy.

van den Akker, Merle

"Can you remember your contactless spend?"

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Does using contactless payment affect immediate memory for the total purchase price? We expected the increased psychological distance from cash and the reduced payment friction might lead to worse memory. We intercepted 3,022 customers leaving the campus grocery store, who swapped their receipt for a snack and then were asked to recall their exact expenditure. The overall effect of contactless compared to PIN on expenditure recall is positive, with people an absolute 2.8% more likely to be correct 95% CI [0.0% -- 5.5%]. The overall effect of contactless compared to cash on expenditure recall is negative, with people being 4.8% 95% CI [0.0% -- 9.6%] worse at recalling their expenditure correctly. Our precise estimates show that the effects of contactless payments are, at most, small. While immediate memory for payments appears unaffected, we cannot say whether contactless might have other effects on spending, substituting for cash, possibly increasing overall spending, changing the type of spending, and making budgeting harder.

van der Wal, Natalie

"Risky Decisions and Risk Communications in Real-World Emergency Evacuations"

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Fires, terrorist attacks, and other threats require emergency evacuations. Faster evacuations during emergencies could save more lives. Policy makers therefore seek to improve emergency evacuation preparedness, in case of fires, terrorist attacks, and other threats. However, people may engage in behaviors that undermine the effectiveness of emergency evacuations, thus putting themselves and others at risk. We took risk research out of the lab to characterize risky decisions and risk communications in the context of real-world emergency evacuations. We collected 126 videos of real-world emergency evacuations during fires, terror attacks, and other threats. The videos of these emergency evacuations were filmed by members of the general public, CCTV cameras, tv news crews, and others. We identified risky behaviors and risk communications and situational variables such as the visibility of the threat. The most common risky behavior pertained to slow initiation of evacuation due to for example, collecting items before evacuating and confusion

about whether the emergency was real or not. We identified risk communications, such as the sounding of an alarm, having staff guide people out, and making a live or pre-recorded announcement. Our analyses suggested that the most effective risk communications for reducing risky evacuation behaviors included announcements or staff guiding people out. Especially when threats were not visible, alarms alone were often ineffective and had to be combined with either announcements or staff guiding people out. We will discuss our findings in light of research in risk perception and communication, and suggest improved guidelines for emergency communication that will ultimately save lives.

van der Weele, Joel

“Anticipatory Anxiety and Wishful Thinking”

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Recent economic theory suggest a central role for "anticipatory utility" and "belief-based utility" to explain the prevalence of biased beliefs and phenomena like wishful thinking or overconfidence. However, there is little rigorous evidence for the relation between anticipatory feelings and belief formation. We incentivize experimental participants to accurately report their beliefs about the orientation of patterns shown on a screen. We induce anticipatory anxiety by wiring people to an electric stimulation device, and informing them that some patterns may result in an electric shock. Our results show clear evidence for wishful thinking: participants are significantly less likely to accurately and confidently identify patterns associated with electric shocks. The bias depends on the ambiguity of the evidence and incentives for accuracy. Our findings can inform interventions that improve decisions made under stress, such as those about health and financial investments.

Van Dillen, Lotte

“Disgust at the crime scene. Disgust shapes gaze behavior and crime scene assessments by lay people and professionals.”

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Four studies addressed the question to what extent disgust sensitivity shapes assessments of (visual) evidence of murder crimes by lay people and legal professionals (e.g., investigators, lawyers). Self reports and eye-tracking findings showed that high compared to low disgust sensitive participants reported stronger negative emotions in response to mock murder cases judged these cases to be more serious and gave harsher punishment recommendations. This pattern moreover concurred with more eye fixations on gruesome hotspots of mock crime scene photos (e.g., the blood, the wound) compared to non-gruesome areas of interest. Finally, the effects did not vary as a function of emotion regulation instructions or professional expertise pointing to the robustness of the effects of disgust sensitivity. Implications and future directions for legal decision making will be discussed.

van Dolder, Dennie

“Gender and Competitiveness in a High Stakes TV Game Show”

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We examine gender differences in willingness to compete using the Dutch version of the TV game show Deal or no Deal. In every episode, one individual from an audience of 500 contestants plays a game of chance with an expected value of approximately half a million euro. The finalist is selected through an elimination game that consists of various rounds of quiz questions. At several stages, the remaining contestants face a choice between continuing to compete and opting out in exchange for a significant but relatively small prize. For every stage, we find that women are more likely than men to opt out of the competition. This result indicates that previous findings from small-stake experiments generalize to consequential decisions, which gives further credence to the hypothesis that differences between men and women in their willingness to compete contribute to existence and persistence of gender gaps in the labor market.

van Giesen, Roxanne

“Switching health insurance (or not): how to encourage deliberate decision-making?”

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Each year, before December 31, Dutch consumers can switch to another health insurer. However, many consumers remain inert and stick to their current one. This inertia could lead to many consumers having insurances that do not fit their needs or paying hundreds of euros a year too much. Why don't they switch? And how can we influence this?

An initial survey (N = 1122) provided insight into drivers and barriers in the decision-making process. The inert (not considering switching) seemed to believe that switching is difficult, that benefits do not outweigh costs, and perceived switching to be a hassle. For consumers who made a deliberate decision to stay with their current health insurer, satisfaction and being loyal played an important role. Moreover, they were afraid to regret switching to another insurer. Switchers expected to be better off by carefully evaluating health insurance alternatives and thought it was worth the effort.

Based on the survey results, two interventions to encourage more deliberate decision-making were tested in a field experiment with inert consumers (N = 2925): (1) explaining how easy it is to switch and (2) providing a reminder of the deadline. The interventions were implemented in the months before the deadline. Subsequently, the intervention groups were compared to a control group that didn't receive an intervention. Results show positive effects of the intervention explaining how easy it is to switch: consumers were more likely to actually switch or to deliberately stay with their current health insurer compared to the control group. They were also more likely to consciously consider their options. This could be due to a change in perceptions: they saw it less as a hassle to switch than consumers who did not receive the intervention.

van Lent, Tjits

“The influence of collaborating with an ingroup or outgroup member on dishonest behaviour”

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Research showed that collaboration provides fertile ground for dishonesty. However, less is known about the effect of group membership on dishonest collaboration. This project investigates whether collaborating with an ingroup member results in more dishonesty than collaborating with an outgroup member.

Vanunu, Yonatan

“Elucidating the differential impact of extreme-outcomes in perceptual and preferential choice.”

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Previous studies have suggested that extreme information is often overweighted in risky-choices but underweighted in perceptual choices. We aimed to explore this discrepancy with a novel behavioral paradigm that manipulates task-goal, and with a cognitive model that outlines the decision-process.

Venema, Tina

“The sweet taste of nudge effectiveness: Working with existing habits.”

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Background: We all have habits that would we could do without (e.g. to reduce our calorie intake.) Nudges have been shown to be a promising intervention tool to reduce unfavourable choices by altering the choice architecture in such a way that the decision-agent is steered towards the sensible choice without limiting alternative options. Although nudges are usually installed in public spaces, not everyone who is exposed to them might be equally susceptible to the effect. We propose that habits are an important factor when it comes to the boundary conditions of nudge effectiveness. Habits are behaviours that have become automatic due to frequent execution in the same context. The context is regarded as the cue that triggers the behaviour to occur.

Methods & Findings: In a repeated measures factorial design study (N= 132) it was found that a portion-size-nudge was effective when people have a strong habit of putting a certain amount of spoons of sugar in their tea. People with a weak habit used the same amount of sugar regardless of the spoon size ($b = 2.36$, $p = .020$). In this way a bad habit facilitates the nudge, and indirectly leads to the desired behaviour.

Discussion: This study is the first to demonstrate the relations between nudge effectiveness and habit strength. People with a strong habit were more influenced by the nudge. These results contribute to the knowledge of how externally triggered automatic processes

influence actual behaviour and demonstrate that habits are an important boundary condition to nudge effectiveness.

Vincent, Benjamin

"The DARC Toolbox: automated, flexible, and efficient delayed and risky choice experiments using Bayesian adaptive design."

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Delayed and risky choice (DARC) experiments are a cornerstone of research in psychology, behavioural economics, neuroeconomics and beyond. By collecting an agent's preferences between pairs of prospects we can characterise their preferences and probe the underlying decision making mechanisms.

We present a state-of-the-art approach and software toolbox allowing DARC experiments that maximise information gain per trial. This allows real-time and efficient estimation of decision making model parameters, resulting in higher measurement precision per trial. This is particularly useful when testing special participant populations, using repeated measures experimental designs, or when using EEG or fMRI, for example. We make advances over current Bayesian adaptive design methodology to achieve this real time and automatic performance, and demonstrate superior performance over alternative approaches.

We provide a number of decision making models and choice environments for researchers to use. These focus upon various inter-temporal choice and risky choice models and experimental protocols. A key contribution is that our approach can be extended to virtually any 2-alternative-choice task. Users need only specify a behavioural model and allowable stimuli - the software toolbox automates all other tasks.

Our experiment toolbox is written in Python, is open source, and available for experimenters to download and use. We use the popular and free experiment software, PsychoPy, to run experiments. This allows experimenters to easily modify and run adaptive experiments to suit their particular research purposes. It is easy to extend our software to add new decision making models, decision environments, or alter the visual presentation of stimuli to participants.

Vomfell, Lara

"Officer encounters and stop and search disproportionality"

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Black and Asian people in England are stopped and searched at up to 8 times the rate of White people. It has been argued that stop and search need not match ethnic proportions in the general population. The argument is that instead, police officers target their searches to reflect ethnicity-specific propensity for crime. In the context of claims of officer bias, we investigate the extent to which officers' experiences with criminals inform their search decisions.

First, we develop officer-specific benchmark tests by comparing their searches to information sets of crime. For each officer we use crime suspect data at three aggregation levels: the police force, the officer team and the individual officer. This hierarchy allows us to discern how officers' behaviour is shaped in response to collective and individual experiences. Second, we estimate the temporal resolution at which experiences with criminals influence search decisions.

We demonstrate our approach on 2,151 police officers of the West Midlands Police force in the UK. Across all benchmarks, up to 40% of officers search ethnic minorities at rates higher than explicable by their information sets. We find no such discrimination against White people. Officers' searches are influenced primarily by their teams' experiences rather than personal encounters. However, the information sets explain only a small part of actual search behaviour. Additionally, recent crime events at any hierarchy predict neither search volume nor the ethnicity of searched persons in the month following the events.

Personal and collective experiences with criminals explain only a small part of officers' search patterns. They do not lead to direct changes in behaviour and some officers' behaviours cannot be explained by these encounters at all. Disproportionate police officer behaviour cannot be explained by ethnicity-specific differences in observed criminal behaviour. Using several information sets on crime suspects, we demonstrate that officers' individual experiences do not influence their stop and search behaviour.

W

Wada, Ryoko

"Making an ambiguous box affects parameter of ambiguity aversion"

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We conduct experiments in which the subjects faces different Ellsberg urns and investigate comparative properties of ambiguity attitudes across information and if there is any substantive component which is translatable beyond a single-information situation. We create three pieces of imprecise information, and measure their probability equivalents and certainty equivalents, and back up the degree of imprecision aversion proposed by Gajdos, et.al (2008), as the measure to be used in the comparative analysis. We run two kinds of experiments, which differ in how the subjects are informed about how the numbers of balls are determined in the end. One is "Telling Nothing," which is actually standard in the literature and tells simply nothing about how the numbers are determined. The other is "Dice," in which numbers are determined according to a sufficiently complicated snake-and-ladder game so that the calculation of probabilities is virtually impossible despite the rule is simple to understand. We find a pretty consistent tendency, at an aggregate level, in the change of ambiguity attitudes across information. The changes are more significant in the "Telling Nothing" experiment than in the "Dice"

Wakker, Peter

"Measuring Ambiguity Attitudes under Time Pressure"

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Measurements of ambiguity attitudes have so far focused on artificial events, where (subjective) beliefs can be derived from symmetry of events and can be then controlled for. For natural events as relevant in applications, such a symmetry and corresponding control are usually absent, precluding traditional measurement methods. This paper introduces two indexes of ambiguity attitudes, one for aversion and the other for insensitivity/perception, for which we can control for likelihood beliefs even if these are unknown. Hence, we can now measure ambiguity attitudes for natural events. Our indexes are valid under many ambiguity theories, do not require expected utility for risk, and are easy to elicit in practice. We use our indexes to investigate time pressure under ambiguity. People do not become more ambiguity averse under time pressure but become more insensitive (perceive more ambiguity). These findings are plausible and, hence, support the validity of our indexes.

Wanders, Florian

"How rule breakers rise and fall in the eyes of others: The role of sanctions."

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The role of sanctioning on perceptions of rule breakers is unclear. Confirming our prediction, data showed that sanctioning rule breakers reduces power perceptions. However, and unexpectedly, sanctioning did not affect the observers' perceptions of the rule breaker's volitional freedom.

Wang, Tong

"Follow the Money: Bayesian Markets to Extract Crowd Wisdom"

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Common misconceptions are counter-examples to the wisdom of crowds. In such cases, we would rather rely on experts but expertise may be unknown ex ante, especially when only one question is asked. Originally designed as an incentive mechanism to elicit private information (subjective judgments or unverifiable facts), Bayesian markets (Baillon, 2017, PNAS) also offer a way to extract crowd wisdom in such cases. In Bayesian markets, agents answer a question and bet on others' answers. We propose an algorithm for extracting wisdom from the crowd: select the answer submitted by agents who make money in the Bayesian market. We show theoretically that this "follow the money" algorithm yields the correct answer under reasonable assumptions.

A lab experiment demonstrates how to use this mechanism in practice and compares its performance with the "surprisingly popular" algorithm (Prelec, Seung, and McCoy, 2017, Nature) which has proven to lead to the correct answer even when the majority is wrong. In Bayesian markets, we fit supply and demand curves and then compute average ex post surplus. The answer of the agents with the higher surplus is selected by our algorithm. Results show that the "follow the money" algorithm outperforms the "surprisingly popular" algorithm. Despite using less information than the "surprisingly popular" algorithm,

Bayesian markets manage to obtain better-quality information by asking simpler questions and having more transparent incentives.

Wang, Xinghua

“Bridging the gap between the lab and the field: The case of the dictator game”

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Meta analysis of papers that investigate external validity of social preference games shows that the correlation between lab decisions and field measures is quite low. In this paper, we try to determine the characteristics that lab games (in our case the dictator game) should have to correlate better with the field behaviors they may want to address. We conduct our within-subject study by comparing the lab behavior in several different versions of the dictator game with elicited behavior in three field situations. Four versions of the dictator game are run in the lab, which vary three key factors that potentially drive the lab-field difference in measured pro-social behavior. These three factors are: house money vs. earned money, student as recipient vs. recipient in serious need, and absence vs. presence of face to face interaction.

Weingarten, Evan

“So Bad It’s Good: When People Prefer Bad Options”

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Why do people choose so-bad-it’s-good content such as Tommy Wiseau’s “The Room” or Rebecca Black’s “Friday?” In nine studies across several content domains (e.g., Olympic ski runs, talent show auditions), we demonstrate that participants often prefer very bad options over mediocre ones (that are higher in objective quality) but not very good options, and explore why. Bad options are chosen more often when they are perceived to be more ridiculous, in content domains that are more lowbrow, when intended for enjoyment rather than information, and even when individuals understand the domain is vertically differentiated. Moreover, this phenomenon may only emerge when the worst option is extremely bad. That is, it is not sufficient for the bad option to merely be the worst in the set to be more likely to be chosen over a mediocre (but higher in objective quality) option. We rule out several alternative explanations of the results, including uniqueness and schadenfreude.

Weisel, Ori

“The complementarity of centralized and decentralized institutions in fostering cooperation”

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Cooperation could be the result of (1) an intrinsic motivation to cooperate; (2) informal punishment (e.g., peer-pressure); or (3) formal sanctioning institutions (i.e., police and courts). We report on laboratory experiments conducted in the UK and in Turkey (N=632), designed to disentangle and quantify the relative impact of these three factors, and relate them to the particular normative setting (UK vs. Turkey). We conduct four variations of a repeated public goods game: without punishment, with informal peer-punishment, with a formal sanctioning institution, and with a combination of both. In the UK Informal peer-

punishment induced high and stable cooperation levels, with decreasing levels of cooperation (and, consequently, increasing levels of social welfare). The formal sanctioning institution was considerably less effective than both informal punishment alone and the combination of both types of punishment. Despite considerable resources that went towards funding it, it was not very effective in increasing contributions, and the end result was a low level of social welfare. A best-reply analysis reveals that formal sanctions crowd out voluntary contributions. The picture is very different in Turkey, with less cooperation, more investment in formal sanctioning, more anti-social peer punishment, and, consequently, much reduced social welfare. Overall, We demonstrate that formal sanctioning institutions encourage best-reply reasoning and induce cooperation only when the monetary incentives are high enough. They cannot effectively foster cooperation in the long run, unless they have the support of informal peer-punishment, which, in turn, requires that sufficient cooperation norms are in place for it to be effective.

Weiss-Cohen, Leonardo

“Chasing past experiences: Biases in mutual fund selections using decisions from experience”

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When choosing mutual funds, individuals chase past performance instead of focusing on minimizing fees. However, high fees can severely erode investment returns. Past research in this area has been criticized for being artificial, creating unrealistic settings which push individuals towards this behavioral finance bias. By employing a novel paradigm using repeated decisions from experience and dynamically created stochastic fund returns, we make the task more representative, and ensure that the alternatives are perfectly risk-matched. We show that individuals chase past performance and mostly ignore fees. Fund selection was moderated by financial literacy, with more literate individuals choosing the low-fee fund more often, and less literate individuals behaving almost randomly. However, all participants chased past performance, albeit centered at different means. This line of research is crucial to help individuals make better investment decisions, and for testing disclaimers that help nudge individuals towards the more efficient behavior of minimizing fees. We propose new warning messages that are more efficient than the traditionally ineffective “past performance does not guarantee future returns.”

Weiss-Sidi, Merav

“Who Does Good to Feel Good? Cross Cultural Differences in Altruistic Motivations”

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Research suggests that altruistic behavior increases happiness. Our research examines this phenomenon across cultures. We suggest that cultural variations in the motivation for altruistic behavior leads to variations in its effect on happiness. Specifically, we argue that in individualist cultures, the notion of altruism is linked to self-interest. Individualists, therefore, help others to gain personal benefits, which results in increased happiness after helping. By contrast, in collectivistic cultures, altruism is pure and thus more focused on

the benefit of others. Consequently, collectivists' helping is more directed toward the benefit to the other, and therefore is less likely to enhance the helper's happiness. Four studies explore these propositions. Studies 1 provides evidence for cultural differences in the notion of altruism. Studies 2, 3 and 4 demonstrate the moderating role of culture orientation in the altruism-happiness link, using lab experiments (study 2 and 3) and a data set of the European Social Survey (study 4). This research shed light on donors' motivation and on the sources of happiness across cultures.

Wertenbroch, Klaus

"When Algorithmic Predictions of Consumer Preferences Threaten Belief in Free Will"

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The advent of machine learning techniques and artificial intelligence allows marketers to microtarget consumers and predict their choices more accurately than ever before. Consumers are enjoying the economic benefits of lower search costs, better matching of offers with their preferences, and greater convenience. What are the psychological consequences of predicting consumers' choices ever more accurately? Across a set of four studies, we show that the predictability created by algorithmic microtargeting threatens consumers' sense of free will and that consumers react to this threat by choosing less preferred options to re-establish their sense of free will. In two of these studies, we first measure participants' preferences using self-explicated conjoint analyses to establish their preference orderings of various choice options. We then ask participants to make subsequent choices. Participants who have been told that the researchers can predict their choices from the conjoint results choose less consistently with their stated preferences (as derived from the conjoint analyses) than participants who have been told that the researchers can determine how consistent their choices are with their preferences as measured in the conjoint analyses, a violation of description invariance.

Wichary, Szymon

"Neural signatures of rational and heuristic choice strategies: an EEG analysis"

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We studied neural underpinnings of strategy use in multi-attribute choice, demonstrating dependencies between EEG signal and use of Weighted Additive rule or Take The Best heuristic. Strategy preference has an early neural signature reflecting attentional weighting of decision cues.

Woike, Jan

“How to deal with insufficient attention in online panels and laboratory research? Comparing the validity of established and novel measures”

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Attention checks have become a routine element in surveys and experiments, especially on crowdsourcing platforms like Amazon Mechanical Turk. To ensure data quality under limited supervision and control, researchers have developed a variety of approaches to measure attention, including instructional manipulation checks, gold standard questions, comprehension and memory checks, reaction time measures or psychometric indices.

Some well-established approaches have been in use for several years, leading to concerns that experienced participants might have learned to circumvent their intended function (i.e., passing the attention check without paying attention). Using less established approaches or developing new tests would sidestep this potential problem, but also would require researchers (and reviewers) to make informed judgments about their appropriateness.

In the present research, we develop a novel approach, and compare its validity with a selection of established attention checks across various experimental tasks (standard survey experiments, cognitive measures, economic tasks) both with an online sample (N=677) including more experienced participants and a laboratory sample (N=302) including less experienced participants.

Aiming to aid researchers in monitoring their participants' attention, we present results on the validity of different methods for different types of target tasks and their intercorrelations, and contrast the pattern of results between settings.

Wolfe, Kelly

“Age differences in risk-taking behaviour: a matter of risk-attitude or decision-quality?”

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Introduction: Previous research examining age differences in decision-making under risk has yielded mixed findings. These mixed findings may result from a) age differences in decision-making quality due to age-related decline in cognitive abilities, and or (b) age differences in attitudes towards risk-taking. This study aims to disentangle the contribution of decision-making quality and risk attitude to age differences in decision-making under risk.

Methods: 101 participants from 18 to 90 years of age completed a novel gamble task measuring decision-quality and risk-attitude. Other measures included a numeracy task, Domain-Specific Risk-Taking (DOSPERT) scale, Digit Span Backward, Digit Symbol Coding, Belief in Luck and Luckiness Scale, and a shortened Positive and Negative Affect Schedule (PANAS-X).

Results: Preliminary analysis shows that a higher likelihood of accepting to play a gamble was associated with incorrectly judging the probability of winning as higher than the actual

probability to win or incorrectly judging the probability of losing as lower than the actual probability to lose. Moreover, incorrect judgements of the probability to win and lose were associated with lower numerical ability. Also, higher numerical ability was also associated with a lower likelihood of accepting gambles. Age was not associated with likelihood of accepting to play gambles.

Conclusion: Our findings suggest that numerical abilities play a large role in assessing the value of a monetary gamble and the likelihood of accepting these gambles, irrespective of age. This study aims to disentangle the contribution of decision-making quality and risk attitude to age differences in decision-making under risk, by means of a novel decision-making task that is able to separate decision-quality and risk-attitude when measuring risk-taking behaviour.

Wolk, Leonard

“Constrained contributions to public goods”

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In this paper, we test how constrained choices affect the provision of public goods. Specifically, we implement two public good games with different levels of discretization in contribution choices and find that limiting options leads to higher payoffs. Using a novel experimental design, we are able to distinguish two separate channels through which payoffs improve. As might be expected, higher payoffs can be explained, in part, by more cooperation and higher rates of giving in the treatment with constrained choices. However, we also find that subjects provide public goods in a more cost-effective manner when facing fewer options, suggesting that constrained choice can lead to better decisions, even conditional on the same level of giving. Together our results indicate that the simple availability of choices, or lack thereof, can influence behavior and outcomes, with important implications for a wide range of settings like charitable giving and environmental conservation efforts.

Wollschlaeger, Lena

“A “psychophysical” preferential choice paradigm with real consequences”

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A preferential choice paradigm with real consequences (money, loudness of an annoying sound, and waiting time) is proposed and tested in a “psychophysical” experiment with six subjects who made 960 pairwise choices each, 480 under risk and 480 under uncertainty.

Woudstra, Anke

“Development and pilot-testing of a Colorectal Cancer Screening”

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Aim: Making an informed decision about colorectal cancer screening requires health literacy. Our aim was to develop and pilot-test a computer-based decision aid to support informed decision making about whether or not to participate in colorectal cancer screening for individuals with varying health literacy levels in the Netherlands.

Methods: First, we designed and adapted the decision aid prototype among 25 individuals with low (n=10) and adequate (n=15) health literacy. Second, we used a before/after study to assess changes in knowledge, attitude, intention, decisional conflict, deliberation, anxiety and risk perception in an online survey among 81 individuals eligible for colorectal cancer screening with low (n=35) and adequate (n=46) health literacy.

Results: The decision aid was acceptable, comprehensible, reduced decisional conflict, increased deliberation and improved knowledge about colorectal cancer screening, but not about colorectal cancer, among individuals with adequate and low health literacy. Usability was slightly higher for participants with adequate health literacy compared to those with low health literacy.

Conclusion: The decision aid is promising in supporting informed decision making about colorectal cancer screening, also among individuals with lower health literacy. Further refinement of interactive features, such as videos, animations and the values clarification exercise, is needed to increase the usability of the decision aid.

Wulff, Dirk

“Declarative sample representations in decisions from experience”

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Reinforcement learning models are popular accounts of choices among experienced options. These models typically assume that incoming samples are discarded after they have been used to update running evaluations of the available options and, thus, the absence of declarative representations of experienced samples. However, the few empirical studies that included post-choice probability judgments have found individuals to be, on average, quite accurate. We evaluated the nature of individuals' sample representations. In three experiments, half of the individuals received a surprise message after experience and prior to choice that instructed them to ignore part of the experienced samples. The ignore-instruction resulted in a preference shift in the direction of the benefitting option of 31 to 38 percentage points. The shift was moderated by individuals' numerical abilities, but not the difficulty of the problem (discrete vs. continuous outcomes) or whether individuals received a clear or vague task-instruction prior to making experiences. Moreover, individuals produced relatively accurate frequency judgments, with accuracy varying as a function of individuals' numerical abilities and the difficulty of the problem. Overall, our findings conclusively demonstrate that individuals build up declarative representations of experienced samples, that the representations' precision depends on personal and contextual factors, and that representations can be accessed and used at the moment of choice. These findings contradict the assumptions of typical reinforcement learning models

and highlight the need for incorporating an episodic- or instance-based memory system in models of decisions from experience.

Wyszynski, Marc

“Do I care about you? The effect of identifiability, framing, and time limits on sharing”

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To investigate the willingness to share and to provide means to someone's need, we designed an experiment called need game which includes two players, one active (the participant, AP) and one passive (PP). Both players require a minimum need of 2200 points. AP is endowed with 2350 points and must retain 2200 points. PP starts with 0 points and must gain 2200 points. AP uses parts of the points to place a bet on a lottery. If won, the gain is added to the endowment. If lost, PP receives the points. Because past research suggests that the amount to invest may depend on the probability to win or lose and, this in turn, on how the lottery is framed, we included a gain/loss framing for the lotteries with four preset probabilities. Furthermore, a manipulation of the depth of processing in terms of shorter time limits could intensify the framing effect. Thus, we included two time constraints within which AP must place the bet: 1 and 3 seconds. The main focus was on the identifiability of PP. In one condition, PP was unidentified, meaning PP was referred to as “other person”. In the other condition, PP was identified, meaning PP was represented by a real person sitting in the same room as AP. We found that AP placed higher bets when PP was identified. AP bet more points in gain-frames than in loss-frames and the amount of the bets increased (decreased) with the probability of winning (losing) the lottery, especially in gain-frames. We also found individual differences in the size of the effects of framing, probabilities and time limits.

X

Xu, Yan

“Top-Flop Betting: An incentive mechanism to elicit unverifiable truths”

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This paper introduces a simple mechanism to incentivize truth-telling even when the underlying truth is unverifiable. Most similar mechanisms in the literature rely on the existence of a common prior about the distribution of possible answers and on Bayesian arguments. In our mechanism, respondents to a question bet on the answers of others, relative to the answers given to other questions. For instance, people are asked to bet whether they think a given movie will get higher ratings than another, random movie. The bet reveals whether people themselves liked the movie. We call this method “top-flop betting” and show that it provides incentives to truthfully reveal private information, even in the presence of biases in the answers the bets are based on. Unlike existing methods, our method (i) relaxes assumptions on common prior; (ii) is robust to risk aversion and certainty effects, basically requiring first-order stochastic dominance only; (iii) leads to truth-telling

as dominant in individual setting and a Bayesian equilibrium in game setting (not needing a Bayesian Nash equilibrium).

Yamamoto, Shohei

“Mood, Nudge and Willingness to Work”

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In order to overcome procrastination, a notification or peer information intervention can be helpful. However, to the best of our knowledge, previous research has not investigated how mood affects responses to notifications nor examined how mood influences the effect of a peer information intervention. Carver & Scheier (2013) proposed the hedonic flexibility hypothesis that suggests that positive affect leads people to prioritize less pleasant but important activities for their longer-term goals. Regarding the effect of peer information, if positive mood enhances conformity (Tong et al., 2008), the effect should be stronger when in more of a positive mood. Therefore, this study investigates the effect of mood on willingness to work and examine if mood changes the effect of peer information by a one-week experiment with the smartphone app which sends notifications to ask their emotions and invite real effort tasks eight times per day.

The results show that, consistent with our hypothesis, the acceptance rates were about 40% higher when the level of happiness was higher than the median value of all observations, and this difference is significant (t test: $t=3.48$, $p<0.01$). Mood has significant impact on the acceptance rates even after controlling for the other factors, such as the level of happiness in general, energy level, individual heterogeneity, a current location, type of action, and people interacted with. Interestingly, the subjects with a higher level of happiness in general are also more likely to accept the task invitations. Surprisingly, we find that the effect of peer information is stronger when in more negative moods, which does not agree with Tong et al. (2008).

Yechiam, Eldad

“The debatable origins of loss aversion”

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It is often claimed that negative events carry a larger weight than positive events. Loss aversion is the manifestation of this argument in monetary outcomes. In this review we examine early studies of the utility function of gains and losses, and in particular the original evidence for loss aversion reported by Kahneman and Tversky (1979). We suggest that loss aversion proponents have over-interpreted these findings. Specifically, early studies of utility functions have shown that while very large losses are overweighted, smaller losses are often not. Also, the findings of some of these studies have been systematically misrepresented to reflect loss aversion though they did not find it. These findings shed light both on the inability of modern studies to reproduce loss aversion as well as a second literature arguing strongly for it.

Yeomans, Michael

“What the Heck are we Talking About? Topic Selection in Conversation”

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Speakers in every conversation must choose, on almost every turn, whether to stay on the current topic or switch to a different one. Topic selection directly affects conversational enjoyment, even when speakers' goals are aligned, but it can still be hard for conversationalists to co-ordinate this decision together. Here we develop an integrative bargaining framework for topic selection in phatic conversation. And across five experiments (total N > 2000) - including synchronous and asynchronous conversations in both face-to-face and online settings - we find evidence for two behavioral constraints on effective topic selection. The first constraint is topic interest detection - that is, it is often hard to detect one another's interest in topics, even after some discussion of the topic itself. In our studies, some participants wrote answers to topic-starting questions (e.g. "what's the strangest thing about where you grew up?") and rated their interest in staying on topic; later, other people read those answers and predicted that interest rating. These human judges had considerable room for improvement - their topic interest judgments were egocentric, and were routinely outperformed on this supervised learning task by common NLP tools (LDA, word2vec, etc.). The second constraint is strategic topic switching - the opportunity costs of undiscussed topics are ambiguous and overlooked. Accordingly, we show that Pareto improvements are possible in dyadic conversations when speakers are encouraged to switch topics more frequently together. We discuss the implications of our results for dialogue modeling, conversational agents, and for humans who want to have better conversations.

Yoon, Sangsuk

“Choosing versus rejecting: The effect of decision modes on subsequent preferences”

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Consumers make purchase decisions by choosing an alternative that they prefer the most (choosing) or by rejecting unattractive alternatives (rejecting). Prior studies have shown that people employ different cognitive processes in choosing versus rejecting, often leading to preference reversals across these two decision frames. In many circumstances, consumers also confront the same alternatives repeatedly in future decisions. Yet, little is known about how the two decision frames influence the evaluation of the attractiveness, and preference for the selected alternative in subsequent decisions. Across a series of 4 independent studies, we sought to evaluate how choosing versus rejecting differentially affects preference for the alternative in future decisions. In Studies 1 and 2, we found asymmetric effects of choosing and rejecting - choosing led to increased subsequent preferences while rejecting did not. In Study 3, we found smaller post-choice ratings changes after rejecting than choosing. Further drift diffusion modeling showed greater boundaries in rejecting than in choosing, indicating that rejecting was associated with more deliberation. In Study 4, eye-tracking measures showed longer fixation on preferred items than non-preferred items in choosing (the reversed pattern in rejecting) and more frequent

fixation changes across items in rejecting than in choosing. These findings imply that choosing has greater impact than rejecting on subsequent choices and attractiveness ratings. Critically, converging evidence across multiple methods suggest that the increased deliberative processes in the rejection frame contributes to this asymmetry.

Yu, Xiao

“Better early than late: Effects of interventions to change last-moment submitting behaviour”

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Procrastination behaviour has been extensively studied as an individual problem. However, the effect of such behaviour is rarely discussed from managerial perspectives. Many large governmental programs - such as census, tax returns, grant application, subsidy application - have to deal with large volumes of submissions that take place right before the deadline. The last-moment submitting behaviour can substantially challenge the handling system in terms of quality of service and maximum capacity. To study how to alleviate last-moment overload, we conducted two waves of field experiments in a national census that includes submissions from all farming enterprises in the Netherlands. Using randomized-controlled trials, we compared four types of zero-stake interventions: 1) raising awareness with a peak-day calendar, 2) adding a short list of information to help prepare for submission, 3) providing a soft incentive of “early submission, early evaluating”, 4) setting an earlier non-binding target date for submission. Our results show that setting an earlier target date is a robust and effective method of nudging towards earlier submission, hence could reduce the overload of the peak submission period. This result suggests that anchoring a date, even when it does not have the power of a deadline, could still effectively influence procrastination. To study how to alleviate procrastination induced last-moment overload, we conducted field experiments in a national census that includes submissions from all farming enterprises in the Netherlands. Using randomized-controlled trials, we compared four types of zero-stake interventions with a control group. Our results show that setting an earlier target date is a robust and effective method of nudging towards earlier submission.

Yuan, Zhou

“The influence of prior- reputation on the human trust”

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People often consider trustworthiness of others to reduce the risk when they make trust decisions. To study whether the prior-reputation information can increase people's sensitivity to trustworthiness of trustees during a trust game, we investigated the behaviors of 33 students (16 males; age: 18.82 ± 2.13) being investor in a modified iterative trust game. In this game, we quantified the trustworthiness of trustees into five levels (Star one/ Star Three/ Star Five/ Star Seven/ Star Nine) and set two conditions (with/without prior-reputation) for the ways to form the trustworthiness of trustees. Each participant played the

trust game with each trustee who had different levels of trustworthiness under each condition for 20 times. Using the RMANOVA and its post hoc test, we found that the interaction between trustworthiness and conditions was significant ($p < 0.001$; $\eta^2 = 0.69$). Specifically, compared with the without prior-reputation condition, investor invested more to the trustee with higher level of trustworthiness (Star Seven/ Star Nine) and invested lesser to the trustee with lower level of trustworthiness (Star one/ Star Three/ Star Five) under the condition of with prior-reputation. In addition, using logistic regression to fit the behavior of investors, we found that, the β_1 representing the influence of trustworthiness on the invested amount is larger in the with prior-reputation condition than that in the without prior-reputation condition ($t = 2.44$; $p = 0.02$). These findings suggested that the way for investor to form the prior-reputation of trustee affect their trust decisions, depending on the level of trustworthiness of trustee. And the prior-reputation information can increase people's sensitivity to the trustworthiness of the trustee during the decision to trust.

Z

Zak, Uri

"The Effects of Rankings and Ratings on Performance: What Can We Learn From Chess Tournaments?"

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Evaluations and comparisons of performance are ubiquitous, and the use of ranking and rating systems is common in many contexts. Here we focus on chess tournaments to study the effects of rankings and ratings on performance.

In Study 1, we analyzed data from 960 round-robin chess tournaments that took place in Israel in 2007-2017. The tournaments differed significantly in their participants' level of expertise, so that a beginner and a grandmaster could have had the same ordinal rank (within their tournament). We explored how one's ordinal rank is related to one's performance. We found that the relationship between rank and performance is U-shaped: high and low ranked players outperformed the prediction based on the commonly used Elo benchmark, whereas middle-ranked players fell behind it. We also found an effect of group size: in tournaments with fewer than 8 participants there was a negative relationship, rather than U-shaped, between one's ordinal rank and performance.

In Study 2, we compared pairs of players competing in two conditions: knowing or not knowing each other's Elo rating. In a field experiment, using a computerized chess platform,

we compared the stronger and weaker players' level of play under the two conditions. As expected, the higher-rated players in the dyads won significantly more games and made significantly fewer mistakes than their lower-rated opponents. Importantly, the availability of rating information harmed the performance of the higher-rated players in the dyads. They

made significantly more mistakes when ratings were available than when they were not ($p < .02$), and their overall scores were marginally lower ($p < .10$).

Our results suggest that even experienced players are affected by information about rankings and ratings.

Zeisberger, Stefan

"Is Buying more Forward-Looking than Selling? The Role of Beliefs in Trading Decisions"

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We provide evidence that people fail to consistently incorporate their beliefs into their trading decisions. The results of our laboratory experiment show that selling is considerably less belief-driven than buying. This difference is entirely driven by selling decisions in the presence of paper losses for which we observe that the belief-sensitivity is reduced by half. Selling decisions for paper gains, however, are as sensitive to beliefs as buying decisions. Additionally, we find that people have more optimistic beliefs in face of a loss than when their position is at a gain.

Zhang, Yi

"Self-Other Differences in the Use of Decision Strategy"

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Choosing attractive options and rejecting unattractive options are two decision strategies. The present study finds people deciding for others prefer rejecting over choosing strategy more than those deciding for themselves do because of more thoughts about justifying decisions.

Zhao, Wenjia

"Towards a space of behavioral interventions: Insights from the drift diffusion model"

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Choice behavior can be influenced by many different types of incidental contextual factors, including those pertaining to presentation format, emotion, social belief, and cognitive capacity. Many of these contextual factors form the basis of behavioral interventions, or "nudges", used by academics and practitioners to shape choice. In this paper we propose a space of seventeen different behavioral interventions, based on data from a very large-scale choice experiment. Our space analyzes these interventions using the drift diffusion model (DDM), a quantitative theory of decision making whose parameters offer a theoretically compelling characterization of the neurocognitive and statistical underpinnings of choice behavior. By representing a large number of behavioral interventions using the parameters of the DDM, we are able to precisely measure, quantify, and compare the effects of these interventions, and interpret these effects in terms of their descriptive, mechanistic, and normative implications.

Zheng, Rui

“Us” versus “them”? Promoting pro-environmental behaviors by enhancing connection to future others”

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Although various environmental problems are increasingly prominent and have received widespread attention, research has witnessed a decreasing trend of participation into environmental protection. According to intergenerational decision-making, pro-environmental behavior can be seen as a choice between the interests of the present self and future others and consists of two dimensions, namely the intertemporal dimension and interpersonal dimension. In our research, we conducted three studies: In Study 1, we surveyed 303 employees at two time points to investigate the influence of connection to future others/self on pro-environmental and self-protective behaviors respectively. Results revealed that connection to future others was positively related to pro-environmental behaviors, while the connection to future self was not related to self-protective behaviors. In Study 2, by using a mental time travel prime we manipulated the connection to future others and examined subsequent effects on pro-environmental behavior. Results found that, compared to control group, the two groups whose connection to future others (especially for participants whose connection to descendants) was enhanced showed higher preference for environmental protection. In Study 3, we partition the future into 3 time periods (10, 30, 50 years) to find out which future period more able to promote people’s environmental protection behavior. Results revealed that for participants who wrote letter to their own descendants, longer time horizons contributed to more donations to an environmental charity and more pro-environmental behaviors. The research helps to address the knowledge-behavior gap in risk management and suggests the exclusive role of intergenerational connectedness. Although various environmental problems are increasingly prominent and have received widespread attention, research has witnessed a decreasing trend of participation into environmental protection. According to intergenerational decision-making, pro-environmental behavior can be seen as a choice between the interests of the present self and future others and consists of two dimensions, namely the intertemporal dimension and interpersonal dimension. In our research, we conducted three studies: In Study 1, we surveyed 303 employees at two time points to investigate the influence of connection to future others/self on pro-environmental

Zhou, Lei

“Similarity in processes of risky choice and intertemporal choice: Based on equivalence conversion paradigm”

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Risky choice (RC) and intertemporal choice (IC) are two types of common decisions that are vital and share similarities regarding many aspects. The mainstream discounting model hypothesizes that both decisions follow a compensatory and alternative-based rule. However, other models suggest that RC and IC commonly involve non-compensatory and attribute-based processing. Previous studies were primarily based on outcome data which showed mixed results regarding what the exact mechanism might be. They also failed to exclude the confounding from parameter specificity and individual differences in RC and IC. To overcome these disadvantages, we developed a new paradigm which subjectively equivalent probability to delay and generate a unique set of parameters for each participant. Utilizing these equivalent RC and IC tasks with single- (study 1) and double-outcome (study 2) and eye-tracking technology, we examine the underlying process of RC and IC. Focusing on compensatory/non-compensatory and alternative/attribute based rule, we compared the local and holistic process characteristics of RC and IC. At last, we assess the best-fitting type of models for RC and IC by hierarchical Bayesian modeling. Results showed that RC and IC are indeed similar in most characteristics in local process and reflected non-compensatory and attribute based rule. However they differ in holistic process, as IC is processed in a relatively more deliberate, and deeper fashion than RC. Computational modeling supported the results of RC and IC are more consistent with non-discounting models and follow the non-compensatory, attribute-based rule. This study provides a novel direction for theoretical and methodological comparisons between variant decision tasks.

Zhu, Feibai

“Confidence in Risky Choice with Description and Experience”

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When sampling, decision makers tend to underweight the small probabilities of rare events, whereas they tend to overweight small probabilities that are clearly stated. We examine to what extent this difference is due to how decision makers receive information (through description or experience) and what kind of information they receive (fully specified probabilities or sample evidence). Experimental subjects receiving sample descriptions on average behaved slightly less as if they underweight small probabilities than subjects experiencing the same samples, and both significantly less than subjects receiving stated probabilities. The latter gap is particularly pronounced where samples provide strong evidence for a rare-event probability being small. Our research thus offers both a more robust identification of description-experience gaps and points to a counter-intuitive role of statistical confidence in risky choice.

Zilker, Veronika

“Linking algebraic and process models of risky choice: Probability weighting reflects asymmetric attention in evidence accumulation models”

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Formal theories of risky choice are divided into two major modeling traditions: Algebraic models such as cumulative prospect theory (CPT) rely on constructs like nonlinear probability weighting, assuming that the impact of the possible outcomes of a risky option on the decision can be described by a systematic distortion of the outcomes' probabilities (such that, for instance, small probabilities are over- and large probabilities underweighted). Process models capture the information processing steps leading to a choice, often in terms of sequential sampling processes. It is currently unclear, however, whether and how patterns in probability weighting reflect distinct characteristics of information processing. We demonstrate that patterns of probability weighting can arise from attentional biases in a drift diffusion process. We simulated choices between a safe and a risky option with the attentional drift diffusion model, while manipulating the asymmetric attention to the risky versus safe option. These choices were modeled with CPT. In two-parametric weighting functions, increasing attentional biases toward the safe option were reflected in a lower elevation, and asymmetric attention—irrespective whether favoring the safe or risky option—was reflected in a more extreme curvature. These findings suggest that the apparent under- or overweighting of probabilities can reflect asymmetries in the allocation of attention to different options, rather than distortions in the cognitive representation of probability information. Our analysis thereby illuminates the relationship between two influential but previously unconnected computational frameworks of decision making under risk.

Zimmermann, Laura

“Digital Calibration: Mobile Phone Tracking, Judgments and Behaviour”

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In autumn 2018 Apple launched the Screen Time application as a new feature of iOS12 to help its users understand how much time they are spending on their smartphones, and subsequently to reduce their screen time, if wanted. Android followed immediately with a ‘Digital Wellbeing’ application which tracks mobile phone usage. Knowing how much time people spend on their mobile phones is typically emphasised by these companies as the first step towards changing mobile phone habits. However, thus far it is unclear whether these novel applications have any impact on peoples’ mobile phone usage estimates (i.e. the calibration of their judgments) or their habits. This research study investigates empirically, using longitudinal data whether tracking mobile phone usage with apps 1) improves calibration of judgments of individual mobile phone usage and 2) reduces overall mobile phone screen time. As an alternative to usage tracking, I am further testing whether a simple ‘nudge’ - turning your mobile phone to grey-scale black and white mode - has a comparable effect on mobile phone usage. The results of this longitudinal field study and the implications for consumer wellbeing and product design will be discussed.

Zou, Wanling

“Modeling judgment errors in naturalistic numerical estimation”

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We quantitatively modeled and compared two types of errors in numerical estimation for naturalistic judgment targets: mapping errors and knowledge errors. Mapping errors occur when people make mistakes reporting their beliefs about a particular numerical quantity (e.g. by inflating small numbers), whereas knowledge errors occur when people make mistakes using their knowledge about the judgment target to form their beliefs (e.g. by overweighting or underweighting cues). In two studies, involving estimates of the calories of common food items and estimates of infant mortality rates in various countries, we found that knowledge error models predicted participant estimates with very high out-of-sample accuracy rates, significantly outperforming the predictions of mapping error models. The knowledge error models were also able to identify the objects and concepts most associated with incorrect estimates, shedding light on the psychological underpinnings of numerical judgment.

Zultan, Ro'i

"An Experimental Approach to Comparing the Moral Severity of Deception"

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We compare three modes of deception: lying (LI, asserting falsehoods), falsely implicating (FI, asserting truths that, in context, will predictably cause false beliefs), and nonlinguistic deception (ND, making an action which leads to false beliefs). We identify two major normative positions in this debate. The Classical View (CV) is that lying is morally worse than the other venues of deception. The Equivalence Thesis (ET) states that—as long as the intent and the consequences are the same—it makes no difference morally how one deceives.

The experimental game involves an investor and a consultant. The investor decides how much to invest in a risky prospect. The consultant observes a signal about the state of the world (Favorable or Unfavorable to the investment), and conveys information to the investor. The consultant earns the invested amount. Hence, if she observes an Unfavorable signal, she gains from deceiving the investor into thinking that the signal was Favorable.

In the LI condition, the consultant can only deceive by saying that the signal was Favorable. In the FI condition, the consultant can make a statement that suggests a Favorable signal but is literally also true for an Unfavorable signal. In the ND condition, the consultant can make a small investment, knowing that the investor observes this and draws conclusions.

In two studies, we find no significant differences between the three conditions, neither among consultants nor among investors. While equivalence in behavior does not logically imply normative equivalence, we nonetheless argue that this result is in line with ET and not with CV. Our justification for deriving normative conclusions.