

SPUDM

Subjective Probability, Utility & Decision Making

August 31 - September 4, 2025



SCUOLA
ALTI STUDI
LUCCA



Open Lab



Finanziato
dall'Unione europea
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Ministero
dell'Università
e della Ricerca



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DI RIPRESA E RESILIENZA

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Scientific committee



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Niccolò Toccafondi

IMT School for Advanced Studies Lucca

PRESIDENTIAL ADDRESS

Welcome from the President of the European Association for Decision Making

Dear Friends and Colleagues,

It is with great pleasure that I welcome you to the 2025 *Subjective Probability, Utility and Decision-Making (SPUDM)* meeting of the European Association for Decision Making (EADM).

SPUDM has long served as a forum for coming together to deepen our understanding of human judgment and decision making. Over a few days, every two years, in some beautiful part of Europe, we share cutting-edge research, challenge our thinking, foster interdisciplinary connections, and inspire new directions for theory and application. This year's meeting, which includes an impressive line-up of invited speakers, promises to continue that tradition. Whether your work is grounded in psychology, economics or some other discipline, and shaped by experimental, survey or other methods, SPUDM welcomes diverse perspectives that enrich the field.

We are especially grateful to the local organising committee for assembling a stimulating scientific programme. We are thrilled to be hosted by *IMT School for Advanced Studies* in Lucca—a School which is committed to interdisciplinarity and academic excellence, located in a beautiful city rich in history and culture. This provides the perfect backdrop for intellectually creative exchange, and affords one last 'break' before a new academic year awaits.

To our early career researchers and students: I encourage you to take full advantage of the opportunities to engage with the community, share your ideas, seek mentorship, and build collaborations. It is because of your vitality and your enthusiasm for discovery in our field that EADM and SPUDM thrive.

I thank you for your participation and support. I look forward to an exciting and rewarding meeting with you all.

Warm regards,

Mandeep K Dhami

President, European Association of Decision Making

KEYNOTE SPEAKERS



**Wim
De Neys**

Wim De Neys is a cognitive psychologist and Research Director at the French National Centre for Scientific Research (CNRS), affiliated with the LaPsyDÉ lab at the University of Paris-Sorbonne. His research investigates the mechanisms underlying reasoning, decision making, and intuition, with a particular emphasis on dual-process theories of thinking. He received his PhD in psychology from the University of Leuven and conducted postdoctoral research at the University of Toronto and the University of California, Santa Barbara. De Neys has published over 100 scientific papers focusing on advancing our understanding of dual-process models of human thought.

Fast and Slow thinking: Quo Vadis?

The two-headed, dual process view of human thinking has been very influential in the cognitive sciences. The core idea that thinking can be conceived as an interplay between a fast-intuitive and slower-deliberate process has inspired a wide range of psychologists, philosophers, and economists. However, despite the popularity of the dual process framework it faces multiple challenges. One key issue is that the precise interaction between intuitive and deliberate thought processes (or System 1 and 2, as they are often referred to) is not well understood. In my talk I will give an overview of recent advances and discuss broader implications for our view of human cognition and intelligence.



**Grace
Lordan**

Dr Grace Lordan is an LSE professor, global public speaker and thought leader. She is the Founding Director of The Inclusion Initiative and the creator of the MSc in Behavioural Science at the LSE. Grace is an expert on labour market skills, building productive organisations, inclusive leadership, women's progress in the workplace, the future of work and individual success.

Grace served as an expert advisor to the UK government sitting on their skills and productivity board. She currently leads the £2 million ESRC funded diversity and productivity from education to work (DAPEW) project. Her academic writings have been published in top international journals and she has written for the Financial Times, Fortune, Fast Company, MIT Sloan Management Review, Reuters and Harvard Business Review. Grace is a regular speaker, educator and advisor to blue chip finance and technology firms.

Think Big, Take Small Steps and Build the Future you Want, is her first book.

Dynamic Inclusion Negotiation: Bridging Formal Theory and Lived Experience?

I introduce a formal theoretical model of inclusion-related decisions that frames employees' responses to exclusion as strategic decisions in a repeated workplace game. In this model, individuals choose among four behaviors—Quiet, Dissent, Conform, and Quit—based on the expected utility of each action, with the payoff structure shaped by the level of leadership inclusivity. An inclusive leader alters these dynamics thereby shifting the organizational equilibrium from silence to voice.

Building on this model, a qualitative study of nearly 200 interviews provides empirical depth, revealing how these behaviors unfold as negotiated responses to marginalization. Participants described actively navigating inclusion through everyday choices: staying quiet to avoid backlash, dissenting to assert their perspectives, conforming to fit in, or ultimately quitting when other avenues failed. These narratives illuminate the psychological, social, and organizational tensions underpinning each response—speaking up can backfire, yet staying silent exacts its own costs. By synthesizing formal theory with rich lived experience, my findings portray inclusion as a dynamic, ongoing negotiation rather than a static state. The results underscore the transformative role of inclusive leadership in this process: leaders who foster psychological safety and truly hear diverse voices encourage a shift from passive silence to active voice. I will also demonstrate the link between organisational inclusion and macro level firm outcomes (stock returns and innovation).

Pietro Pietrini, MD, Ph.D., is Professor of Clinical Biochemistry and Molecular Biology. He graduated in Medicine and Surgery at the University of Pisa Medical School as an Intern Fellow of the Scuola Superiore Sant'Anna in Pisa, where he also obtained his Ph.D. in Neuroscience. He received his board-certification in Psychiatry from the University of Pisa Medical School. He worked for ten years at the National Institutes of Health (NIH) in Bethesda, Maryland on the in vivo study of the neural correlates of human cognition and behavior. Prof. Pietrini had been the Director (Rector) of IMT School for Advanced Studies in Lucca (Italy) from November 2015 to October 2021. He is currently the Coordinator of the Neuroscience, Psychology and Philosophy Multidisciplinary Area at the IMT School.

Prof. Pietrini's lab has developed an innovative research program by adopting a multidisciplinary and integrated approach which spans across



**Pietro
Pietrini**

neuroscience, psychiatry, molecular biology, genetics, social psychology, bio-engineering, philosophy, linguistics and ethics to understand human cognition and social behavior.

Prof. Pietrini has published over 250 papers in scientific journals, including Science, Nature, PNAS, JAMA Psychiatry and the American Journal of Psychiatry. His research has been featured on the cover of Science and other top magazines. Prof. Pietrini is the recipient of international awards for research in biological psychiatry and neuroscience. In 2015 he was bestowed the grade of Commander of the Order of Merit of the Italian Republic (Commendatore al Merito della Repubblica) because of his scientific achievements. In 2017 he was bestowed the Bronze Medal in Public Health by the Ministry of Health in Italy. He was nominated Honorary President for Science of the UNESCO Club in Lucca (Italy) for scientific merits. In 2024 he was conferred the grade of Grand Officer of the Order of Merit of the Italian Republic (Grande Ufficiale al Merito della Repubblica Italiana) for his scientific and academic achievements.

Are we really free?

Novel insights from behavioral neuroscience

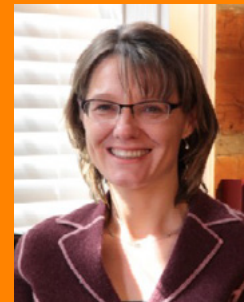
Pietro Pietrini, MD, Ph.D.

Director, Molecular Mind Lab, IMT School for Advanced Studies, Lucca, Italy

The factors that modulate human behavior have been a matter of consideration since the dawns of philosophical speculation. Indeed, over twenty-five hundred years ago, Plato concluded that *“No one is willingly evil, but one can become evil for a bad disposition in his body and for a training without a true education; this is hideous for everyone and happens against his will”* (Plato, Timaeus, 86e).

In the last few decades, the development of behavioral neuroscience has fostered the study of the biological and psychophysiological correlates that subtend the cognitive abilities required for decision-making processes, moral choices and social behavior. To what extent are we really free in our choices? Are we aware of the reasons and the motivations that underlie our acts and our decisions? To what extent can we control our impulses and do otherwise, as required by law in order for individuals to be considered responsible for their own's acts? Overruling previous views that favored an almost absolute dominance of rational control in human behavior, results from recent research are unveiling the limitations and the pitfalls of human decision-making processes and behavior, with crucial implications for the understanding of human interactions at economic, financial and social levels as well as for the assessment of responsibility in the Court.

Dr. Maggie Toplak is a Professor in the Clinical-Developmental Area of the Department of Psychology at York University. The focus of her research is on judgment, decision-making and rational thinking, including their associations with individual differences in cognitive abilities. Her research has been informed by using participants across the lifespan (including children, youth and adults) and with special populations (including youth with ADHD). Her most recent book *Cognitive sophistication and the development of judgment and decision-making* integrates her research from a 9-year longitudinal study on the developmental trajectories of these competencies. Her research has been funded by the Social Sciences and Humanities Research Council (SSHRC) and the Canadian Institutes for Health Research (CIHR). She is also a clinical psychologist registered with the College of Psychologists and Behaviour Analysts of Ontario (CPBAO).



**Maggie
E. Toplak**

Measuring Rational Thinking in Development

Fostering competent decision-making is arguably one of the most important goals or outcomes we have for our children and youth. This talk will provide an overview of my research on the development of rational thinking in children and youth. Establishing stimulus equivalence of rational thinking tasks and using cognitive sophistication as a tool to operationalize rational thinking in development were key strategies in this program of research. Findings from a 9-year longitudinal study spanning the ages of 8 to 20 years of age will be discussed, including longitudinal and cross-sectional analyses. Base rate sensitivity, attribute framing and prudent temporal discounting were examined as direct measures of rational thinking, and several indirect measures of rational thinking, including ratio bias, belief bias syllogisms and a problem-solving task. Age differences, individual difference predictors (cognitive abilities and thinking dispositions), task factors and how developmental patterns complement data patterns that have been conducted in adult samples will be reported. This research program contributed to the development of the Assessment of Rational Thinking in Youth (ART-Y) for adolescents.

ABOUT LUCCA

Lucca is a lovely historical town located in Tuscany (Italy) close to Florence and Pisa, easily reachable by plane from both cities.

Surrounded by its ancient city walls, Lucca is the perfect place to savour the taste of true Italian Renaissance.

Run or Walk on Lucca's Iconic Walls

Experience the charm of Lucca by running or strolling along its Renaissance walls while enjoying breathtaking views of the city and beyond. Feeling social? Join the free **Parkrun** every Saturday morning!

Dive into History and Culture

Visit the **Puccini Museum**, step back in time at the **Domus Romana**, or explore the rich collection at the **National Museum of Villa Guinigi**.

Stroll and Shop on Via Fillungo

Take a leisurely walk down Lucca's main shopping street, filled with charming boutiques, local stores, and delicious gelato spots.



Discover Iconic Piazzas

Don't miss **San Michele Square**, the grand **Napoleone Square**, and the one-of-a-kind oval **Anfiteatro Square** - each with its own unique character and history.

Explore Lucca's Churches

Step into the history and artistry of **San Martino Cathedral**, **San Michele Church**, and the stunning **Basilica of San Frediano**.

Climb the Towers

Get a bird's-eye view of Lucca by climbing the **Guinigi Tower**, crowned with its famous oak trees, or the **Torre delle Ore**, the city's historic clock tower.

Try the Italian Aperitivo

Relax with a classic Italian aperitivo in **San Francesco Square** or at one of the charming spots near the intersection of **Michele Rosi Street** and **Zecca Street**, both close to IMT.

Go on a Rafting Adventure

Book a rafting trip on the **Serchio River**, just a short distance from Lucca.

Savor Tuscan Wines in the Countryside

Treat yourself to a wine-tasting experience in the picturesque Tuscan countryside, where you can sip some of the region's world-famous wines.



HOW TO REACH US

Lucca is at the heart of Tuscany and is often chosen by tourists as a starting point for exploring the nearby cities of Pisa, Florence, Siena. It is easily and cheaply accessible: the fact that the historical centre is near the station and the motorway exit makes it easy to access the city. Given the presence of many pedestrian areas, it is easy to explore the city on foot or by bicycle.

Lucca welcomes hundreds of thousands of visitors per year who reach the city by airplane, train, bus, car. The Galileo Galilei International Airport in Pisa (PSA) and the Leonardo Da Vinci International Airport in Florence (FLR) are a convenient gateway to and from the rest of the world, due to the many European and intercontinental flights based there; transportation between the Pisa airport and downtown Lucca is very convenient (about 40 minutes by bus or train).

Several low-cost flights are based at the airport of Pisa, with cheap daily connections to/from Roma, Paris, London, Madrid, Brussels, Berlin, Dublin, Stockholm, Barcelona, Munich, Frankfurt, to name just a few. PSA is one of the main Italian RyanAir hubs, and other low-cost European airlines (e.g., EasyJet, Transavia) have PSA as one of their destinations; PSA has direct flights also from New York, Moscow, and Doha.

The Florence airport is just 90 mins from Lucca by bus or train (40 mins by car) and hosts flights connecting the most important European cities.

In addition, highways connect Lucca to Florence, Pisa, and Genoa, making the city easily reachable also by car.



Download the map:

[Map of Lucca](#)

[Map of Lucca surroundings](#)

Courtesy of the
[Lucca Tourist Office](#)

How to get to Lucca

BY CAR



Lucca is situated on the highway line that connects Florence to Pisa and Versilia, called “Autostrada A11 Firenze-Mare”. If you find yourself at Florence or Pisa airport, please follow A11 directions.

The nearest highway exit to the IMT Campus is Lucca-Est. You can leave your car at the Mazzini underground parking (Via dei Bacchettoni) that is next to the Campus and reachable from Porta Elisa.

BY TRAIN



The Lucca Train Station is located in Piazzale Ricasoli, near Porta San Pietro.

It is directly connected to the main Tuscan provinces and tourist locations such as Pisa, Viareggio, Montecatini, Pistoia and Florence. San Francesco Complex is easily reachable by foot from the Train Station.

You can check connections and timetables on the [Trenitalia website](#).

BY PLANE



FROM PISA

The nearest airport to Lucca is the [Galileo Galilei International Airport of Pisa](#).

The [CoTaPi taxi company](#) is available at Pisa Airport. A taxi from Pisa Airport to Lucca center could cost around € 50.00 and would take about 30 minutes.

Pisa Airport – Pisa Centrale Railway Station: transfer is provided by the Pisa Mover Train service with a timetable departure of every 10 minutes and a journey time of 5/8 minutes. At the Airport, the stop is located just outside the check-in area. At the Pisa Centrale Railway Station, the stop is located close to platform 14, from which you can easily reach the other platforms and station’s main entrance. The ticket cost is around € 6.50.

Trains to Lucca depart from Pisa Centrale Railway Station. Details are available on the [Trenitalia website](#) or via [Google Transit](#). Direct trains are Regional trains, the journey is a little over 30 minutes and the ticket costs € 3.90. It is not possible to purchase Regional tickets more than 7 days in advance of the day of travel. Trains are less frequent on the weekend.

Bus travel from Pisa to Lucca is provided by Autolinee Toscane, connections and timetables available on the [website](#).

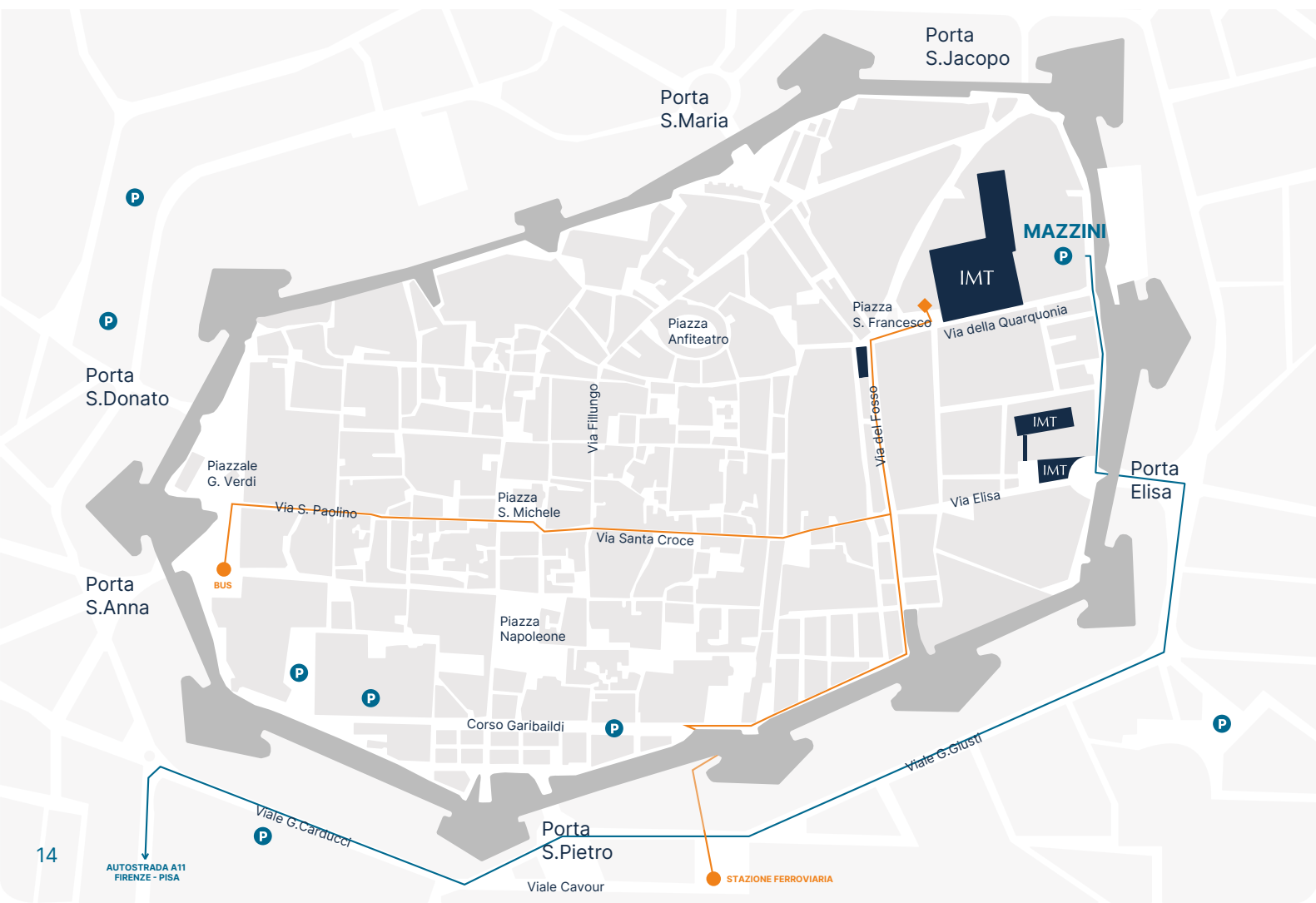
FROM FLORENCE

The School can also be easily reached from the [Amerigo Vespucci International Airport of Florence](#).

The easiest way to reach IMT from the Florence Airport is by **taxi**. You can catch a taxi from just outside the airport for an approximate cost of € 100.

Alternatively, [Autolinee Toscane](#) - Linee Regionali operates a bus from **Firenze T2 Guidoni P2** to **Lucca Carducci 4** every 3 hours. Tickets cost €8.40 and the journey takes 55 min. Also, [Trenitalia](#) operates a train from Firenze S.M.N. to Lucca hourly. Tickets cost €8.40 and the journey takes 1h 20m.

— by car — by foot P Parking ◆ Chiesa di S. Francesco



CONFERENCE VENUE

The conference will take place at the San Francesco Campus and its immediate surroundings. Plenary sessions will be held in the San Francesco Church, while parallel sessions—both regular and flash talks—will take place in various rooms across the San Francesco and San Micheletto complexes. Poster sessions will be hosted exclusively in the San Francesco complex.

The San Francesco and San Micheletto complexes are located just 300 meters apart. Lunches and coffee breaks will be provided at both locations on all days except the last, when the coffee break will be held only in the San Francesco complex. All events, including cocktails and the social dinner, will be hosted in the San Francesco complex.

SAN FRANCESCO COMPLEX

Piazza San Francesco, 19
55100 Lucca

Meeting rooms:

- San Francesco Church
- Guinigi Chapel
- Cloisters
(poster session, secretariat desk,
catering services)
- Aula 1
- Aula 2
- Canova
(Social events and catering services)

SAN MICHELETTO COMPLEX

Via San Micheletto, 3
55100 Lucca

Meeting rooms:

- Convegni Room
- Affreschi Room
- Cloisters (coffee break service)



IMT Campus

Piazza San Francesco, 19

- San Francesco Church
- Guinigi Chapel
- Aula 1
- Aula 2
- Canova

San Michele Campus

Via San Michele, 3

- Convegni Room
- Affreschi Room



IMPORTANT INFO

Presentations Guidelines

- Flash Talks are limited to 8 minutes, including questions
- Regular Talks are limited to 15 minutes, including questions

In each session, the **last speaker will serve as the session moderator**, responsible for keeping track of time and ensuring that the schedule is followed.

All speakers are kindly asked to bring their presentation slides on a **USB flash drive** and to **arrive at least 10 minutes before the start of their session**, so that technicians can upload the slides to the conference room computer in a timely manner.

Poster Sessions

Posters must be prepared in A0 size: 84.1 cm (width) × 118.9 cm (height) or 33.1 × 46.8 inches, in portrait (vertical) orientation.

Poster presenters are responsible for **mounting** their posters in the designated area, according to the assigned numbering, **in the morning of their scheduled Poster Session**, and for **removing them at the end of the afternoon on the same day**.

Conference staff will be available in the poster area to assist and to provide the necessary materials for mounting.

Presenters or their co-authors are expected to be present at their posters for the entire duration of the session (during lunch-break), in order to engage with attendees and discuss their work.

Poster Awards

A Best Poster Prize will be awarded for each day of the conference.

Winners will be selected by participant vote — each registered attendee will have the opportunity to vote for their favorite poster of the day. The poster receiving the highest number of votes will be awarded the daily prize.

All winners will be announced on September 3rd, during the Award Ceremony.

Certificate of Attendance

A certificate of attendance will be issued and delivered to participants at the Secretariat Desk upon request.

Venue Information

All rooms, spaces, and events of the SPUDM conference will be clearly marked with signs and directional arrows to help participants navigate the venue, which includes IMT School locations San Francesco and San Michele.

Local staff will be available on site to assist with any questions or additional information you may need.

THE ORGANIZING SECRETARIAT DESK

The Organizing Secretariat Desk will be placed in the area next to Guinigi Chapel in the San Francesco Campus.

[IMT School for Advanced Studies Lucca](#) - Piazza S. Francesco, 19 - 55100 Lucca

Secretariat desk opening hours

Sunday August 31st, 2025
14.00 – 18.00

Monday September 1st, 2025
08.00 – 18.00

Tuesday September 2nd, 2025
08.30 – 18.00

Wednesday September 3rd, 2025
08.30 – 18.30

Thursday September 4th, 2025
09.00 – 13.00

The Organizing Secretariat contact



Kardo srl

Via Lucca, 44, 50142 Florence – Italy

Anna Gnozzi & Elena Mani

Mobile: +39 348 3969840

Email: SPUDMconference2025@kardo.it

SOCIAL EVENTS SCHEDULE

SUN - August 31st, 2025
at 18.30

Traditional
Flag-Throwing Show
San Francesco Complex
For all registered attendees

at 19.00

Welcome reception
Canova room
San Francesco Complex
Standing reception for all
registered attendees

MON - September 1st, 2025
at 19.00

Early career event
Canova room
San Francesco Complex
Preregistered participants
only standing cocktail

TUE - September 2nd, 2025
at 19.30

Social Event
Canova room
San Francesco Complex
Standing buffet dinner
with music and dancing for
all registered attendees

CODE OF CONDUCT

The European Association for Decision Making (EADM) is committed to **diversity, equity, the professional exchange of ideas, and respectful treatment of all members**.

We will not tolerate discrimination or harassment of any type, including that based on gender, gender identity, gender expression, race, ethnicity, national origin, religion, citizenship status, age, sexual orientation, disability, or their intersection.

During EADM-sponsored events, members are reminded that they are **prohibited** from:

- Intimidating, harassing, abusing, demeaning, or bullying speech or actions
- Persistent and unwelcome solicitation of emotional or physical intimacy, including but not limited to that which is accompanied by real or implied threat of personal harm
- Physical assault, including unwelcome touching or groping
- Retaliation against an individual for reporting behavior that contravenes EADM's Code of Conduct.

Each EADM-sponsored event will have a **personal consultant** appointed by the event organizer whose role will be to treat all cases of code of conduct violations or concerns regarding harassment absolutely confidentially.

At SPUDM 2025 the personal consultant is **Mrs. Francesca Pidone**, which can be contacted:

- by email at: consiglieradifiducia@imtlucca.it
- by phone at: +39 0583 4326581
- at the School in Piazza San Ponziano no.6

Moreover, the Confidential Counsellor is available by appointment at the office or remotely, to be scheduled by email or phone.

Concerns can also be directed towards the EADM's Executive Committee (whose names appear in <https://eadm.eu/executive-board/>).

Note that reports can be made anonymously. If there is immediate danger, individuals should contact local emergency services.

For more information about EADM code of conduct, please see here:

<https://eadm.eu/who-are-we/code-of-conduct/>

PROGRAM AT GLANCE

Sunday 31 August	Monday 1 September	Tuesday 2 September	Wednesday 3 September	Thursday 4 September
	9:00 - 10:15 Parallel Session 1	9:00 - 10:15 Parallel Session 1	9:00 - 10:15 Parallel Session 1	9:00 - 10:00 Symposia
	10:15 - 10:45 Coffee break San Francesco Complex & San Micheletto Complex	10:15 - 10:45 Coffee break San Francesco Complex & San Micheletto Complex	10:15 - 10:45 Coffee break San Francesco Complex & San Micheletto Complex	10:00-11:00 Symposia
	10:45 - 12:00 Parallel Session 2	10:45 - 12:00 Parallel Session 2	10:45 - 12:00 Parallel Session 2	11:00 - 11:30 Coffee Break San Francesco Complex
	12:00 - 13:00 Poster Session & Lunch San Francesco Complex	12:00 - 13:00 Poster Session & Lunch San Francesco Complex	12:00 - 13:00 Poster Session & Lunch San Francesco Complex	11:30 - 12:50 Keynote Speech Prof. M. Toplak York University San Francesco Church
	13:00 - 14:15 Parallel Session 3	13:00 - 14:15 Parallel Session 3	13:00 - 14:15 Parallel Session 3	12:50 Farewell and concluding remarks San Francesco Church
	14:15 - 14:40 Coffee break San Francesco Complex & San Micheletto Complex	14:15 - 14:40 Coffee break San Francesco Complex & San Micheletto Complex	14:15 - 14:40 Coffee break San Francesco Complex & San Micheletto Complex	
15:00 - 16:00 Welcome and Presidential Address San Francesco Church	14:40 - 16:00 Keynote Speech Prof. W. De Neys Université de Paris - Sorbonne San Francesco Church	14:40 - 16:00 Keynote Speech Prof. G. Lordan The London School of Economics San Francesco Church	14:40 - 16:00 Flash Talks	
16:00 - 17:00 Keynote Speech Prof. P. Pietrini IMT Lucca San Francesco Church	16:00 - 17:00 Parallel Session 4	16:00 - 17:00 Parallel Session 4	16:00 - 17:00 Parallel Session 4	
17:00 - 18:00 Lifetime award San Francesco Church	17:00 Early career symposium San Francesco Complex	17:00 EADM general Assembly San Francesco Church	17:00 - 18:30 Awards San Francesco Church	
18:30 Welcome reception San Francesco Complex	19.00 Early Career Event San Francesco Complex	19.30 Social event San Francesco Complex		

SESSION SCHEDULE

Regular Talks Schedule

Regular presentations				
1-Sep	1 Sept h. 9.00	1 Sept h. 10.45	1 Sept h. 13.00	1 Sept h. 16.00
San Michele Convegno	Financial Decision Making 1	Decision Processes - Broader Perspectives 1	Ethical Decision Making	Advice taking 1
San Michele Affresco	Prosocial Behavior 1	Risk Communication & Risky Choices	Risky choice 2	Conflict
Guinigi SF	Decision Processes 1	Heuristics & Biases 1	Decision from Experience 1	Heuristics & Biases 2
Aula 1 & Aula 2 SF	Artificial Intelligence 1	Misinformation & polarization 1	Mode of Cognition	Consumer Decision Making 1
San Francesco Church	Intertemporal Choices	Team decision making	Norms & Compliance	Social Evaluation 1
2-Sep	2 Sept h. 9.00	2 Sept h. 10.45	2 Sept h. 13.00	2 Sept h. 16.00
San Michele Convegno	Artificial Intelligence 2	Decision Processes - Broader Perspectives 2	Predicting & Forecasting	Advice taking 2
San Michele Affresco	Prosocial Behavior 2	Risky choice 3	Risky choice 4	Choice Modelling
Guinigi SF	Decision Processes 2	Heuristics & Biases 3	Decision from Experience 2	Heuristics & Biases 4
Aula 1 & Aula 2 SF	Financial Decision Making 2	Misinformation & polarization 2	Consumer Decision Making 2	Climate Change
San Francesco Church	Sustainability	Strategic Sophistication	Gender	Social Evaluation 2
3-Sep	3 Sept h. 9.00	3 Sept h. 10.45	3 Sept h. 13.00	3 Sept h. 16.00
San Michele Convegno	Artificial Intelligence 3	Decision Processes 3	Dishonesty	Communication
San Michele Affresco	Prosocial Behavior 3	Risky choice 5	Decision Processes 4	Misinformation & polarization 3
Guinigi SF	Loss Aversion	Beliefs	Inequality	Decision from Experience 3
Aula 1 & Aula 2 SF	Consumer Decision Making 3	Behavior change	Ambiguity	Choice Modelling
San Francesco Church	Trust	Attention	Motivated Reasoning	Nudge

Flash Talks Schedule

Flash talks	3 Sept h. 14.40
San Micheleletto Convegni	Decision making
San Micheleletto Affresco	Prosociality and emotions
Guinigi SF	Technologies & Information + Finance, Accounting, & Management
Aula 1 SF	Consumer Decision Making & Sustainability
San Francesco Church	Choice Modelling & Theory
Aula 2 SF	Heuristics & Biases

Symposia Schedule

Symposia	4 Sept h.9.00	4 Sept h. 10.00
San Micheleletto Convegni	Communicating Climate Change Risks and Uncertainties: Interdisciplinary Perspectives	Impact driven research for climate adaptation
San Micheleletto Affresco	Language and Decision-Making: Insights from behavioral economics, computational linguistics, and artificial intelligence	Crowdsourcing Interventions in Behavioral Science Megastudies: Addressing Unethical Behavior and Redistributive Preferences
Guinigi SF	Contrasting approaches to the adoption of AI advice in decision-making teams.	Large language models in judgment and decision-making research
Aula 1 SF	Advances in Assessment of Human Forecasting	Sampling accounts of judgment and decision-making: The broad relevance of cognitive-ecological theories
San Francesco Church	Bayesian Inference and the Cognitive Revolution in Economics	Decision Science in the Wild
Aula 2 SF	Judgment & Hybrid Decision-Making: Human-AI delegation, oversight, and punishment	

Poster sessions

Day	Author	Title
1-Sep	Agata Sobkow	Replication in Judgment and Decision Making (JDM): A Review of 100+ Studies
2-Sep	Alessandra Carella	BEHIND THE SEAMS: PREDICTORS OF SUSTAINABLE FASHION CONSUMPTION AMONG ITALIAN CONSUMERS
3-Sep	Alexandra Ortmann	
1-Sep	Andrew M Camara	Control Mediates the Effect of Cash-out Availability on Increased Bet Size
2-Sep	Angelica Mori	Entrepreneurship and Compassion Training in Italian Prisons: An Experimental Model for Inclusive Rehabilitation and Reintegration
3-Sep	Antti-Eero Lattula	
1-Sep	Arianna Buratto	Encouraging sustainable food consumption through nudges: An experiment with menu labels
2-Sep	Aviel Ratson	Rare Breakthroughs in Collective Innovation: Investment in Public Goods With Rare Events
3-Sep	Axel Perini	Quantum Cognition and Judgment Consistency: An Investigation of the Zeno Effect
2-Sep	Davide Faipò	Self-Reported Uncertainty in the Sampling Process of Decision from Experience Tasks
2-Sep	Douglas Lee	A Supply and Demand Approach to Information Processing in Decision-Making
1-Sep	Douglas Lee	Neural Adaptations In Multi-alternative Perceptual Decisions
2-Sep	Elaine Strittmatter	
3-Sep	Eldad Tal-Shir	Designing behavioral interventions with explainable AI
1-Sep	Emmanouil Konstantinidis	Learning, Experience, and Adaptation to Change
1-Sep	Eva Janssen	
2-Sep	Filip Tiljak	Can contributions to public goods be contagious? Tipping points in social decision-making
1-Sep	Franciszek Ostaszewski	Well-being perspective in discounting tasks
2-Sep	Fujii Yoichiro	
3-Sep	Giorgio Gronchi	
1-Sep	Giulia Priolo	CONSUMERS' INFORMATION NEEDS FOR SUSTAINABLE FOOD CHOICES
2-Sep	Hannah Pongratz	Response times in intertemporal choice Meta-dataset and meta-study
3-Sep	Irina Heimbach	DO AI LITERACY AND AESTHETIC FLEUNCY HELP RECOGNIZING AI-GENERATED IMAGES AND ARTWORK
1-Sep	Jakub Cacek	The second time is the charm? Only the second change of task structure prompts participants to abandon maladaptive choice strategy
2-Sep	Jakub Krawiec	The Synergistic Effect of Nudge and Boost Interventions on Savings Behavior
3-Sep	John Gubernath	
1-Sep	Katarzyna Idzikowska	The relationship between maximization, indecisiveness and context effects in choice
2-Sep	Katarzyna Sekścińska	Saving for Tomorrow: The Impact of Time Perspectives on Retirement Planning
3-Sep	Keita Kawasugi	The Relationship Between Attitudes and Behavior Under Uncertainty: Evidence from a Capsule Toy Task
2-Sep	Lijun (Shirley) Zhang	The Charity Capacity Curse
3-Sep	Lishi Tan	
2-Sep	Luisa Schulz	Cue integration in metacognitive control decisions
3-Sep	Lukas Bantle	Disentangling Ellsberg - What drives Ambiguity Attitudes?
1-Sep	Marcin Terlecki	Chart Design and Decision Quality: How Visual Manipulations Shape Judgments
3-Sep	Marta Mangiarulo	Fairness Outweighs Perceived Status in Ultimatum Game Decisions
1-Sep	Meylisa Sari	
2-Sep	Milica Vdovic	Moral reasoning about real world issue - disparities between online and offline moral judgments in Luigi Mangione case
3-Sep	Moral Fridberg	Advice taking as a social token: The effect of advisor prosociality and reciprocity motivation on advice taking
1-Sep	Oscar Bauer	Similarities and differences when humans and GPT evaluate warmth and competence of moral decision makers
2-Sep	Panagiota Tsilogianni	A cross-country examination of responses to inequality
3-Sep	Petra Filkukova	
1-Sep	Philip Millroth	Predicting Risky Choices from Physiological Arousal Responses
2-Sep	Rafał Muda	Using a foreign language increases risk-taking in prenatal testing decisions but not due to attenuated emotional responses
1-Sep	Riccardo Agnelli	Can ChatGPT Improve Financial Literacy? An Empirical Investigation
3-Sep	Ritta Issa	The Warm Glow of Giving: Affective Forecasting and Scope Sensitivity of Warm Glow - Comparisons Between Joint and Separate Evaluations
3-Sep	Sandra Andraszewicz	What makes decision-making complex? - A literature-based conceptual framework of complexity in decision-making
2-Sep	Sara Floriana Zanini	Pre-paid utilities: how virtual stocks affect network services consumption.
2-Sep	Sarah Forst	Deciding fast and slow: A model-based analysis of intuitive and deliberate decisions
1-Sep	Sebastian Horn	Loss Aversion Across Age and Stakes: Findings from Rural India
2-Sep	Selina Zajdler	Disentangling Familiarity and Recollection in the Truth Effect: A Bayesian Hierarchical Process Dissociation Approach
3-Sep	Silvia Tedeschi	Managing Complexity in New Product Development: A Framework for Assessing and Mitigating Over Featuring
1-Sep	Takashi Ideno	Relationship between decision-making style and evaluations of time spent alone: Using an online survey
2-Sep	Tim Rakow	How (well) do those who research risk and uncertainty acknowledge uncertainty or imprecision for the effects they research?
3-Sep	Wai Lam Leung	
1-Sep	Wojciech Białaszek	Temporal Distance Diminishes Task Difficulty Impact But Not Appeal in Intertemporal Scheduling Choices
2-Sep	Yarom Sagiv	Does similarity-based customization of algorithmic advice increase advice taking?
1-Sep	Yoichiro Fujii	Multi-period Regret Theory and Threshold Analysis
3-Sep	Yuki Tamari	A Kappa-Based Analysis of Decision Strategy Classification: Examining Accuracy Ratios and Elementary Information Processing
1-Sep	Zaiyao Zhang	
3-Sep	Zepeng Sun	How descriptions moderate memory biases in experience-based risky choice

Early Career Symposium – Walk & Talk Sessions

MONDAY, SEPTEMBER 1

17:15 – 19:30

This year's Early Career Symposium offers a dynamic "Walk & Talk" format. Participants will join one of six small discussion groups, each led by an experienced researcher, to explore a topic central to early-career development - while enjoying a stroll along Lucca's historic city walls.

Each group will depart from IMT, take a short walk, and pause at a scenic viewpoint for an in-depth conversation. Topics include:

- Publishing – Prof. Valerio Capraro
- Software for Experiment Programming – Dr. Shane Timmons
- Quantitative Data Analysis – Dr. Dirk Wulff
- Open Science Practices – Dr. phil. Nora Hangel
- Networking – Prof. Wändi Bruine de Bruin
- Grants and Funding – Prof. Tomáš Jagelka

Group sizes are limited and advance registration is required. The evening concludes with informal drinks on the IMT cloisters at 19:30, offering an opportunity to continue discussions and build connections.

DAY-BY-DAY SCHEDULE

SUNDAY 31 AUGUST 2025

15:00 - 16:00

Welcome and Presidential Address

San Francesco Church

16:00 - 17:00

Keynote Speech

Prof. P. Pietrini IMT Lucca

San Francesco Church

17:00 - 18:00

Lifetime award

San Francesco Church

18:30

Welcome reception

San Francesco Complex

September 1st

DAY OVERVIEW

Monday 1 sept				
9: 00 - 10:15 Parallel Session 1				
Artificial Intelligence 1 San Micheletto Convegni	Prosocial Behavior 1 San Micheletto Affresco	Decision Processes 1 Guinigi SF	Financial Decision Making 1 Aula 1 & Aula 2 SF	Intertemporal Choices San Francesco Church
10:15 - 10:45 coffee break San Francesco Complex & San Micheletto Complex				
10:45 - 12:00 Parallel Session 2				
Decision Processes - Broader Perspectives 1 San Micheletto Convegni	Risk Communication & Risky Choices San Micheletto Affresco	Heuristics & Biases 1 Guinigi SF	Misinformation & polarization 1 Aula 1 & Aula 2 SF	Team decision making San Francesco Church
12:00 - 13:00 Poster Session & Lunch San Francesco Complex				
13:00 - 14:15 Parallel Session 3				
Ethical Decision Making San Micheletto Convegni	Risky choice 2 San Micheletto Affresco	Decision from Experience 1 Guinigi SF	Mode of Cognition Aula 1 & Aula 2 SF	Norms & Compliance San Francesco Church
14:15 - 14:40 Coffeee Break San Francesco Complex & San Micheletto Complex				
14:40 - 16:00 Keynote Speech Prof. W. De Neys Université de Paris - Sorbonne San Francesco Church				
16:00 - 17:00 Parallel Session 4				
Advice taking 1 San Micheletto Convegni	Conflict San Micheletto Affresco	Heuristics & Biases 2 Guinigi SF	Consumer Decision Making 1 Aula 1 & Aula 2 SF	Social Evaluation 1 San Francesco Church
17:00 early carreer symposium San Francesco Complex				
19.00 Early Carreer Event San Francesco Complex				

POSTER SESSION

Day	Author	Title
1-Sep	Agata Sobkow	Replication in Judgment and Decision Making (JDM): A Review of 100+ Studies
1-Sep	Andrew M Camara	Control Mediates the Effect of Cash-out Availability on Increased Bet Size
1-Sep	Arianna Buratto	Encouraging sustainable food consumption through nudges: An experiment with menu labels
1-Sep	Douglas Lee	Neural Adaptations In Multi-alternative Perceptual Decisions
1-Sep	Emmanouil Konstantinidis	Learning, Experience, and Adaptation to Change
1-Sep	Eva Janssen	
1-Sep	Franciszek Ostaszewski	Well-being perspective in discounting tasks
1-Sep	Giulia Priolo	CONSUMERS' INFORMATION NEEDS FOR SUSTAINABLE FOOD CHOICES
1-Sep	Jakub Cacek	The second time is the charm? Only the second change of task structure prompts participants to abandon maladaptive choice strategy
1-Sep	Katarzyna Idzikowska	The relationship between maximization, indecisiveness and context effects in choice
1-Sep	Marcin Terlecki	Chart Design and Decision Quality: How Visual Manipulations Shape Judgments
1-Sep	Meylisa Sari	
1-Sep	Oscar Bauer	Similarities and differences when humans and GPT evaluate warmth and competence of moral decision makers
1-Sep	Philip Millroth	Predicting Risky Choices from Physiological Arousal Responses
1-Sep	Riccardo Agnelli	Can ChatGPT Improve Financial Literacy? An Empirical Investigation
1-Sep	Sebastian Horn	Loss Aversion Across Age and Stakes: Findings from Rural India
1-Sep	Takashi Ideno	Relationship between decision-making style and evaluations of time spent alone: Using an online survey

Session Breakdown

1-Sep	1 Sept h. 9.00	1 Sept h. 10.45	1 Sept h. 13.00	1 Sept h. 16.00
San Micheletto Convegna	Financial Decision Making 1	Decision Processes - Broader Perspectives 1	Ethical Decision Making	Advice taking 1
	Leonore Riitsalu Security, assets and male gender – the keys to higher subjective financial well-being. Evidence from bank data	Alina Tran On the Economics of Information Search: Does Incentive Structure Matters?	Daniel Read The Menu of Deception and Joint versus Separate evaluation	Johanna M. Höhs Reality Monitoring in Advice Taking: The Role of Source Memory and Source Guessing in Advice Taking
	Martina Vacondio Lay people rely more than experts on emotions, past performance, and fund type in judgments and willingness to sell financial assets.	Elif Tosun Putting negotiation in context: The US vs Japan	Eric Feddeck Valuing, Fast and Slow	Olga Kostopoulou Modeling advice taking as a 2-step process to predict when physicians are likely to follow an algorithm
	Pantoja Maué Using LLMs to identify psychological mechanisms underlying financial decision making	Olivia Fischer The language of decisions: Uncovering linguistic markers of psychological mechanisms in decision making	Sarah Vahed Diverging Fairness Motives in Allocation Decisions Reveal How Merit and Structural Inequality Shape Distributive Justice	Or Drath The Human in the Loop: Incentive Structures and Evaluation in AI-Augmented Decision-Making
	Sebastian Hellmann Testing the drift diffusion model as a model for risky choice	Rian Gross Using a decision support tool to reduce inappropriate antibiotic use after a delayed prescription	Štěpán Bahník Understanding Appointment Decisions: Do Material Interests Trump the Ethical Imperatives?	Ori Plonsky Learning to be algorithm averse: People follow advisors that align with their biases
	Sonsino Doron The Dunning-Kruger Effect in Return Forecasting		Niccolò Toccafondi The Impact of Real-Time Congestion Information on ER Overcrowding: A Theoretical and Experimental Study	

1-Sep	1 Sept h. 9.00	1 Sept h. 10.45	1 Sept h. 13.00	1 Sept h. 16.00
San Micheletto Affresco	Prosocial Behavior 1	Risk Communication & Risky Choices	Risky choice 2	Conflict
	Andreas Glöckner Modeling Social Preferences in Cross-National Interactions	Irina Cojuharenco Narratives versus statistics in cybersecurity risk communication: Differential effects on creative input and resource transfer help	Eden Heilprin The Description-Experience Gap, and the Conditions that Trigger Overweighting and Underweighting of Rare Outcomes	Aljaz Ule Local Competition Favors Spite in Indirect Reciprocal Interactions
	Martijn van den Assem Impact or Responsibility? Giving Behavior in a Televised Natural Experiment	Jeremy Strueder Pre-Decisional Distortion of Risk Information Seen in Icon Arrays	Elisa Tedaldi Sun vs. Atom: what moderates risk perception and willingness to invest in solar farms vs. nuclear power plants?	Dorothee Mischkowski From coordination to cooperation: Previous coordination behavior facilitates subsequent cooperation
	Shahar Ayal Altruistic cheating's spillover effect: How helping others can lead to self-serving unethical acts	Maria Stocco Risk Perception of Air Pollution and Policy Acceptance: An Exploratory Study on a Representative Italian Sample	Maohua Nie Analyzing the Impact of Choice Complexity on Risky Choices	Pablo Marcos-Prieto Is hostile behavior intuitive? A Hawk-Dove experiment with a varying harshness of conflict
	Tom Gordon-Hecker When impact is easily evaluable, thinking of what really matters can save lives	Barb Mellers A Reference-Point Theory of Reflection Effects	Sebastian Olschewski Being Risk Averse and Risk Seeking at the Same Time: An Apparent Preference Reversal in Valuations and Decisions from Experience	Yosuke Hashidate Statistical Discrimination and Model Misspecification
	Vanessa Clemens Beyond Ingroup Favoritism: Investigating Cross-national Social Preferences Across 25 Nations	Sandeep Mishra The Uncertainty-Risk Paradox: Fear of the Unknown Drives Both Caution and Risk-Seeking	Zhixing Liu Improving the Efficiency of Eliciting Subjective Probabilities From Ratio Judgements	

1-Sep	1 Sept h. 9.00	1 Sept h. 10.45	1 Sept h. 13.00	1 Sept h. 16.00
Guinigi SF	Decision Processes 1	Heuristics & Biases 1	Decision from Experience 1	Heuristics & Biases 2
	Disentangling Attraction Search vs. Confirmatory Search Behavior in the stepwise-evolution of preference paradigm Carolin Häffner	Clarifying the notion of rationality in JDM research Fiedler, Klaus	Decisions based on a description of the experience of others Adi Tarabeih	"Stop the Count!" - Cumulative Redundancy Fosters Beliefs in Election Fraud André Vaz
	Stability and Change of Dispositional Greed during the Lifespan: an 11-year Longitudinal Study Joshua Weller	Cumulative Redundancy in Financial Decisions Hans Alves	On the interplay of ecological and cognitive search: Do people search adaptively in decisions from experience? Linus Hof	Explaining the 1-in-X format effect Lucia Savadori
	Challenging Overconfidence: Cognitive and Social Determinants of When People Call Out Excessive Confidence in Others Peter Wallmueller	How to improve the accuracy of climate mitigation potential judgments? From barriers to solutions Mario Herberz	The Persistence of Preference under Risk : Memory-Based Choice from Experience Xiaomu Guo	Why are aircraft accidents more likely when the captain rather than the co-pilot is at the controls? A test of two psychological theories Peter Ayton
	Categorical Updating in a Bayesian Propensity Problem Stephen Dewitt	Is the Hot Hand Really a Fallacy? Evidence of Rational Belief Updating from Elite Sport Scott Dickinson	Using ecological momentary assessments and large language models to study social factors in real-life decision making Aaron B. Lob	
	Adaptive Decision Making in the Wild: A Case Study of Chess Supratik Mondal	Heuristic Play Through Equilibrium-Consistent Feedback Sibilla Di Guida	"Superstition" in the Human: How Regression Toward the Mean Influences Support for Punitive Policies Noa Palmon	

1-Sep	1 Sept h. 9.00	1 Sept h. 10.45	1 Sept h. 13.00	1 Sept h. 16.00
Aula 1 & Aula 2 SF	Artificial Intelligence 1	Misinformation & polarization 1	Mode of Cognition	Consumer Decision Making 1
	Delegation of decision-making to AI agents in social dilemma games Ines Terrucha	Empathetic refutation tailored to underlying beliefs improves voting intentions and attitudes to gender quotas Dawn Holford	Insight problem solving: The interpretative function and the emergence of unconscious analytic thought Laura Macchi	Lack of Autonomy and Spontaneous Recovery from Hedonic Decline Jing Hu
	People are surprisingly cooperative with large language models, yet a human-machine cooperation gap persists Pawel Niszczoła	Impact of Political Polarization of Climate Change Belief on Policy Support among Politicians and Citizens from Eight Developed Democracies Kotz, Johannes	Task-specific Strategies can Obscure the Inference from Observed Numeric Magnitude Judgments to Cognitive Processes Yongming Sun	Don't say "vegan" or "plant-based". Labeling interventions to promote food choices without meat and dairy. Patrycja Sleboda
	Goals, Barriers, and Strategies: An Analysis of Self-Control in Natural Language Simon van Baal	When it feels true: news perception and the role of cognitive traits in fluency-based biases Lorenzo Gagliardi	DComputational Models of Dual Process Reasoning Zoe Purcell	Worthy of Your Binge: How Media Momentum Drives Satisfaction in Clumped Consumption Rachele Ciulli
		The Dual Potential of Large Language Models in Shaping Conspiracy Beliefs: A Study on Chat GPT Nikola Erceg	Fast & Slow Decisions Under Risk: Intuition Rather Than Deliberation Drives Advantageous Choices Michal Bialek	More Correlations Signal Causation: The Reinforcement Effect of Correlational Scope on Perceived Causality Yue Zhang
		The limits and perils of gentle communication against vaccine hesitancy: an informational trial Alice Dominici	Perceived Appropriateness of Sharing in the Dictator Game: the effect of framing and mode of cognition Ginevra Del Mastio	

1-Sep	1 Sept h. 9.00	1 Sept h. 10.45	1 Sept h. 13.00	1 Sept h. 16.00
San Francesco Church	Intertemporal Choices	Team decision making	Norms & Compliance	Social Evaluation 1
	Andrea Isoni The Demand and Supply of Paternalism	Joachim Vosgerau The Big Data Fallacy	Meiyang Wang Preferences for No-Punishment Tolerance Zones in Policy Making	David Hagmann Flattering Advice: Avoiding Disappointment in Advice-Giving
	Enrico Diecidue Why Do People Discount? The Role of Impatience and Future Uncertainty	Meir Barneron Genetically-Diverse Crowds Are Wiser	Nigel Harvey Ethical judgment: Form of the sacrificial function	Irsa Ajmal Moral Ingredients to Financial Misconduct
	Rui Zheng Future Orientation and Social Norms: How Temporal Focus Influences Norm Adherence	Natalia Karelaiia Harnessing Humility for Better Team Decisions: The Critical Mass Effect	Siyuan Yin Framing Past Actions as Healthful or Harmful Alters the Decision Process Underlying Allocation of Scarce Resources	Matheus Menezes The N-Effect: Examining the Dynamics of Online Opinion Expression in Response to Volume
	Sebastian Hafenbrädl Reckoning with Ecosystem Investment Risk: How Frequency Formats and Past Framing Lead to Better-Calibrated Valuation Decisions	Pantelis Piperigas Analytis The committee curse: why winners in contests are largely overrated	Filippo Scarparo The role of Source of Power in the Public Bad Game	Soroush Verdi AI Disclosure in Environmental Appeals Reduces Climate Risk Perception and Curtails Donations
	Shohei Yamamoto Intertemporal Choice and the Cross-Modal Effect: The Role of Attention and Categorization			

SEPTEMBER 1ST, H 9:00

Artificial Intelligence 1

Aula 1 & Aula 2 SF

DELEGATION OF DECISION-MAKING TO AI AGENTS IN SOCIAL DILEMMA GAMES

Ines Terrucha

As artificial intelligence increasingly mediates decision-making, a key question arises: does delegating decisions to AI enhance or hinder cooperation? To investigate this, we conducted a behavioral experiment (N=460) using the Collective-risk Dilemma (CRD). In this multi-round game individuals decide whether to contribute to a public good that must reach a target to prevent collective losses. If the target is not met, all group members risk losing their remaining endowments, introducing uncertainty that complicates coordination. Our results show that participants who delegate their decisions to AI agents with constrained action spaces contribute more to the public good than those who make decisions themselves. However, delegation does not lead to greater collective success. Despite higher contributions, groups with AI delegates experience more failure and inequality due to small algorithmic precision errors that accumulate and prevent them from reaching the cooperation threshold. This suggests that while AI delegation may foster cooperative behavior, it also introduces risks if humans cannot effectively adjust their agents. These findings are specific to the CRD setting and AI agents programmed with predefined algorithmic rules. To generalize our results, we design a series of follow-up experiments to study cooperation under AI delegation, now using different AI agent designs and diverse game contexts. We start this investigation in a more straightforward strategic context: the Dictator Game.

PEOPLE ARE SURPRISINGLY COOPERATIVE WITH LARGE LANGUAGE MODELS, YET A HUMAN-MACHINE COOPERATION GAP PERSISTS

Paweł Niszczoła

Machines driven by large language models (LLMs) can potentially replace humans in many tasks, but it is unclear how this will change attitude of users. To begin assessing the consequences of such replacements, we asked people to play the Prisoner's Dilemma game – a surrogate of several real-life economic situations – and assess whether they change their cooperative behaviour when interacting with LLMs. Experiment 1 was designed to replicate earlier work and to extend it to the new generation of AI opponents. Accordingly, N=100 participants played a thirty-round repeated game against a human, classic bot, and LLM (GPT). Experiment 2 was designed to minimize incentives that lead to cooperation. Therefore, in Experiment 2 (N=192), participants played a one-shot game against a human and LLM: half

of them could communicate with their opponent, allowing LLMs to capitalize on the crucial difference between them and older-generation machines. We found that on the one hand, most participants cooperated with an LLM. This was most surprising for Experiment 2, as the strategic game component was removed (the decision to defect had no consequence on future games and pay out) and the psychological cost of selfish behaviour was attenuated (as the gains or losses for LLM were effectively non-monetary). On the other hand, there was a consistent drop in cooperation when playing LLM compared to human opponents. This “trust gap” was approximately 10-15% and was unaffected by experimental manipulations that altered overall cooperation rates. Our findings have important practical implications when replacing human interaction with LLM agents.

GOALS, BARRIERS, AND STRATEGIES: AN ANALYSIS OF SELF-CONTROL IN NATURAL LANGUAGE

Simon van Baal

Background Self-control has been studied in many contexts, through surveys, lab studies, and more recently experience sampling. In surveys, it is difficult for people to admit to self-control problems because a lack of self-control is stigmatised. In lab studies, a major challenge is ascertaining whether people have the goal the experimenter wants them to have. In experience sampling, due to the resource-intensiveness of the paradigm, the investigated self-control domain tends to be restricted to phenomena that occur often and for many people. **Aim** In this work, we aim to show what self-control problems tend to be most common in which domains, analysing people’s goals, barriers, temptations, and finding proposed solutions. **Method** In the current work, we analyse Reddit forum posts on self-control problems in many domains. To structure the self-control problems, we leverage taxonomies of goals, temptations, and barriers. **Results** We find self-control problems commonly discussed on these fora tend to be impactful, difficult, one-off decisions, rather than incremental, habitual, frequent decisions. We also find certain temptations are over-represented in difficult self-control problems.

Decision Processes 1

Guinigi SF

DISENTANGLING ATTRACTION SEARCH VS. CONFIRMATORY SEARCH BEHAVIOR IN THE STEPWISE-EVOLUTION OF PREFERENCE PARADIGM

Carolin Häffner

The stepwise evolution-of-preference paradigm demonstrates that individuals distort information to strengthen their emerging preferences in sequential decision-making tasks. While the effect of preferences on information evaluation is well-documented, its impact

on information search is less studied. In a study ((N =300), we examined two prominent search strategies: the Attraction Search Effect (ASE), which suggests individuals seek information about their preferred option (i.e., positive and negative info about the leading option), and Confirmatory Search (CS), which posits that individuals seek information that supports their beliefs (i.e., positive information about the leading option and negative information about the trailing option). The results support the role of both ASE and CS in information search. Participants primarily sought positive information about the leading option, consistent with both search strategies. However, contrary to CS, participants did not show a preference for seeking positive leader and negative trailer information over negative leader and positive trailer information. Notably, participants also demonstrated a preference for positive trailer information, suggesting that additional factors, such as a general positivity bias, may influence information search. Importantly, our findings provide strong overall support for ASE as the dominant search strategy, even for more concrete, review-like information, extending its effect beyond stylized information in probabilistic reasoning and preferential decision-making.

STABILITY AND CHANGE OF DISPOSITIONAL GREED DURING THE LIFESPAN: AN 11-YEAR LONGITUDINAL STUDY

Joshua Weller

Dispositional greed is characterized by being unsatisfied with one's current state, coupled with the desire for more. While greed can drive wealth accumulation, it may also lead to financial and psychosocial difficulties. However, the extent to which levels of dispositional greed change across adulthood is unclear. Our study aims to test how greed changes over 11 years with three assessments spaced 6 years apart and whether these changes relate to aging. In a pre-registered study, individuals in a nationally-representative longitudinal panel completed measures of dispositional greed in 2013, 2019, and 2024 (N=5344 with 2013 assessment). After testing for longitudinal and measurement invariance (age and gender), we assessed (a) rank-order stability, (b) cross-sectional age differences, and (c) changes in greed over time using latent growth modelling. We found moderate rank-order stability across visits, range $r = .57$ to $.66$. Within-visit, men reported greater greed (mean $d = .19$). Age was inversely associated with greed ($r = -.28$ to $-.38$). Latent growth model analysis shows baseline age ($B = -.47$, $p < .001$) and gender are associated with intercept over time, but only age predicts the slope ($B = .39$, $p < .001$), indicating younger adults' greed declines until middle age, then stabilizes. These results demonstrate the stability of greed over time, similar to that observed with the Big 5 personality traits. The results also illustrate that dispositional greed declines as individuals get older. Taken together, these results allow us to test longitudinal effects of dispositional greed on decision making and psychosocial outcomes across the lifespan with confidence. We discuss these results in light of lifespan developmental theories.

CHALLENGING OVERCONFIDENCE: COGNITIVE AND SOCIAL DETERMINANTS OF WHEN PEOPLE CALL OUT EXCESSIVE CONFIDENCE IN OTHERS

Peter Wallmueller

Across two studies (7,955 observations in total, $N=1203$), we evaluate what drives people's decision to challenge others who are exhibiting high confidence in their interval estimates. We propose that two important processes shape people's challenging behavior. First, people's propensity to challenge depends critically on their own confidence, such that people become more likely to challenge excessive confidence in others, the less confident they are themselves. Secondly, we highlight that the public nature of challenging can lead to gendered challenging behavior. When challenging behavior is publicly announced within groups, women are initially less likely to challenge than men. However, when challenging behavior is private, gender differences disappear, implying that fear of social backlash initially impedes women from challenging excessive confidence in others. These findings offer novel insights into why excessive confidence is challenged or not, and thus allow for a deeper understanding of when miscalibration can persist in social contexts.

CATEGORICAL UPDATING IN A BAYESIAN PROPENSITY PROBLEM

Stephen Dewitt

The need to update one's estimates of propensities (e.g. of a prisoner to reoffend) in light of a new uncertain instance (e.g. physical violence) is commonplace but understudied. We study this in two novel problems across three experiments and provide the solution of Bayesian models. In the first, participants update their estimates of the proficiency of two warring nations with missiles after being told of a new explosion on the border. In the second, participants update their estimates of the accuracy of two early-warning tests for cancer when they produce conflicting reports. Across all experiments, we find two modal responses, representing one-third of participants each. In the first, 'categorical' response, participants update propensity estimates as if they were certain about the single instance e.g. certain that one of the nations was responsible for the explosion, or certain which of the two tests is correct. In the second, 'no change' response, participants make no update to their propensity estimates. Across the three experiments, the theory is developed and tested that these two responses in fact have a single representation of the problem: because the actual outcome is binary (only one of the nations could have launched the missile; the patient either has cancer or not), they believe it is incorrect to update propensities in a graded manner. They therefore operate on a 'certainty threshold' basis, whereby, if they are certain enough about the single event, they will make the 'categorical' response, and if they are below this threshold, they will make the 'no change' response. Ramifications are considered for the 'categorical' response in particular, as this approach produces a positive-feedback dynamic similar to that seen in confirmation bias.

ADAPTIVE DECISION MAKING IN THE WILD: A CASE STUDY OF CHESS

Supratik Mondal

In resource-constrained settings, purely rational choices are less feasible as people may switch between optimal or suboptimal strategies to save cognitive resources based on their perception of a problem's significance. While early evidence suggests that there is a relationship between skill (i.e., numeracy) and adaptive decision making in a lab environment with well-defined binary economic choice problems, Klein (2008) has argued that such strategies often fall short in the real world. Chess provides a useful tool to explore the generalizability of these adaptive strategies in more complex, real-world scenarios. We gathered 9,546 classical and 6,441 blitz games to analyze how players balance accuracy under time pressure. Stockfish 15 chess engine was used at depths 5 and 25 to assess positions' criticality. Higher depth provides more accurate evaluations; the difference in stockfish evaluation between depth levels is large in critical positions but negligible in less critical ones. We found that winning players, compared to their opponents, followed a more adaptive decision strategy - they made more theoretical best moves (i.e., accurate moves) in critical positions. However, the accuracy difference between the opponents was very similar in non-critical positions. The difference in theoretical best moves across different levels of criticality between winning and losing players suggests that the outcome of a game depends on the ability to accurately identify the potential in each position (i.e., accurate representation of the problem). We conclude that winning players better understand when and how to spend their limited resources more efficiently while controlling for the difference in skill levels than their opponents.

Financial Decision Making 1

San Micheletto Convegni

SECURITY, ASSETS AND MALE GENDER – THE KEYS TO HIGHER SUBJECTIVE FINANCIAL WELL-BEING. EVIDENCE FROM BANK DATA

Leonore Riitsalu

Financial well-being (FWB) research is growing rapidly, despite the lack of consensus on its definition, conceptualisation, and operationalisation. Little is known about the relationship between subjective FWB and objective financial data. We contribute to it by developing a three-dimensional, human-centric conceptualisation of FWB, comprising of security, freedom, and pleasure, developing and testing its scale, and conducting the first longitudinal analysis of the relationship between subjective FWB and objective financial situation and behaviours. Our validated measure was used for data collection in a bank in Czechia in two waves, in February and September 2024. Confirmatory factor analysis and structural equation modelling confirmed the reliability and construct validity of the scale. Pseudonymised transactional data from 14 months was linked to the survey responses (n=6182 in wave 1 and n=1704 in wave 2), and analysed using models and methods such as LightGBM, random forest, and regression mo-

dels. We find that security is fundamental - one cannot have high freedom or higher pleasure without having average or higher security. The relationship between freedom and pleasure is more nuanced. The most significant gap lies in the freedom to change course in life without worrying about money. The second key fact is that men report higher FWB than women with equivalent assets or liabilities. Third, we observe that assets play a more evident role in FWB than liabilities. Importantly, the predictors of the FWB elements partly differ, highlighting its multi-dimensional and multifaceted nature. We are the first to observe gender differences in assessing the elements of subjective FWB while controlling for objective transactional bank Data.

LAY PEOPLE RELY MORE THAN EXPERTS ON EMOTIONS, PAST PERFORMANCE, AND FUND TYPE IN JUDGMENTS AND WILLINGNESS TO SELL FINANCIAL ASSETS.

Martina Vacondio

Behavioral finance research demonstrates that both professional and lay investors are influenced by cognitive biases, but expertise significantly impacts the degree to which they rely on intuition and emotions versus analytical reasoning. Lay investors are often guided by emotional reactions and superficial cues, such as past performance or fund type, while professionals tend to evaluate financial options more systematically. This study investigates whether fund type (socially responsible vs. traditional) and past performance (positive vs. negative) differentially influence financial judgments of professional vs. lay investors, focusing on emotional responses, perceived risk, expected returns, and willingness to sell. Using a pre-registered 2x2 (Type of fund: socially responsible vs. traditional x Past performance: positive vs. negative) within-subject design, 318 participants (74 professionals and 244 lay people) evaluated four investment funds. Results showed that lay investors demonstrated significant variability in their judgments, strongly influenced by fund characteristics and past performance. Professionals maintained consistent judgments across conditions, with higher overall perceived risk. Lay investors exhibited greater emotional attachment to socially responsible funds, resulting in a lower willingness to sell even after poor performance. This study underscores the importance of financial literacy and communication strategies tailored to address lay investors' biases. By improving understanding of how expertise shapes decision-making, the findings provide insights for fostering better investment decisions.

USING LLMS TO IDENTIFY PSYCHOLOGICAL MECHANISMS UNDERLYING FINANCIAL DECISION MAKING

Pantoja Maué

What if verbalized thoughts revealed the psychological mechanisms underlying decision making? While analyzing verbal protocols has a long history, advances in LLMs now permit exploring these mechanisms on a much bigger scale. In the current study, we aim to determine whether linguistic features extracted from verbal protocols can indicate the presence of specific psychological mechanisms underlying decision making. To this end, we designed a series of financial decision-making situations (i.e., gambles, investment

task, and hypothetical decisions) to manipulate state-specific mechanisms influencing decision making (e.g., responsibility representing social influence) while simultaneously collecting participants' verbalizations of their thoughts. We analyze the latter with GPT (OpenAI, 2023), rating the presence of different psychological mechanisms. These ratings are used as input for a random forest classifier to recover the experimental condition (e.g., presence versus absence of responsibility) and to determine the mechanisms that are the most predictive of the condition. Preliminary results of the technical testing phase suggest that linguistic features from verbal protocols can serve to identify psychological mechanisms underlying decision making. This novel approach could overcome the limitations of traditional methods—such as self-report questionnaires capturing static aspects of decision making—and provide a dynamic and state-specific understanding of decision-making mechanisms.

TESTING THE DRIFT DIFFUSION MODEL AS A MODEL FOR RISKY CHOICE

Sebastian Hellmann

The drift diffusion model (DDM) is one of the most popular evidence accumulation models in the cognitive and decision sciences and successfully accounts for data across a wide range of experimental decision tasks (e.g., perceptual and value-based decisions). However, only a few studies have applied the DDM to the domain of decision making under risk. Moreover, these applications have primarily focused on estimated parameters, with less emphasis on examining the general fit of the model to the observed data. With the present analyses, we test the DDM as a model for risky choice, in particular focusing on the degree to which it can account for response times (RTs). To that end, we compiled publicly available datasets on risky choice that also included RT data (14 datasets; 1,388 subjects; 199,157 choices). Then we applied an integrative DDM model to each dataset, whose drift rate was defined by cumulative prospect theory (CPT). A key pattern predicted by the DDM is a negative relationship between choice strength and RT. We find that datasets show considerable variation in the degree to which they align with this pattern, leading to corresponding variations in the model fit in terms of prediction errors. In addition, we identify task features that are connected to a better or worse fit of the DDM. Particularly, experiments featuring covered information (e.g., using Mouselab) and choice problems with gambles that have more than one non-zero outcome show a bad fit to the DDM-CPT. Therefore, experimental features need to be considered when aiming to apply the DDM to risky choice. We conclude that a more comprehensive model, which unifies information search, preference construction, and decision-making is necessary to fully account for RTs in risky choice tasks.

THE DUNNING-KRUGER EFFECT IN RETURN FORECASTING

Sonsino Doron

While dozens of studies confirm that the least skilled vastly overestimate their ability while the relatively skilled are roughly calibrated (the DKE effect), Kruger and Dunning (1999) suggestion that the overconfidence of the least skilled follows from a deficit in metacognition has been repeatedly debated. We explore the DKE in stock-return forecasting utilizing the data

collected in a framed-field Web experiment where N=141 finance professionals, registered private investors and MSc finance students predicted the price of four S and P500 stocks and chose the amount to buy or sell from each stock. The cross-sectional results support the DKE, showing that the gap between subjects' confidence in the accuracy of their forecasts and the realized accuracy scores steeply decreases with the accuracy of the predictions. We moreover cross-validate the DKE using diverse competence or skill-related variables, e.g., using the average Return on Trading (RoT) across the four tasks of the experiment and showing that overprecision rapidly declines with the RoT. The DKE pattern, however, also reflects at the individual level, as the participants grossly overestimate the accuracy of their predictions in their worst-performing task, while calibration cannot be rejected for their best-performing tasks. Moreover, confidence in the accuracy of predictions does not increase with realized accuracy and Yate's separation is rejected at the cross-section and at the individual-level. Similar results (with more robust overconfidence) emerge in the analysis of MBA students' forecasts for eight Israeli stocks. The results essentially validate the DKE pattern but suggest that metacognitive/self-awareness failure should be cautiously interpreted when discussing the effect.

Intertemporal Choices 1

Guinigi SF

THE DEMAND AND SUPPLY OF PATERNALISM

Andrea Isoni

The evidence that individuals may recognise that their hot desires are often inconsistent with their cool judgments has led to calls for paternalistic interventions to support better decisions. In two pre-registered incentivised experiments based on a paradigm involving trade-offs between smaller-sooner and larger-later future rewards, we investigate whether individuals express a desire for self-constraint that represses hot desires in favour of cool judgments (demand for inner paternalism), whether they would like such constraints to be imposed externally (demand for outer paternalism), and whether they would be willing to constrain others (supply of paternalism). Experiment 1 uses a between-subject design that documents a high inner demand of paternalism and a high supply, but a much lower outer demand. Constraints favouring impatient options are as common as constraints favouring patient options, and mostly compatible with participants' cool judgments. In line with typical findings, preference reversals favouring impatient choices prevail over the opposite reversals. Experiment 2 replicates these broad findings in a within-subject design, which also documents a strong correlation between supply and demand for inner paternalism, but a much weaker correlation between supply and outer demand. Considering external restrictions first slightly decreases self-imposed constraints and constraints on others, while constraining others first increases acceptance of external constraints. The large gap between outer demand and supply is inconsistent with known notions of paternalism and challenges justifications of paternalism based on people's desire to limit their own or others' future choices. It does, however, seem consistent with basic principles of decision making.

WHY DO PEOPLE DISCOUNT? THE ROLE OF IMPATIENCE AND FUTURE UNCERTAINTY

Enrico Diecidue

Despite the intuition that risk preferences affect intertemporal choice because the future is uncertain, time discounting is commonly regarded as a reflection of impatience. Our experimental data show that approximately 43% of the observed time discounting can be explained by an aversion against future uncertainty rather than impatience, even when controlling for utility curvature. Future uncertainty receives disproportional weight because subjects engage in subproportional probability weighting, a behavioral regularity that does not feature in the standard risk framework of most intertemporal choice models. We find that many people do not demand compensation for waiting but rather for an uncertain future.

FUTURE ORIENTATION AND SOCIAL NORMS: HOW TEMPORAL FOCUS INFLUENCES NORM ADHERENCE

Rui Zheng

We propose that individuals' future orientation may influence their preference for different types of social norms. To test this hypothesis, we conducted three experiments. Firstly, in order to test the relationship of social norms conformity and future orientation. We measured participants' future orientation and their perception of two types of social norms in the contexts of pro-environmental and altruistic behaviors. The results showed that when perceived more injunctive norms, the people with higher future-orientation have higher pro-environmental behavior intention (Study 1). Secondly, we manipulated both future orientation and social norms, providing evidence that individuals who emphasize future-oriented experiences in their daily lives show greater adherence to injunctive norms and less adherence to descriptive norms in the contexts of pro-environmental and health behaviors (Study 2). Finally, in the naturalistic setting of a "Bedtime Early Check-in Activity", we confirmed these findings, further supporting our conclusions (Study 3). In conclusion, we found that individuals with a high future orientation are more likely to follow injunctive norms rather than descriptive norms. This insight can help guide the more effective use of social norms in future applications

RECKONING WITH ECOSYSTEM INVESTMENT RISK: HOW FREQUENCY FORMATS AND PAST FRAMING LEAD TO BETTER-CALIBRATED VALUATION DECISIONS

Sebastian Hafenbrädl

How do managers perceive interdependent risks, for instance, about the success of innovation ecosystems that depend on components that may independently fail? Prior research has shown that managers are not well calibrated, and that they value investments in such

risky ecosystems higher when the chances of success were first presented separately for each component (and then aggregated), compared to when they were only presented aggregated for the ecosystem. Our successful pre-registered replication (N = 3,608) of the key study that raised this problem shows the robustness of this divergence by replicating it under two (out of three) extensions. These extensions also double as ‘debiasing’ or boosting interventions: they improve the calibration of participants’ valuations to the expected value. We target, first, the representation of information by representing chances in terms of frequencies (rather than probabilities), second, the temporal framing by describing the components as completed in the past (rather than the future), and, third, we combine frequencies and temporal framing. Ruling out potential alternative explanations, we show that none of the results (neither from the replication nor from the extensions) are driven by inferences about the quality of the information, or the management team’s qualification. Building on these results, we move beyond the prior focus on optimism bias and turn its managerial implications upside down: Rather than over-optimistically investing too much in ecosystem innovation, participants invest too little (relative to its expected value). Instead of cautioning against systematic over-investment, our results illustrate how interventions can improve participants’ risk calibration.

INTERTEMPORAL CHOICE AND THE CROSS-MODAL EFFECT: THE ROLE OF ATTENTION AND CATEGORIZATION

Shohei Yamamoto

When people make intertemporal choices between early and delayed outcomes they display more patience when the two outcomes are different than when they are identical. This is the cross-modal effect. The effect can be tested by eliciting multiple judgments of the value difference between pairs of items. The set of items on each side of the comparison (sooner versus later) is held constant, but items are paired so that sometimes they are similar or the same, other times they are very different. Compensation, possibly negative, is elicited for choosing the later option in each comparison. So long as the sets of items on both sides are identical then, no matter how the options are paired between the sets, the average compensation across all comparisons should be identical according to most economic and psychological theories of valuation. We investigate causal mechanisms for the effect in intertemporal choice and its boundary conditions. Study 1 uses eye-tracking to show that people attend more to delay in uni-modal than cross-modal choice. This study replicates the cross-modal effect, and shows that people pay relatively more attention to outcomes in cross-modal decisions, when the outcomes are different. Study 2 tests the cross-modal effect when the “different” outcomes are similar. We find that it did not. Discounting is approximately the same for identical goods (two varieties of chocolate) and similar goods (chocolates versus gummy bears), suggesting that the cross-modal effect works at a categorical rather than feature level. When two items are from the same category there is a high level of discounting, but when they are from different categories discounting drops substantially. A third experiment, currently in progress, is testing this mechanism systematically.

MODELING SOCIAL PREFERENCES IN CROSS-NATIONAL INTERACTIONS

Andreas Glöckner

When making decisions, individuals do not only take into account their own payoffs but often additionally consider the consequences for others. Models of social preferences (e.g., social value orientation) aim to describe exactly how outcome for the self and for others are integrated. Models widely differ concerning whether and how various factors are taken into account. They contain for example different relative weights for the own and the other outcome, take into account inequality (i.e. differences in outcomes for self and other) and/or efficiency concerns (i.e. the sum of outcomes). Some models, such as Jenkins et al. (2018), also differentiate between cases of advantageous and disadvantageous inequality. Jenkins et al. suggested a Social Perception-Weighted (SPW) model of social valuation, which takes into account perceived competence and warmth from the stereotype content model and show its superiority in predicting behavior. We conduct a comprehensive model comparison by (i) applying SPW to cross-national interactions, (ii) testing SPW against competing models, and (iii) extending SPW by including further variables. We analyze choices from an incentivized, multi-national study (N = 6,182). In the experiment, individuals from 25 nations allocated money between themselves and individuals from the own and each other nation. Stereotype perception, perceived conflict between nations and further factors were measured. Based on these model comparisons, we identify relevant structures and factors and suggest an extended model of social preference for cross-national interactions taking into account social perception.

IMPACT OR RESPONSIBILITY? GIVING BEHAVIOR IN A TELEVISED NATURAL EXPERIMENT

Martijn van den Assem

We directly compare the influences of impact and responsibility considerations on giving behavior. In moral philosophy, utilitarianism emphasizes the importance of the former, whereas theories of equity and desert argue for the importance of the latter. Our data are from a television show where an audience of one hundred people divides ten thousand euros among three financially distressed candidates, and from independent raters who evaluated various attributes of the candidates and their financial predicaments. We find that the well-being benefit of a donation ("impact") outweighs the degree to which the candidate had control over the cause of their situation ("responsibility"). Giving increases more with impact than it decreases with responsibility, and the contribution of impact to the fit of our regression models is approximately two-and-a-half times that of responsibility. Additionally, our analysis shows no evidence of discrimination on age, gender, or physical attractiveness.

ALTRUISTIC CHEATING'S SPILLOVER EFFECT: HOW HELPING OTHERS CAN LEAD TO SELF-SERVING UNETHICAL ACTS

Shahar Ayal

Altruistic cheating is a readily justified form of dishonesty where focusing on others' social utility allows individuals to perceive their actions more positively, thereby avoiding a negative update to their moral self-image. The current research examined when and how altruistic cheating influences subsequent unethical behavior. In Study 1, participants who had the opportunity to cheat to increase donations to charity later exhibited a greater tendency to cheat for personal benefit. We refer to this process as 'the spillover effect,' where dishonest behavior spills over from justified to unjustified settings. Study 2 demonstrated that the effect does not occur in the reverse direction. Namely unjustified, and thus lower, egoistic cheating does not diminish subsequent justified altruistic cheating. Study 3 compared two possible drivers for this effect and revealed that moral credentials serve as a stronger driver for subsequent egoistic cheating than habituation to the level of dishonest behavior. Finally, Study 4 showed that once moral credentials are rendered inoperative, the spillover effect disappears. Overall, these findings suggest that while cheating for the benefit of others may reflect good intentions, the moral credentials it provides may pave the way for an increase in self-serving unethical acts.

WHEN IMPACT IS EASILY EVALUABLE, THINKING OF WHAT REALLY MATTERS CAN SAVE LIVES

Tom Gordon-Hecker

People's decisions about helping others are often biased because emotional reactions can distract them from maximizing impact. Previous studies have shown that simply asking people to think more carefully has not been effective. We suggest a "structured-analysis" method which helps people prioritize decision aspects by rating their importance. Since saving lives is a top priority, structured-analysis increases life-maximizing choices. We tested this method in two experiments, comparing decision-making in joint and separate evaluations. When options are presented together, structured-analysis helps people compare them. But when options are separate, comparisons are harder. In Experiment 1, participants decided whether to donate to rescue journalists in a war zone—either 5 outgroups or 3 ingroups. In joint evaluation, structured-analysis reduced in-group bias, leading to prioritizing more lives. However, in separate evaluation, donations were similar across groups, regardless of thinking style. In Experiment 2, we examined cleft lip severity—an attribute that is easier to evaluate. Participants saw images of children with mild or severe conditions and decided on donations. Both under joint and separate evaluation, structured-analysis reduced preference for attractiveness and increased donations for the child with a more severe condition. Our findings show that guiding people to focus on relevant factors—like neediness and the number of lives at stake—helps them make better decisions when such aspects can be evaluated and compared. We discuss several possible mechanisms for this effect.

BEYOND INGROUP FAVORITISM: INVESTIGATING CROSS-NATIONAL SOCIAL PREFERENCES ACROSS 25 NATIONS

Vanessa Clemens

Cooperation across national boundaries is essential amid current global challenges such as climate change. In a preregistered, incentivized cross-national study with 6,182 participants from 25 nations, we assessed individuals' prosociality towards individuals from the respective 25 nations, thereby investigating cross-national social preferences beyond the classical ingroup vs. outgroup distinction for $25 \times 25 = 625$ national dyads. By integrating central competing and complementary theoretical approaches from social psychology and economics, we provide a comprehensive test of individual and broader contextual factors predicting intergroup prosociality. Our data revealed significant variation in cross-national social preferences beyond ingroup favoritism. This systematic variation was related to similarity in culture and nation-specific stereotypes, economic and institutional factors, and national conflict and cooperation. Similarity in nation-specific stereotypes and conflict between the respective nations emerged as the strongest predictors. These findings highlight the importance of examining both the characteristics of individuals and their interaction partners, including social perceptions and broader contextual factors such as cultural and economic factors, to enhance our understanding of global intergroup prosociality and cooperation.

SEPTEMBER 1ST, H 10:45

Decision Processes - Broader Perspectives 1

San Micheletto Convegno

ON THE ECONOMICS OF INFORMATION SEARCH: DOES INCENTIVE STRUCTURE MATTERS?

Alina Tran, Georgia Institute of Technology

Information search has its foundation in animal foraging as animals are constantly making decisions under risk. However, there are few studies that have examined how incentive structure influences information search. This study investigates whether environmental factors interact with hypothesis-guided search processes to influence search termination in a gamified medical diagnosis task. Participants were tasked with diagnosing patients with one of four fictitious diseases and prompted to select medical tests before making the final diagnosis. We assessed how different incentive structures such as points gained for correct trials and points lost for incorrect trials would influence a person's search termination. Participants were able to gather as much information to aid them in selecting the proper diagnosis, thus it was normatively sensible for them to maximize how much information they received regardless of incentive structure. Results showed that participants selected more sources of information when being penalized for an incorrect diagnosis than when they were rewarded for a correct diagnosis—which can be explained as a form of loss aversion. This study simulates some environmental parameters of search tasks that physicians may face when diagnosing patients in a more controlled environment.

PUTTING NEGOTIATION IN CONTEXT: THE US VS JAPAN

Elif Tosun, Universitat Pompeu Fabra

We study the extent to which cultural differences in bargaining behavior are context-dependent. In an online experiment, we examine bargaining behavior in the US and Japan using the ultimatum game, questionnaire items, and contextualized scenarios. Our participants played the ultimatum game, making decisions as both the proposer and the responder. They also answered two general questions about negotiation behavior, one about the tendency to negotiate and another about aggressiveness in negotiations. Finally, they responded to questions about 13 real-life negotiation scenarios, indicating whether they would try to negotiate or not, and in 7 scenarios specifying their proposals to the other party. They also rated the frequency of each scenario in their environment. We found significant cross-country differences in willingness to negotiate in 6 out of the 13 scenarios: in 3 cases, the Americans were more willing to negotiate, while in 3 others, the Japanese showed greater willingness. We also found significant differences in proposal levels in 2 out of 7 scenarios, with higher offers by Americans in one case and by Japanese in the other. These differences can be partly explained by the frequency of negotiation scenarios in the participants' environment.

Across countries, the questionnaire measure of negotiation tendency highly correlated with the willingness to negotiate in the scenarios, while aggressiveness in negotiations correlated with proposal levels. However, the ultimatum game behavior did not significantly correlate with responses to the scenarios. Our findings highlight the necessity of considering context to fully understand cross-cultural differences in bargaining behavior.

THE LANGUAGE OF DECISIONS: UNCOVERING LINGUISTIC MARKERS OF PSYCHOLOGICAL MECHANISMS IN DECISION MAKING

Olivia Fischer, University of Zurich

What can language reveal about decision making under risk and uncertainty? This study investigates whether think-aloud protocols can capture distinct psychological mechanisms underlying decision processes using large language models and interpretable machine learning. We conducted an online experiment with 320 participants who made a decision on a hotel booking platform. Participants chose between a refundable and a non-refundable option, with uncertainty introduced by a chance they might not be able to attend the trip. Participants verbalized their thoughts while deciding and were randomly assigned to one of four conditions: (1) baseline (no additional manipulation), (2) social norms (indicating most guests preferred one option), (3) need (highlighting limited room availability), or (4) knowledge (removing the hotel room image). To analyze verbalized thought processes, we transcribed think-aloud protocols using Whisper, then prompted GPT-4o to rate the presence of different theory-based psychological mechanisms and generate additional predictive indicators. A 10-fold cross-validated random forest classifier was then trained on these ratings to predict the condition participants were in. Preliminary results suggest that random forests performed best in classifying transcripts when combining theory-based mechanisms with GPT-generated indicators. Furthermore, feature importance analysis revealed moderate correlations across conditions, suggesting that some indicators co-occur in and are predictive of multiple conditions. These findings highlight the potential of LLM-based methods for uncovering real-time decision processes, offering a scalable approach to studying the complex dynamics and interplay of such processes both in the lab and in real-life applications.

USING A DECISION SUPPORT TOOL TO REDUCE INAPPROPRIATE ANTIBIOTIC USE AFTER A DELAYED PRESCRIPTION

Rian Gross, University of Vienna

Background. The global health challenge of antimicrobial resistance (AMR) is partly driven by overprescribing antibiotics in primary care. Delayed antibiotic prescriptions that allow the monitoring of symptom progression have been proposed as a possible intervention. However, the effectiveness of this strategy is compromised by many patients who inappropriately take antibiotics immediately upon receiving a delayed prescription. **Purpose.** Using a behavioral game measure that models delayed prescriptions, we examined whether a decision support leaflet issued by the World Health Organization can, alone or

in combination with other evidence-based interventions, reduce inappropriate antibiotic use for viral infections. **Methods.** We conducted a preregistered online experiment with $N = 633$ adult UK participants randomly assigned to one of five experimental conditions: (i) control condition, (ii) leaflet only, (iii) leaflet with value integration task, (iv) leaflet with active symptom monitoring, and (v) leaflet with value integration and active monitoring. **Results.** Inappropriate antibiotic use was significantly lower in all decision support conditions than in the control condition. Receiving a decision support tool was associated with less perceived decisional conflict. Specifically, it was associated with greater perceived decisional support and improved clarity regarding the personal values underlying the decision-making process. **Conclusions.** Decision support tools have the potential to promote the appropriate use of antibiotics. Integrating decision support tools into delayed prescription procedures can contribute to a more informed and responsible approach to antibiotic use by providing relevant information and tools.

Heuristics & Biases 1

Guinigi SF

CLARIFYING THE NOTION OF RATIONALITY IN JDM RESEARCH

Fiedler, Klaus, Heidelberg University

Although virtually all JDM approaches presuppose a basic conception of rationality, hardly anybody cares about a missing definition, to which all rationality research should be committed. The present reflection on viable definitions of rationality starts from the dual-process distinction of fast (heuristic) and slow (systematic) processes, which is easy to refute because deliberate mental efforts in slow processing do not prevent people from producing irrational inferences (e.g., in perseverance or anchoring effects). The notion of metacognitive myopia highlights the persistence of distortions and biases even when judges or decision makers engage in a metacognitive quality check. Within the metacognitive realm, the distinction of monitoring and control suggests the possibility that irrational responding may reflect that effective control takes more than perfect monitoring. Perfect insight (e.g., in classical conditioning) may not suffice to exert control (i.e., enable persons to resist classical conditioning). Yet, counter-normative reasoning is not at all confined to the control stage of metacognition. Certain monitoring rules are simply hard to understand from the beginning, such as the stronger dependence of speed than accuracy on sample size in sample-based decision tasks, the regression trap, or the cognitive underpinnings of the ratio bias. Thus, the bottom line is that metacognition offers a viable conceptual framework, within which irrationality (not rationality) can be defined (in terms of resistance to metacognitive quality check), although the problem transcends both metacognitive functions, monitoring and control. I illustrate these reflections by various empirical findings from our own lab or from the extant literature

CUMULATIVE REDUNDANCY IN FINANCIAL DECISIONS

Hans Alves, Ruhr University Bochum

Managerial decisions require the integration of multiple information pieces across time. Often, these information pieces are cumulative, such that later observations already include information from previous time points (e.g., an account balance at t_1 is influenced by the balance at t_0). In the present work, we demonstrate that decision-makers do not adequately account for the redundancy in such cumulative outcome sequences, leading to sometimes suboptimal decisions. Five preregistered experiments ($N = 1,600$) showed that a sequence of cumulative positive outcomes leads to higher future outcome expectations and increased choices compared to a sequence of cumulative negative outcomes, despite the same incremental outcomes. This bias influences people's choices in monetary gambles as well as their perception of investment portfolios.

HOW TO IMPROVE THE ACCURACY OF CLIMATE MITIGATION POTENTIAL JUDGMENTS? FROM BARRIERS TO SOLUTIONS

Mario Herberz, Department of Psychology and Swiss Center for Affective Sciences, University of Geneva, Switzerland

Individuals require an accurate representation of the impact of climate actions to guide effective climate mitigation across life domains. While research has shown that impact knowledge is generally low, its psychological barriers remain insufficiently understood, and few attempts have been made to improve it. Here we ask how heuristic and motivated reasoning processes shape estimates of the mitigation potential of climate actions and evaluate three corrective interventions. Across three pre-registered online studies ($N_{\text{total}} = 2924$), we show that (1) individuals consistently rely on inappropriate heuristics and motivated reasoning in their impact estimates, (2) individuals' perception of the behavioral costs and the social norm of climate actions is moderately associated with actual impact and can therefore be used to improve impact estimates, and (3) a behavioral costs and social norm heuristic, as well as simply providing information on the four most effective climate actions do not improve impact estimates across the board, but only for some individuals in line with theoretically predicted heterogeneity in the intervention effects. Our findings suggest that inappropriate heuristics and the motivated overestimation of the impact of already adopted behaviors may misguide the adoption of climate actions. Building better intuitions about mitigation potential may usefully complement conventional communication approaches to guide individuals to become carbon competent.

IS THE HOT HAND REALLY A FALLACY? EVIDENCE OF RATIONAL BELIEF UPDATING FROM ELITE SPORT

Scott Dickinson, University of Exeter

This paper studies the ability of individual decision makers to incorporate information about previous successes to predict future performance. I investigate a bias in belief updating, the

hot hand fallacy, using data on elite sports. In the setting under observation, fans make hundreds of predictions about the future performance of elite athletes. Using variation in outcomes between athletes who took actions with the same probability of success, I find a large hot hand (momentum) effect in athlete behaviour. In contrast to the hot hand fallacy, fans correctly incorporate this information in their predictions and make decisions consistent with rational updating. When deviating from this weighting, fans experience comparably worse outcomes.

HEURISTIC REASONING UNDERLYING EQUILIBRIUM PLAY IN STRATEGIC INTERACTIONS

Sibilla Di Guida

Feedback in games has commonly been found to facilitate convergence to equilibrium play. However, few studies have examined whether such behavior reflects underlying equilibrium reasoning or the adoption of heuristics that yield equivalent choice outcomes. To investigate this, we designed a three-stage experiment that tests the distraction effect—whether the presence of a plausible heuristic in a game interferes with the adoption of equilibrium reasoning. In the central learning stage, participants were assigned to one of two learning conditions: they played, with feedback, either a sequence of overlapping games—where equilibrium and a target heuristic prescribe the same action—or a sequence of distinct games—where the two prescribe different actions. Each game featured a computerized counterpart that consistently played the unique equilibrium action. We test the distraction effect across five widely studied heuristics, each used in turn as the target, in a 2 (learning conditions) × 5 (target heuristics) factorial design. Comparing the pre- and post-learning stages—where both game types were played without feedback—we find that the frequency of equilibrium choices increases in both learning conditions. However, the underlying decision processes differ: for the same target heuristic, feedback on distinct games fosters reasoning consistent with equilibrium, whereas feedback on overlapping games reinforces the target heuristic. Notably, the magnitude of the distraction effect varies substantially across heuristics. These results underscore the need for caution when drawing inferences about decision mechanisms from choice data alone.

Misinformation & polarization 1

Aula 1 & Aula 2 SF

EMPATHETIC REFUTATION TAILORED TO UNDERLYING BELIEFS IMPROVES VOTING INTENTIONS AND ATTITUDES TO GENDER QUOTAS

Dawn Holford, University of Bristol

Misconceptions about political issues can be difficult to refute because people's misconceptions are linked to motivational factors (e.g., emotions and beliefs) known as attitude roots. Effective corrections must align with these attitude roots to avoid being threatening. In two studies we

investigated the use of the Empathetic Refutational Interview (ERI) to refute misconceptions that influence political attitudes and behaviours. The ERI is an approach that refutes misconceptions by affirming individuals' attitude roots and tailoring corrections to those attitude roots. Previous work found the ERI to be effective in correcting vaccine misinformation. In two studies, we applied the ERI approach to misconceptions about voting (Study 1) and misconceptions about gender quotas (Study 2). We used a between-subjects experimental design to compare the effect of reading a correction that used the ERI vs. reading a control text passage. We measured participants' intentions and attitudes before and after the intervention. With a sample of young adults who had not voted in the 2024 UK election, Study 1 ($n = 335$) found the ERI to be more successful than the control at increasing their intentions to vote. With a sample of participants who were against gender quotas, Study 2 ($n = 327$) found the ERI to increase support for gender quotas while there was no change in the control condition. Study 2 also introduced a third condition where participants read a tailored correction passage without an affirmation. This condition was also successful at increasing support for gender quotas but with a smaller effect size than the ERI condition that included the affirmation. Our results suggest that the ERI could be a promising tool to address misconceptions in the political domain.

IMPACT OF POLITICAL POLARIZATION OF CLIMATE CHANGE BELIEF ON POLICY SUPPORT AMONG POLITICIANS AND CITIZENS FROM EIGHT DEVELOPED DEMOCRACIES

Kotz, Johannes, University of Konstanz

Despite a strong scientific consensus, belief in human-driven climate change is often a function of political orientation, and this polarization can be an obstacle for mitigation policies. However, data on polarization among politicians compared to citizens is limited. This observational study explores how political orientation and education affect climate change belief and policy support among politicians ($N = 714$) and citizens ($N = 18,281$) in eight developed democracies (Australia, Belgium (separately for Flanders and Wallonia), Czechia, Germany, Israel, Luxemburg, Netherlands, Norway). Climate change belief was polarized in all countries among citizens and politicians, with lower climate change belief on the political right, whereas education mattered little. Polarization of climate change belief was even stronger among politicians. Furthermore, climate change belief mediated the impact of political orientation on mitigation policy support among politicians. Our findings highlight the need to debias belief in anthropogenic climate change, especially among politicians, to promote mitigation action.

WHEN IT FEELS TRUE: NEWS PERCEPTION AND THE ROLE OF COGNITIVE TRAITS IN FLUENCY-BASED BIASES

Lorenzo Gagliardi, Department of Developmental Psychology and Socialization, University of Padua

Recent research has shown that judgments of truth about news are heavily influenced by the ease with which we process such information (i.e., fluency); for instance, the mere presence of images increase the perceived accuracy of claims (i.e., truthiness effect), but also familiarity

with the news has the same effect (i.e., illusory truth effect). Little is known, however, on how cognitive traits moderate these fluency-based biases. In this study we present results from a survey experiment conducted on an Italian sample (N = 300) where subjects were presented with a set of 40 news (half real and half fake), under two conditions (no image vs image), and were asked to report perceived accuracy, familiarity and sharing intentions. Subjects also completed scales investigating cognitive reflection, numeracy and intellectual humility. Our findings provide evidence for the truthiness effect and the illusory truth effect. Cognitive traits significantly moderated these effects: while higher cognitive reflection reduced the influence of familiarity on perceived accuracy, it amplified the role of images, suggesting nuanced interactions between analytic thinking and fluency-based biases. Numeracy, on the other hand, was associated with improved detection of fake news but also amplified the illusory truth effect, indicating that familiarity may sometimes override deliberative thinking. Finally, intellectual humility played a limited role but was associated with higher perceived accuracy in the absence of images. These results shed light on the complex interplay between cognitive traits and fluency-based biases in news perception, providing theoretical and practical insights for interventions aimed at mitigating the spread of misinformation.

THE DUAL POTENTIAL OF LARGE LANGUAGE MODELS IN SHAPING CONSPIRACY BELIEFS: A STUDY ON CHAT GPT

Nikola Erceg, Faculty of Humanities and Social Sciences, University of Zagreb

Belief in conspiracy theories has severe societal consequences, including promoting health risks, violence, and political instability. Addressing their spread is a pressing challenge. Large Language Networks (LLNs) like Chat GPT offer a novel approach to reducing these beliefs through personalized, neutral communication. While promising, LLNs also raise ethical concerns due to their dual potential to counteract or propagate misinformation. This study examined Chat GPT's ability to influence conspiracy and unsubstantiated medical beliefs among 124 U.S. participants, all Trump voters in the 2020 election. Participants, categorized as believers or nonbelievers, engaged in conversations with Chat GPT aimed at reducing or increasing agreement with selected statements. Results showed significant reductions in belief among believers ($d = 0.87$) but increased agreement among nonbelievers ($d = 0.59$). Participants rated interactions with GPT as satisfying overall. Individual differences moderated GPT's effectiveness. Specifically, actively open-minded thinking enhanced belief reductions, while anomia, political alienation, schizotypy and conspiracy mentality weakened them. Conversely schizotypy and conspiracy mentality amplified susceptibility among nonbelievers. Overall, Chat GPT demonstrates both promise and risks in addressing conspiracy beliefs, emphasizing the need to understand psychological moderators to maximize its benefits while minimizing potential harm.

THE LIMITS AND PERILS OF GENTLE COMMUNICATION AGAINST VACCINE HESITANCY: AN INFORMATIONAL TRIAL

Alice Dominici

Motivational Interviewing (MI) is a gentle communication technique effective in doctor-patient interactions. The WHO recommends it against vaccine hesitancy, a key challenge for overburdened healthcare systems, especially in aging populations at higher risk of hospitalization from vaccine-preventable flu viruses. However, MI's high training and implementation costs further strain healthcare systems. We tested MI in a flu vaccine video campaign via a survey experiment on a representative sample of 12,004 individuals above age 40 from Italy, the second-oldest country worldwide. While MI improved perceptions in line with theory, it reduced vaccination willingness (-7.4%, ~3 p.p.) and did not affect actual vaccination rates. Causal forests showed that MI increased uptake among a minority with worse health, older age, and higher distrust of vaccines but decreased uptake among those with more vaccine-compliant positions at baseline. MI may help specific groups accustomed to health professionals but could backfire on the general population, warranting caution in adopting it as a large-scale policy.

Risk Communication/Choices

San Micheletto Affresco

NARRATIVES VERSUS STATISTICS IN CYBERSECURITY RISK COMMUNICATION: DIFFERENTIAL EFFECTS ON CREATIVE INPUT AND RESOURCE TRANSFER HELP

Irina Cojuharenco, University of Surrey

In the context of cybersecurity, helping victims or potential victims of online harm often takes the form of creative input (problem-solving) rather than a mere resource transfer (e.g., monetary donation). In a pre-registered experiment, we explore how the form of risk communication impacts these distinct forms of helping behaviour. Participants were asked to help the cause of building cybersecurity awareness following exposure to either a victim narrative of password fraud or statistical information about this type of online harm. We predicted that victim narratives would increase resource transfer help but decrease creative input help due to the mediating role of emotional reactions. In particular, for creative input type of help, emotions could interfere with the ability of participants to generate help, offsetting and possibly, reversing the commonly known positive impact on helping in the case of resource transfer help. Our findings inform the effectiveness of different risk communication strategies in the context of cybersecurity and in other contexts where creative input and resource transfer types of help co-occur. We discuss theoretical and practical implications of distinguishing different types of helping behaviour.

PRE-DECISIONAL DISTORTION OF RISK INFORMATION SEEN IN ICON ARRAYS

Jeremy Strueder , University of Iowa

Icon arrays are widely established as effective tools for communicating risk/likelihood information (e.g., Garcia-Retamero and Cokely, 2017), and are considered best-practice by various organizations and government agencies (e.g., The U.S. Food and Drug Administration). However, very little is known about their ability to buffer against biasing forces that can distort how risk/likelihood information is perceived. We addressed this question by testing the extent to which icon arrays can reduce pre-decisional information distortion that arises when early emerging preferences bias the evaluation of new information. In Study 1, using traditional measures of information distortion, we found that risk-of-death information about two potential treatment options that was presented via icon arrays was distorted in favor of participants' leading alternative. The magnitude of distortion was similar to the level of distortion for other information (e.g., information about dietary restrictions). Study 2 directly tested whether the presence vs absence of icon arrays when presenting risk information had any impact on levels of information distortion, this time using a dependent measure that targeted people's intuitive perceptions of risk. We found that the extent to which a 6% risk of death seemed riskier than a 3% risk-of-death was greater when the former risk was from a treatment option that was relatively undesired. This distortion was not significantly reduced by the presence of icon arrays. These findings highlight the need for developing new tools and methods for presenting risk/likelihood information that can protect against the influence of pre-decisional Information distortion.

RISK PERCEPTION OF AIR POLLUTION AND POLICY ACCEPTANCE: AN EXPLORATORY STUDY ON A REPRESENTATIVE ITALIAN SAMPLE

Maria Stocco, Department of Developmental Psychology and Socialization, University of Padova

Air pollution is one of the most significant health risks in Europe, with over 300,000 annual deaths, ranking as the second leading cause of death in the Continent, but there is low awareness of the problem among the population. While policymakers are implementing various initiatives to curb emissions and improve air quality, these measures are often perceived by the public as either too costly or ineffective. In some cases, a lack of awareness about pollution levels and contributing factors further complicates the issue. In this pre-registered and correlational study, we investigate the variables associated with the acceptance of policies to reduce air pollution, focusing on awareness of air pollution, risk perception, self-efficacy, perceived costs of the policies, and political orientation with a representative Italian sample (N=1,008). Results showed that people with higher air pollution awareness perceived a higher risk and supported more policies. However, policy support decreased as perceived costs increased and the more the political orientation shifted to the right. Moreover, perceived risk partially mediated the relationship between air pollution awareness and policy acceptance. We also found an interaction between self-efficacy and perceived costs and between perceived risk and political orientation. This study offers novel insights

into risk perception and policy acceptance in the context of air pollution, a pathway still little explored among Western cultures. Raising people's awareness about the negative impacts of air pollution is key to increasing their awareness of appropriate measures against environmental risk and accepting mitigation policies.

A REFERENCE-POINT THEORY OF REFLECTION EFFECTS

Barb Mellers, University of Pennsylvania

We examine reflection effects among risk preferences, ambiguity preferences and risk versus ambiguity preferences using incentivized choices with small stakes. We find that Kahneman and Tversky's (1979) four-fold pattern of risk preferences extends to both ambiguity and risk versus ambiguity. With small uncertainties, most people prefer greater risk or ambiguity with gains and less risk or ambiguity with losses. However, with large uncertainties, the opposite pattern holds; most people prefer less risk or ambiguity with gains and greater risk or ambiguity with losses. Our variations of uncertainty (i.e., risk and ambiguity) appear less important than gains versus losses or small versus large uncertainties. Although we changed absolute uncertainty, preference patterns remained the same. We can capture these effects with a new account of preferences called reference-point theory. This theory describes individual data and provides a good account of the data. The vast majority of decision makers were motivated by optimism when outcomes are small-uncertainty gains or large-uncertainty losses. Furthermore, decision makers were driven by pessimism when outcomes were large-uncertainty gains or small-uncertainty losses. Finally, decision makers were loss averse and gain seeking both within and across choices. When it comes to reflection effects over small stakes, beliefs about uncertainty were stronger motives than hedonic sensitivities for all three sets of preferences

THE UNCERTAINTY-RISK PARADOX: FEAR OF THE UNKNOWN DRIVES BOTH CAUTION AND RISK-SEEKING

Sandeep Mishra, University of Guelph

Why does fear of the unknown sometimes lead to caution and, at other times, reckless gambles? We investigated this paradox by examining how intolerance of uncertainty (IU) shapes risk attitudes and behaviors. To clarify these opposing effects, we assessed IU in relation to risky personality traits (impulsivity, sensation seeking, selfcontrol), risk attitudes (DOSPERT), and behavioral risk-taking (ambiguity preference, gambling engagement, and risky decision-making in monetary choice tasks). We also measured delay discounting to distinguish IU's effects on risk-taking from its influence on time preferences. Despite IU's strong association with self-reported risk attitudes, it did not consistently predict ambiguity aversion or delay discounting, suggesting its effects are domain-specific rather than universal. Instead, its influence diverged based on IU subcomponents. Individuals high in prospective IU (future-oriented worry) reported lower risk attitudes and avoided gambling, aligning with conventional risk-avoidance patterns. In contrast, those high in inhibitory IU (uncertainty-induced freezing) exhibited higher impulsivity, sensation seeking, and real-world risk-taking,

particularly in gambling. These results suggest two distinct pathways through which uncertainty intolerance can either suppress or amplify risk-taking. These findings challenge the assumption that individuals who fear uncertainty invariably avoid risk, demonstrating how reactive sensation seeking can sometimes override apprehension. Our results refine models of decision-making under uncertainty and offer insights for interventions targeting financial risk-taking, gambling, and other high-stakes decisions.

Team decision making

San Francisco Church

THE BIG DATA FALLACY

Joachim Vosgerau, Bocconi

The advent of big data has revolutionized the use of empirical evidence by scientists, policy makers, and managers. Advocates of the big data revolution have propagated a dangerously misleading belief—that “with enough data, the numbers speak for themselves” (Anderson, 2008). This claim overlooks a fundamental issue: big data are typically observational, rather than collected following the strict rules of random assignment. Consequently, variables exhibit some degree of endogeneity, irrespective of sample size. Through eight preregistered experiments (total $N = 6,408$), we demonstrate that decision-makers are more likely to erroneously infer causation from observational data obtained from large sample sizes—a phenomenon we term “big data fallacy.” The fallacy persists even for those who show moderately strong scientific reasoning skills, and it stems from a focus on sample size (rather than on how observations are assigned to different levels of the ‘cause’ variable) and a belief that increasing sample size generally enhances the quality of the data and the validity of a variety of inferences. Alarming, interventions aimed at teaching the distinction between correlation and causation or prompting the identification of omitted variables fail to mitigate this fallacy.

GENETICALLY-DIVERSE CROWDS ARE WISER

Meir Barneron, Hebrew University of Jerusalem

A major seam of research has shown that combining individual opinions can improve judgments and decisions, a phenomenon also known as “the wisdom of crowds.” Typically, collective wisdom is augmented when judgments are issued from independent sources. In this work, we tested the hypothesis that genetically-diverse groups would produce more independent opinions that, once combined, would heighten judgment accuracy. Our dataset comprised $N=602$ twins who made, individually and separately, numerical estimates of quantities (candies in jars). We then artificially created all the pairs of twins that could be created from the dataset, by pairing all the estimates. These pairings consisted of either natural co-twins (“related” pairs) or individuals who were not co-twins (“unre-

lated" pairs). We expected the unrelated pairs to be more accurate, being more diverse than the related pairs. This would corroborate the hypothesis that diversity (genetic, environmental, or both) contributes to the accuracy of collective judgments. To isolate the role of genetic diversity, we compared related vs. unrelated twins, separately, for monozygotic vs. dizygotic twins. The results indicated that, among monozygotic twins, unrelated pairs performed better than related ones. Among dizygotic twins, however, no difference between related and unrelated pairs was observed. An interaction analysis confirmed that the effect of relatedness was more pronounced among the monozygotic than the dizygotic twins, evidencing the role of genetics in collective judgment accuracy. To our knowledge, the present research provides the first empirical demonstration of the effects of genetic diversity on accuracy gains in collective judgments, shedding light on the origins of the wisdom-of-crowds phenomenon.

HARNESSING HUMILITY FOR BETTER TEAM DECISIONS: THE CRITICAL MASS EFFECT

Natalia Karelaia, INSEAD

People are often put together into teams to solve problems and make critical decisions. A growing body of research suggests that for teams to perform at their best, they need collective intelligence, which extends beyond individual intelligence. This paper explores the role of collective humility in improving group decisionmaking. Specifically, we examine the effect of a critical mass of humility on a team's ability to leverage individual knowledge and benefit from diverse perspectives. Using data from 8,231 individuals organized into 1,808 non-hierarchical problem-solving teams, we operationalize the critical mass of humility as the median of team members' individual humility. We also quantify the proportion of team members with high humility. Participants were high-level management professionals engaged in solving a strategic decision-making problem. They varied in relevant knowledge and were highly motivated to reach a good decision. Team performance was assessed based on the collective solution achieved through deliberation and contrasted to (1) the average pre-deliberation knowledge of team members, and (2) the best individual knowledge within the team. Results show that teams were more likely to surpass their best individual member when a critical mass of humility was present. Moreover, teams with prior knowledge and diverse opinions benefited the most from deliberations when their members were not overly confident. Our findings suggest that while collective humility does not require all team members to uniformly recognize their own intellectual limitations, a significant mass of individual humility is necessary for intellectually humbling deliberations to occur, leading to collectively intelligent outcomes.

THE COMMITTEE CURSE: WHY WINNERS IN CONTESTS ARE LARGELY OVERRATED

Pantelis Pipergias Analytis , University of Southern Denmark

People working across disciplines compete for resources and recognition. The competition arenas are often systematized as contests, in which a group of individuals (i.e. a committee) stand on behalf of a larger population and evaluate the candidates, determining who will be selected. How accurate and replicable are committee decisions and how strong is the quality signal they confer? We propose a simple model for committee decisions, which predicts that from most people's point of view, the candidates selected by committees will be overrated. We test this prediction using a novel dataset from a graphic design contest that we organized, which shows that the overrating effect is much larger than what is predicted by the model. We then explain this discrepancy by showing that the probability that different candidates will be selected is more sensitive to the variance of the candidates' evaluations than to their average evaluation, and that variability also drives the overrating effect. Our results can inform the design of effective and fair decision committees, and can help candidates and committees to better manage their expectations.

SEPTEMBER 1ST, H 13:00

Ethical Decision Making

San Micheletto Convegni

DANIEL READ, WARWICK BUSINESS SCHOOL

The Menu of Deception and Joint versus Separate evaluation

We examine how the salience of alternative messages affects how individuals interpret pre-play communication in strategic decision-making. We ask if the failure to recognize the predictive power of a counterpart's statement can be explained by a lack of awareness about the set of alternative statements the counterpart could make. We do this using the joint versus separate evaluation approach. Across two experiments inspired by the Golden Balls TV game show and a variant of the prisoner's dilemma, participants evaluated the likelihood of cooperation based on strong or weak messages signalling cooperative intent. In the game, participants could either claim the full amount for themselves (£2 in our game), or share the amount with the other person (£1 each). If one chose to share £2 was released, and if the other chose to steal they would receive the full £2 whereas if they chose to share they would receive £1. The two messages were "I will choose share" and "I would be happy to receive £1." Results show that the joint versus separate evaluation manipulation is highly effective. Under separate evaluation, when individuals are unaware of alternative messages, they struggle to accurately predict the behavioural differences between strong and weak signals. However, if they know about the alternative messages that "could" have been sent their judgment accuracy is improved. These findings highlight the importance of designing communication frameworks and information strategies that enhance individuals' ability to assess intentions, offering valuable insights for organizations and policymakers to mitigate deceptive practices.

VALUING, FAST AND SLOW

Eric Feddeck, Radboud University (BSI, Donders)

Value-based decision-making involves sequential sampling of information, yet the timing of different attributes entering the decision process remains debated. This preregistered study (N = 35) aimed to replicate and extend previous findings on differential processing speeds of choice attributes using a novel European food stimulus set. Participants rated 70 food items on health and taste before making 280 binary choices, with reaction times, choices, and mouse trajectories recorded. Mouse-tracking analyses identified tastiness as a stronger overall predictor of choice and movement direction. A time-varying drift diffusion model (tDDM) revealed substantial individual differences in whether health or taste information contributed first to evidence accumulation. These results contrast prior findings, underscoring the role of personal values in shaping decision processes. By integrating mouse tracking and tDDM analyses, this study provides new insights into the dynamics of value-based choices, highlighting the interaction between decision attributes and individual preferences.

DIVERGING FAIRNESS MOTIVES IN ALLOCATION DECISIONS REVEAL HOW MERIT AND STRUCTURAL INEQUALITY SHAPE DISTRIBUTIVE JUSTICE

Sarah Vahed, Donders Institute for Brain, Cognition and Behaviour

A foundational principle in Western societies is meritocracy—the belief that effort determines success. However, structural inequalities constrain opportunities, creating tension in distributive decision-making. Understanding how individuals navigate this trade-off between merit and structural disadvantage is critical for decision-making theories under inequality. To investigate this, we implemented an experimental paradigm manipulating structural advantage and effort-based merit in incentivised allocation tasks. Across three preregistered studies (n=634), participants made distributive choices from different perspectives: in study 1 (n=385), participants competed in a structurally biased tournament before allocating resources. In study 2 (n=125), third-party observers allocated resources based on tournament outcomes, and in study 3 (n=124), impartial judges distributed resources without direct involvement. Findings revealed that structural status and merit shaped allocations. Participants allocated more to disadvantaged players, but this depended on perceived effort: disadvantaged high performers received more than low performers. While structural disadvantage was thus acknowledged, meritocratic reasoning remained dominant. Importantly, clustering analyses identified distinct fairness preferences: some prioritised structural redress, others adhered to meritocratic principles, and an additional subset exhibited context-dependent strategies. These findings highlight heterogeneity in fairness ideals, underscoring the complexity of social preferences in flawed meritocratic systems. By elucidating how inequality and meritocratic beliefs shape fairness perceptions, this research advances theories of distributive justice and informs strategies to promote social equity.

UNDERSTANDING APPOINTMENT DECISIONS: DO MATERIAL INTERESTS TRUMP THE ETHICAL IMPERATIVES?

Štěpán Bahník, Prague University of Economics and Business

Organizations usually seek employees who will not harm them by their dishonest behavior. However, in certain situations, companies can benefit from the dishonesty of their employees at the expense of their customers, competitors, or the public. To systematically examine how individuals reward or punish dishonest behavior of the members of their group, we conducted a study measuring the preference for dishonest behaviour that impacts the group or third parties. In a laboratory experiment, participants (N = 512) played an incentivized prediction task in two versions, in one of which they could cheat to increase their reward. Participants were divided into groups of four and voted on which participant should play the cheating-enabling version of the task using information about their reward in a previous round of the task. Participants voted for cheaters less when the costs of cheating had a negative impact either on them or on a charity (representing social impact) than when cheating did not have an identifiable victim. However, they voted for cheaters more when the reward from cheating was divided among all group members. Even otherwise honest participants tended to vote for dishonest group members when they benefited from their cheating.

THE IMPACT OF REAL-TIME CONGESTION INFORMATION ON ER OVERCROWDING: A THEORETICAL AND EXPERIMENTAL STUDY

Niccolò Toccafondi

An urgent issue in the medical sector is the emergency room (ER) overcrowding. This study investigates whether providing real-time information on ER congestion affects individuals' propensity to visit the ER. We model the decision process of an individual who is uncertain about its health status and must choose between visiting the ER or a territorial health facility (TH) under different levels of ER congestion. Using an incentivized discrete choice experiment we manipulate information on ER congestion levels in a between-subject design. We find that real-time congestion data increase the overall number of visits compared to the control situation in which congestion levels are unknown, especially for less urgent visits. This evidence suggests that when information is available the uncertainty of ER visits decreases, leading risk-averse individuals to choose the ER more frequently. We also test the effect of an alternative policy in which intermediate levels of congestion are equally probable, finding a null effect on the total number of visits compared to the control situation. Additionally, we investigate decisions made on behalf of others in this context. We find that participants are more cautious, visiting the ER more often, when choosing for-others. Finally, while participants show a preference for TH services, this is not driven by moral considerations towards the inappropriate use of ER resources

Risky Choice 2

San Michele Affresco

THE DESCRIPTION-EXPERIENCE GAP, AND THE CONDITIONS THAT TRIGGER OVERWEIGHTING AND UNDERWEIGHTING OF RARE OUTCOMES

Eden Heilprin, Technion - Israel Institute of Technology

Comparing decisions from description to repeated decisions from experience reveals a robust gap: people tend to overweight rare outcomes in decisions from description but underweight them in decisions from experience. However, comparing description-based decisions to one-shot sampling-based decisions paint a more complex picture, with evidence for a weak, inconsistent, and even reversed gap. This research clarifies these mixed findings through three preregistered studies (N = 1,439) and a reanalysis of published data. In studies 1 and 2, participants made a single choice based on either description or sampling. Results showed a strong description-experience gap, with rare outcomes underweighted in sampling-based choices, even when samples accurately reflected the true payoff distribution. Study 3 examines why some studies fail to detect the gap, testing (1) uncertainty in both the safe and risky prospects and (2) decision order effects. Participants completed two choice tasks in one of two orders, based on either description or sampling. Despite these changes, the

gap remained robust. Study 4 reanalyzes datasets from studies that failed to detect the gap despite using settings similar to those in Study 3. The reanalysis suggests this discrepancy stems from two interacting processes: (1) early sampling termination after encountering all possible outcomes, and (2) greater reliance on recent experiences. This interaction amplifies the salience of rare outcomes, falsely suggesting overweighting and masking the description-experience gap. It may also distort cumulative prospect theory estimates, making rare outcomes seem overweighted even when actual choices reflect underweighting

SUN VS. ATOM: WHAT MODERATES RISK PERCEPTION AND WILLINGNESS TO INVEST IN SOLAR FARMS VS. NUCLEAR POWER PLANTS?

Elisa Tedaldi, Yale University

In one of the hottest years on record, COP28 concluded with a global pact to “transition away from fossil fuels” to address climate change. This transition requires large-scale modernization of the energy sector, emphasizing renewable and nuclear energy. Across two studies, we explored factors influencing risk perception and support for solar farms and nuclear power plants. Study1 surveyed 595 participants, randomly assigned to information about solar farms, nuclear power plants, or both. Results showed solar farms were perceived as less risky and received higher investment intentions than nuclear power plants, especially when both energy sources were presented together. High climate change risk perception reduced solar farms’ perceived risk (but not nuclear power plants’) and increased support for solar farms only when evaluated alongside nuclear power. Nuclear power plants were consistently perceived as threatening, regardless of evaluation context or psychological factors. Study2 involved 108 participants in a lab experiment measuring Heart Rate Variability to examine the role of emotion regulation. Nuclear power plants were again perceived as riskier, and higher emotion regulation reduced their perceived risk but only when evaluated after solar farms; no moderation was observed for the latter source. This suggests the potential to downregulate nuclear power emotional responses to nuclear power, allowing to cognitively-integrate the information about solar farms and thus evaluating nuclear power in a less biased way. Together, these studies highlight psychological factors shaping perceptions and decision-making about critical energy sources. Insights from this research can inform strategies to address public resistance and foster a more sustainable energy transition.

ANALYZING THE IMPACT OF CHOICE COMPLEXITY ON RISKY CHOICES

Maohua Nie, University of Basel

The challenge of information overload often leads decision-makers to favor simpler, more intuitive options over complex ones, even when the latter offer potentially greater rewards. Previous research has primarily focused on the behavioral pattern of complexity aversion, attributing it to the avoidance of cognitive effort. In this study, we employed a drift diffu-

sion modeling (DDM) approach to explore how complexity shapes decision-making across different contexts. Our experiments manipulate lottery complexity along three dimensions: probabilities (Study 1), outcomes (Study 2), and the number of outcomes (Study 3). Beyond that, we also examine scenarios in which both options are uniformly complex or uniformly simple. Contrary to prior research, we found that complexity aversion does not consistently emerge across all three studies. Through DDM, we disentangle the cognitive processes driving these effects. Our analysis shows that complexity-related behavior could be primarily driven by a pre-valuation bias rather than a discounting effect during decision-making, offering a more nuanced perspective on this effect. When both options are either complex or simple, complexity influences several cognitive mechanisms, including response times, choice consistency, risk sensitivity, and the subjective probability weighting of rare outcomes. Our experimental results and computational modeling contribute to a deeper understanding of how complexity shapes decision-making under risk, offering new insights into the cognitive processes involved.

BEING RISK AVERSE AND RISK SEEKING AT THE SAME TIME: AN APPARENT PREFERENCE REVERSAL IN VALUATIONS AND DECISIONS FROM EXPERIENCE

Sebastian Olschewski, University of Basel

Human risk preferences are less stable than what economic theories anticipate. Here, drawing from psychological theories of information representation and integration, we predicted and found a novel signature of apparent risk preference reversal in decisions made after experiencing reward information serially: Participants ($n = 190$) undervalue high-variance options relative to low-variance ones in independent valuations, consistent with risk aversion; but choose high-variance options more frequently in binary choices, consistent with risk seeking. With three additional experiments we demonstrate that this behavioral gap can be closed but cannot be reversed through manipulating the presentation format (sequential or simultaneous information presentation) and the task demand (absolute or relative judgments). Additionally, aligning presentation format and task demand increases the stability of individual risk preferences across valuation and choice. We conclude that, besides individual differences in risk preferences, taking risks critically depends on cognitive processes of numerosity representation and information integration.

IMPROVING THE EFFICIENCY OF ELICITING SUBJECTIVE PROBABILITIES FROM RATIO JUDGEMENTS

Zhixing Liu, Fordham University

Subjective probability judgements are a necessary tool in understanding people's choices. There are many approaches to elicit subjective probabilities. This project focuses on the ratio judgement method, where the judges are asked to estimate how much more likely one event is to occur compared to another. In practice, it requires judges to compare all possible pairs of events and calculate the geometric mean of all the ratio judgements for

all comparisons involving each event. This method is accurate but requires a large number of estimates. This work seeks a more efficient but accurate enough way to estimate subjective probabilities. To reduce the complexity of the method, the ratio judgement method is applied to only a subset of the pairs that are selected in a way that maximizes information. One way of getting partial information is to choose the base event(s) and compare them with all other events. A second method starts from a chain relation among all the events and uses the chained ratios to compute the solution. The two measures used to compare the methods' accuracy are their internal inconsistency (measured by a statistic called WC) and the Euclidean distance between the solutions based on the partial judgements and the solution based on the full set of judgements. The goal is to reach an acceptable recovery level with fewer ratios. We conclude that for every 0.25 increase in sigma of the log-normally distributed error, we should expect the Euclidean distance between the partial and full subjective probabilities to increase by 0.03.

Decision from experience 1

Guinigi SF

DECISIONS BASED ON A DESCRIPTION OF THE EXPERIENCE OF OTHERS

Adi Tarabeih, Technion

Prior research has shown that decisions based on personal experience tend to display insufficient sensitivity to rare events. This effect has been documented in both repeated decisions based on feedback (Barron and Erev, 2003) and one-shot decisions involving sampling from available alternatives (Hertwig et al., 2004). The first part of this research investigates whether a similar bias emerges when individuals rely on the experiences of others. To test this hypothesis, we conducted a one-shot decision-making experiment in which participants chose between a safe option, yielding an average payoff of 210.3 points, and a risky option, which provided a 95% chance of earning 215.7 points and a 5% chance of earning 0 (expected value: 204.9 points). The study compared two conditions: in the Description condition, participants were explicitly presented with the payoff distributions of both options. In the Experience condition, they were additionally shown the outcomes experienced by 40 previous decision-makers—20 who chose the safe option and 20 who chose the risky one. Notably, exactly one participant (5%) in the risky-option group encountered the rare outcome (0). Results revealed that participants in the Experience condition selected the suboptimal risky option significantly more often (44%) than those in the Description condition (31%). These findings suggest that exposure to others' experiences reduced sensitivity to rare events. The second part of our analysis explores the broader implications of these results. Specifically, we examine the possibility that underweighting rare events in decisions based on others' experiences may contribute to the widespread preference for homeownership over renting.

ON THE INTERPLAY OF ECOLOGICAL AND COGNITIVE SEARCH: DO PEOPLE SEARCH ADAPTIVELY IN DECISIONS FROM EXPERIENCE?

Linus Hof, Technical University of Munich

In decisions from experience, people can learn about the options' payoff distributions via sampling (ecological search). However, sampling does not give direct access to the distributions' properties and the mind therefore needs to actively form a representation of them by further processing the collected samples (cognitive search). Importantly, often people have a decision goal which requires to evaluate the options based on a specific property, and ecological search could be organized in a way that reduces the cognitive costs necessary to translate the samples into a representation of the respective property. In an experimental study (N=183), we tested whether people show such adaptive search behavior. We instructed participants to either choose the option representing the short-term vs. long-term winner and tested whether they adopted their switching rate between options during sampling (specifically more frequent switching to facilitate the identification of the short-term winner). In addition, we varied the complexity of choice problems, as the cognitive search costs should be higher the higher the complexity of the choice options. As predicted, participants switched more frequently in the short-term than in the long-term winner condition, suggesting adaptivity in their ecological search. In addition, correct identification of the short-term (long-term) winner choice was more likely the higher (lower) the switching rate. Further, switching had a considerably stronger effect on identification accuracy in more complex problems. Our results illustrate the interplay between ecological and cognitive search and highlight adaptivity in people's sampling behavior.

THE PERSISTENCE OF PREFERENCE UNDER RISK: MEMORY-BASED CHOICE FROM EXPERIENCE

Xiaomu Guo, University of Warwick

Salient events, such as the most and least rewarding events of experience, tend to be better remembered and recalled more readily in memory. When making decisions from experience, people rely on memories of past outcomes, which can be influenced by extreme outcomes. People show a tendency to overweight the largest gains and losses in their memory, leading to more risk seeking for relative gains than losses, contrary to the typical pattern with explicit descriptions. These memories, however, can be forgotten. In many cases, decisions are not made immediately after learning about options, but are often delayed, which requires long-term memory processes. Here, we explored how forgetting influences decisions under risk over longer time frames. We designed an experiment that systematically manipulated delays (from 0 hrs to 7 days) between the initial learning and later consequential decisions. Participants (N=277 total) learned to choose between safe and risky options (e.g., 25 points vs a 50/50 chance of 5 or 45 points) both in the gain or loss domains. After a delay, they made decisions without feedback. Participants were randomly assigned to three delayed-test groups (immediate, 1 hour, 24 hours) as well as a third session with a 7-day delay. All groups were more risk seeking for gains

than losses by the end of learning. This effect was long-lasting and persisted across the delays. Moreover, people exhibited a bias in memory for extreme outcomes, especially for the worst value experienced. There was also a tendency for people to become more risk averse overall for both gains and losses with any delay. These results provide novel evidence that the influence of extreme outcomes on memory and risky decisions persists with an extended timeframe.

USING ECOLOGICAL MOMENTARY ASSESSMENTS AND LARGE LANGUAGE MODELS TO STUDY SOCIAL FACTORS IN REAL-LIFE DECISION MAKING

Aaron B. Lob, University of Zurich

As inherently social beings, humans may be influenced by others' thoughts or behavior, particularly when making decisions under uncertainty. However, little systematic research regarding social influence on real-life decision making exists. Here, we address this by (a) exploring occurrence and variability of social influence during real-life decisions, (b) introducing approaches for collecting verbal protocols and analyzing these with large language models (LLMs), and (c) comparing different methodological procedures for studying everyday decisions. To do so, we collect ecological momentary assessments using the easystudy app (<https://easystudy.cbdr-lab.net>). For 7 days, participants complete event-contingent or retrospective measurements in which they (i) record verbal protocols of all thoughts that cross their mind and (ii) rate their perception of four types of social influence (i.e., norms, accountability, information, and social needs). We use these data to analyze the extent to which social influence occurs in and varies between real-life decision situations. Moreover, we develop an analytical pipeline for quantifying the presence of social influence by means of LLM-based natural language processing of participants' verbal protocols. Finally, we test how methodological decisions, that is, retrospective versus concurrent measurements and spoken versus written protocols influence these results. As such, we aim to better understand how social influence may shape real-life decisions. Moreover, we propose methods using verbal protocols and LLMs for collecting and analyzing data of people's thoughts and perceptions which may allow drawing detailed conclusions about psychological processes at play in a given real-life (decision) situation.

"SUPERSTITION" IN THE HUMAN: HOW REGRESSION TOWARD THE MEAN INFLUENCES SUPPORT FOR PUNITIVE POLICIES

**Noa Palmon, The Faculty of Data and Decisions Science,
Technion – Israel Institute of Technology**

A particularly concerning variant of the rising populist movements in democracies is Penal Populism, referring to punitive policies often advocating for more severe measures, justified on grounds of retribution and moral justice instead of more effective but nuanced crime prevention strategies. These policies aim at rapid electoral gains and simplistic, intuition-based crowd appeal, and gain strong public support despite criminological and

psychological research supporting a different approach. This raises a critical question: What are the conditions under which overestimation of punishment's effectiveness arises, even when punishment is ineffective? Drawing on Tversky and Kahneman's (1974) observation that flight instructors believed criticism was the best way to improve pilot performance, we investigate whether this belief arises from a misinterpretation of regression toward the mean. That is, when feedback has no impact on performance, individuals may misattribute natural fluctuations - improvement after poor performance to criticism and decline after good performance to praise - rather than to chance. We tested this assertion in two pre-registered studies (n=300), with two stages designed to assess whether people perceive criticism as more effective than praise in choices and judgments where feedback has no impact. In Stage 1, participants either provided feedback to "virtual students" or observed a virtual teacher delivering feedback. In Stage 2, participants evaluated different performance scenarios and assessed feedback's impact on students' performance. Our findings reveal that participants who actively provided feedback did not overestimate criticism's effectiveness in their judgments, but observers significantly did. Further analyses sheds light on why.

Mode of cognition

Aula 1 & Aula 2 SF

INSIGHT PROBLEM SOLVING: THE INTERPRETATIVE FUNCTION AND THE EMERGENCE OF UNCONSCIOUS ANALYTIC THOUGHT

Laura Macchi, University of Milano-Bicocca

Language and thought share a unitary cognitive activity, addressed by an interpretative function. This interpretative effort reveals the assonance between the attribution of meaning to an utterance and the discovery of a solution via restructuring in insight problem solving (restructuring as reinterpreting). We suggest a view of complex integrated analytical thinking, which assumes that thinking processes information in different ways, depending on the characteristics of the tasks the subject has to solve, so that reasoning results in a stepwise, rule-based process (for instance, with non-insight problems) or in a widespread activity of search where implicit parallel processes are also involved (UAT-unconscious analytic thought), typically in insight problem solving. We investigated the interrelationship between language and thought in insight problem solving, in both its positive and its negative effects. Three branches of experimental studies have investigated and, we believe, have supported these hypotheses through the reformulation of texts and the use of verbalization. It was also explored the effect of different specific incubation tasks to promote or inhibit an unconscious mind wandering; if this is inhibited, our ability to solve this kind of problems will also be impeded. Our results are discussed in the light of the debate on dual processing theories.

TASK-SPECIFIC STRATEGIES CAN OBSCURE THE INFERENCE FROM OBSERVED NUMERIC MAGNITUDE JUDGMENTS TO COGNITIVE PROCESSES

Yongming Sun, School of Economics, Zhejiang University

Value-based decisions rely on numeric information. Theories of numeric cognition, such as the Compressed Mental Number Line (CMNL), suggests that humans encode numbers logarithmically independently of the task format. We tested whether simpler, task-specific strategies could also explain performance in widely used judgment tasks. In three experiments, participants estimated the average of two-digit numbers, varying presentation format (sequential vs. array) and response type (free estimation vs. binary choice). We manipulated set characteristics (e.g., outliers, number positions) to assess the use of strategies such as focusing on extreme or recent numbers. Using hierarchical Bayesian estimation, we compared a CMNL model with a finite-mixture model. Results showed that approximately half of the participants were better explained by task-specific strategies than by CMNL, suggesting both cognitive processes and strategies are important. Strategies were particularly important in tasks where participants could achieve acceptable levels of accuracy with simple strategies: In array-based choice tasks, two-thirds were best explained by simple strategies and achieved good accuracy. Our findings challenge the view of a single, invariant numerical representation as the only cause for numeric judgments. Rather some tasks can encourage simple, task-specific strategies, that way masking the inference of stable cognitive processes.

COMPUTATIONAL MODELS OF DUAL PROCESS REASONING

Zoe Purcell, University Paris-City

Dual process theories of reasoning propose that human thought arises from two interacting cognitive systems: System 1 (fast and automatic) and System 2 (slow and deliberative). While influential in fields like economics, moral reasoning, and decision making, these theories often remain verbal and under-specified. Existing computational models tend to be narrow, lack rigorous fitting, and fail to capture System 1 and System 2 dynamics, particularly what triggers effortful, deliberative thinking. This article addresses these gaps by developing and testing six computational models that formalize dual process assumptions and their metacognitive controls, such as confidence. These models build on race models of decision-making, incorporating mechanisms for inhibition and confidence to account for key claims, and critically, testing the causal link between confidence and deliberation. Using data from bat-and-ball and base-rate problems ($N_s=150$), we rigorously examine how confidence at time 1 predicts deliberation (via response times and answer change) at time 2. By translating verbal hypotheses into mathematical functions, we examine cognitive mechanisms behind behavioural observations, such as whether System 2 engagement relies on inhibiting heuristic responses and if confidence drives deliberation. By comparing competing models, we evaluate their ability to capture patterns of confidence, reaction times, and accuracy. Preliminary results suggest that models including a causal link between confidence and deliberation outperform those that do not. This work advances the formalization and specificity of dual process theories, offering new insights into the cognitive mechanisms underlying human reasoning.

FAST & SLOW DECISIONS UNDER RISK: INTUITION RATHER THAN DELIBERATION DRIVES ADVANTAGEOUS CHOICES

Michał Bialek

Traditional dual-process theories suggest that making advantageous decisions under risk requires deliberation (System 2), while intuitive decisions (System 1) lead to loss aversion bias. We challenge this view using a two-response paradigm where participants made decisions twice: first under time pressure and cognitive load, then with unlimited time. Across three studies with betting and lottery tasks, we found that when participants made expected-value-maximizing choices after deliberation, they had typically already made these choices intuitively. Moreover, even loss-averse participants showed intuitive sensitivity to expected value through decreased confidence ratings. Our findings suggest that profitable decision-making under risk may be better understood as an interplay between different intuitions rather than a conflict between fast and slow thinking.

PERCEIVED APPROPRIATENESS OF SHARING IN THE DICTATOR GAME: THE EFFECT OF FRAMING AND MODE OF COGNITION

Ginevra Del Mastio, IMT School for Advanced Studies Lucca

This study seeks to investigate whether the appropriateness of actions is influenced by environmental changes that do not affect monetary payoffs, and if so, whether the innate and induced propensity to deliberate influences the tendency to adjust evaluations in light of variations in the interaction context. In an online experiment, participants are randomly assigned to six conditions and are asked to evaluate the appropriateness of three possible actions that an anonymous decision-maker can take in two scenarios: one in which the decision-maker has earned the initial endowment, and one in which the counterpart has done so. Depending on the assigned group, they are asked to report their evaluations either based on their personal opinion or based on the opinion of the society. Additionally, they are assigned to one of three experimental conditions designed to promote reliance on deliberation. Moreover, each subject is asked to complete a six-item CRT, which provides insight into their cognitive profile. We hypothesize that norm perceptions will vary across scenarios to reflect recognition of the recipient's effort. We expect that exogenously induced deliberation—through timing and writing constraints—will influence the propensity to adjust the evaluations in response to a variation in the economic setting, particularly among individuals with a greater natural inclination for deliberation. Our findings show that Personal and Injunctive norms are influenced by contextual framing but are not affected by experimental manipulations designed to encourage deliberation. Furthermore, participants who are more inclined to reflect are more sensitive to framing effects, suggesting that cognitive style plays a role in shaping perceptions of norms.

PREFERENCES FOR NO-PUNISHMENT TOLERANCE ZONES IN POLICY MAKING

Meiying Wang, London Business School

Policymakers often face a dilemma when regulating behavior: enforcing rules too strictly can create perceptions of authoritarianism, while being too lenient risks rendering the regulations ineffective. In this research, we explore how regimes can effectively constrain behavior without being seen as overly authoritarian. We propose that introducing a clear and formalized tolerance zone can strike this balance, allowing for behavioral regulation while preserving positive public perceptions. To illustrate, consider a government aiming to reduce noise pollution by limiting loud noises after 11 pm. A policy without a formalized tolerance zone would issue fines to anyone producing loud noises at any time past 11 pm. In contrast, the government could set the limit for loud noises after 10:30 pm but only enforce punishments for violations occurring after 11 pm. Functionally, the two policies achieve the same formal outcomes. However, across four studies, we find that individuals prefer policies with a zone of tolerance over those without them. We argue that this preference stems from a counterfactual: when encountering a policy with a tolerance zone, individuals assume that, in the absence of such a zone, the behavior would be more strictly regulated. Furthermore, we demonstrate that the presence of a tolerance zone is not merely a framing effect. Individuals still condemn actors who exceed the stated limit, even if they do not cross the punishment threshold. In sum, our research suggests that incorporating a tolerance zone into policymaking is a viable strategy for regulating behavior while maintaining a favorable perception among those whose behavior is being regulated.

ETHICAL JUDGMENT: FORM OF THE SACRIFICIAL FUNCTION

Nigel Harvey, University College London (UCL)

How does the likelihood that people choose to sacrifice one individual to save a number of others depend on the number of people saved? To find out, we used Ryazanov et al.'s (2023) missile interception scenario. A missile has accidentally been fired towards a building in which a number of people are holding a meeting. All will be killed unless the missile is destroyed by intercepting it with a rocket. However, the resulting debris will kill a single person living in a house below. Participants were asked to estimate the likelihood (0-100%) that someone would decide to sacrifice the single person in the house to save the group holding the meeting. In Experiment 1, there were ten values of the Kill/Save (K/S) ratio in which the denominator increased linearly (viz. 2, 116, 230, 344 . . . 1028) in one group and logarithmically (viz. 2, 4, 8, 16 . . . 1024) in a second group. Regression of mean response likelihood on to the denominator of the K/S ratio revealed a significantly better fit in the log2 condition ($R^2 = 0.93$) than in the linear condition ($R^2 = 0.53$). Likelihood of sacrifice increased by a fixed amount each time the K/S denominator doubled.

A second more statistically powerful experiment replicated this finding when K/S ratio was manipulated between participants. It also showed that, when this ratio was varied within-participants, the fit of the regression was better when a quadratic term was included ($R^2 = 0.99$). This was because judged likelihood increased linearly with the log of the K/S ratio up to the point at which it exceeded 75%. After that, it started to asymptote. We assume that this represents a ceiling effect but we are carrying out further experiments to test this hypothesis.

FRAMING PAST ACTIONS AS HEALTHFUL OR HARMFUL ALTERS THE DECISION PROCESS UNDERLYING ALLOCATION OF SCARCE RESOURCES

Siyan Yin, The Wharton School, University of Pennsylvania

This paper investigates how lay individuals navigate the complex tradeoffs in the allocation of scarce resources, using organ transplants as a model decision. Participants judged which of two candidates should receive a transplant by considering both future benefits (i.e., life expectancy) and past responsibility (i.e., blameworthy/praiseworthy behaviors). We used cognitive modeling and eye tracking to uncover systematic decision biases. Previously selected candidates appeared significantly more worthy, even when compared to someone more deserving. While future benefit generally outweighed past responsibility, that effect decreased for large benefits (i.e., diminishing marginal effects). Future benefit was also less influential when responsibility was framed positively than negatively. Moreover, participants' attention patterns skewed their weighting of life expectancy and responsibility. This research exposes the cognitive mechanisms driving tradeoffs between consequentialist and deontological considerations, offering insights into improving allocation policies and suggesting practical interventions to mitigate these biases.

THE ROLE OF SOURCE OF POWER IN THE PUBLIC BAD GAME

Filippo Scarparo, IMT Lucca

Legislation and enforcement mechanisms alone may not be sufficient to address the complex challenges of cooperation, especially when it entails global challenges like climate change. Given the ongoing debates in recent scientific literature, a relevant and up-to-date research question is: how does citizen behaviour depend on the authority's source of power? In particular, in the context of public bads game (e.g., pollution) is there any role for different types of sources of power of authorities. We experimentally explore this question by studying the individuals' response to different types of sources of power of authorities who formulate non-binding investment recommendations. Also, the project has the aim to inquire whether the source of authority has any influence (and of what magnitude) on the authority's behaviour, as captured by their recommendations.

SEPTEMBER 1ST, H 16:00

Advice taking 1

San Micheletto Convegno

REALITY MONITORING IN ADVICE TAKING: THE ROLE OF SOURCE MEMORY AND SOURCE GUESSING IN ADVICE TAKING

Johanna M. Höhs, University of Tübingen

By combining a typical advice taking paradigm with a source monitoring task, the presented research offers new insights into people's ability to discriminate between their own self-generated initial estimates and advice from different advisor sources in delayed advice taking. Participants first generated their own estimates for a calorie estimation task (Experiment 1) or a quantity estimation task (Experiment Series 2) before receiving advice from two different advisor sources of varying quality labeled as 'expert' and 'lay' advisors. Finally, participants completed a classic source monitoring task. In this task, participants indicated the source of the presented estimates (self-generated initial estimate, expert advisor estimate, lay advisor estimate, or new estimate) and then provided their final estimates. The behavioral results of our experiments consistently revealed a source identification benefit for people's own initial estimates in comparison to source identification performance for advice. A multinomial modeling approach that allows the separate measurement of item and source memory and source guessing confirmed a benefit for own initial estimates in source memory. The results further demonstrated the importance of source memory and source guessing for the consideration of own and other's beliefs in people's final judgment. The presented work extends the previous advice taking paradigm by a source monitoring task and offers a fine-grained perspective on the contribution of cognitive processes that determine adaptive advice integration.

MODELING ADVICE TAKING AS A 2-STEP PROCESS TO PREDICT WHEN PHYSICIANS ARE LIKELY TO FOLLOW AN ALGORITHM

Olga Kostopoulou, Imperial College London

Risk prediction algorithms are developed in ever-increasing numbers to support clinical decisions. However, the popular concept of "algorithm aversion" has cast doubts on their promise of improving decision making. In two recent studies, we investigated the impact of an unnamed algorithm, which calculates the probability that a patient with symptoms has a cancer, on GPs' risk estimates and referral decisions (Kostopoulou et al., 2022; Pálfi et al., 2024). We also tested whether different interventions improved algorithm utilisation. We will present findings from modelling the data from these two studies using Himmelstein's "dual hurdle model of advice utilisation" (Himmelstein, 2022). We modelled the data as a 2-stage process, where 1) clinicians first decide to ignore, fully adopt, or integrate the algorithm depending on how different it is from their own, unaided estimate; and 2) having decided to integrate it, they then engage in an averaging process, giving more weight to the algorithm than their own judgement. Modelling these data as a 2-step

process helped to locate more precisely the impact of the interventions than conventional regression analyses.

THE HUMAN IN THE LOOP: INCENTIVE STRUCTURES AND EVALUATION IN AI-AUGMENTED DECISION-MAKING

Or Drath, Tel Aviv University

The increasing integration of AI into our lives raises critical questions about human-AI interaction. While AI offers valuable insights, human oversight is essential, requiring the ability to disagree with AI recommendations. However, incentive structures, whether explicit or implicit, can significantly influence these interactions. When rewards are primarily linked to AI agreement, individuals may suppress their own judgment, leading to suboptimal decisions. Conversely, excessive emphasis on disagreement can hinder the utilization of AI's potential benefits. Furthermore, societal and cultural norms can exert pressure to conform to AI expectations, stifling independent thought. This study investigates how reward structures that incentivize agreement or disagreement with AI recommendations influence human decision-making. Using a Signal Detection Theory framework and a web-based experiment with 544 participants, we found that while automation improved performance, rewards could decrease performance when operators were incentivized to override automation recommendations. This highlights the complex nature of human-automation collaboration, where reward-driven motivations can have unintended consequences. Our findings emphasize the importance of carefully considering incentive structures and continuously monitoring human-AI interactions to ensure optimal collaboration and avoid unintended consequences.

LEARNING TO BE ALGORITHM AVERSE: PEOPLE FOLLOW ADVISORS THAT ALIGN WITH THEIR BIASES

Ori Plonsky, Technion

In 4 preregistered experiments (total N = 1151), we explore when people learn to prefer human expert over algorithmic advice and vice versa. We first find that people who develop experience-based task expertise often provide biased advice, reflecting biases in decisions from experience. When these biased advices are provided to advisees who also receive unbiased algorithmic advice, algorithm aversion emerges: People prefer biased human experts over unbiased algorithms. Yet, when human advisors are contrasted with algorithms that provide even more consistently biased advice, the pattern reverses, and people follow algorithms more than humans. Thus, people favor advisors that align with their own biases.

LOCAL COMPETITION FAVORS SPITE IN INDIRECT RECIPROCAL INTERACTIONS

Aljaz Ule, CREED, Amsterdam School of Economics

Humans frequently cooperate to achieve benefits unattainable through selfish behavior. Punishment of free-riders is key for sustaining cooperation but also costly, raising questions about the evolutionary stability of such hurtful behavior. Some evolutionary models suggest that individuals may be willing to hurt unrelated strangers out of spite in competitive environments. However, empirical evidence about the effect of competition on spite is missing. Using a laboratory experiment, we manipulate the scope of competition to investigate its influence on hurting between unrelated humans in an indirect reciprocity game. We observe distinct behavioral patterns between local and global competition. When competition is confined to isolated groups we find frequent hurting expressed through antisocial spite and retaliation. In contrast, when competition extends globally across several groups, hurting is primarily directed at free-riders. Moreover, kindness is then rewarded which in turn promotes cooperation. Thus, while isolated competition fosters inefficient, antisocial behaviors, global competition encourages prosociality and cooperation.

FROM COORDINATION TO COOPERATION: PREVIOUS COORDINATION BEHAVIOR FACILITATES SUBSEQUENT COOPERATION

**Dorothee Mischkowski, Leiden University,
Max Planck Institute for Research on Collective Goods**

The question of whether prosocial behavior remains stable over time and across situations, or is compensated for in the form of moral licensing, remains an ongoing puzzle. The present study investigated how prior interactions influence subsequent cooperation behavior when interests are aligned vs. conflicted across situations (i.e., coordination games vs. social dilemmas). Specifically, we hypothesized that an increase (vs. decrease) in conflicting interests from one economic game to the next would positively predict subsequent cooperation behavior. Furthermore, we examined whether this potential spillover effect might be conditional on dispositional prosociality (i.e., Honesty-Humility, HH, and Social Value Orientation, SVO) as these individuals by disposition show temporally stable and generalized prosocial behavior. To this end, an existing data set (N = 421 participants) was re-analyzed. Participants played 67 hypothetical, one-shot economic games that varied in the continuous competitiveness-cooperativeness index (CCI), which allows the comparison of games in their degree of aligned preferences vs. conflicting interests. As expected, differences in CCI between two subsequent games were predictive of cooperation behavior: An increase (vs. decrease) in CCI relative to the previous game positively predicted cooperation behavior. This spillover effect was particularly pronounced for individuals with a high degree of dispositional prosociality (i.e., for individuals high in SVO and HH alike). The

findings require replication, but provide an important starting point whether and for whom maximizing mutual gains in coordination games facilitates costlier forms of cooperation in subsequent conflicts of interest.

IS HOSTILE BEHAVIOR INTUITIVE? A HAWK-DOVE EXPERIMENT WITH A VARYING HARSHNESS OF CONFLICT

Pablo Marcos-Prieto, University of Florence

In the context of a one-shot Hawk-Dove game, we experimentally investigate the effect of the mode of reasoning – deliberative or intuitive – on the propensity to behave hostilely (like a Hawk), and we assess whether this effect (if any) becomes more or less pronounced when varying the harshness of the conflict. Our results show that deliberation (intuition) decreases (increases) the likelihood of behaving hostilely and that these effects do not depend on the harshness of the conflict.

STATISTICAL DISCRIMINATION AND MODEL MISSPECIFICATION

Yosuke Hashidate, Sophia University

We study statistical discrimination using a model misspecification approach. Our analysis focuses on an agent whose preferences are not rooted in prejudice, yet whose behavior can nonetheless result in discrimination. Specifically, we examine an agent who belongs to a group and makes decisions under uncertainty influenced by the group. The agent acts based on individual rationality and is concerned with the aggregation of priors within the group. We provide an axiomatic foundation for a decision rule that incorporates the group's reference priors. Our model proposes that the agent chooses an act by considering the "distance" between her/his own prior and the group's prior, measured by relative entropy. We characterize the conditions under which statistical discrimination arises. We also discuss potential approaches for eliminating such discrimination.

Session: Heuristic & Biases 2

Room: Guinigi SF

"STOP THE COUNT!" - CUMULATIVE REDUNDANCY FOSTERS BELIEFS IN ELECTION FRAUD

André Vaz, Ruhr-Universität Bochum

When people observe cumulative progressions, such as team points in a season, they often fail to ignore previous observations, leading to the Cumulative Redundancy Bias (CRB). The CRB causes early leaders to be perceived more favorably, even if overall per-

formance is similar. Previous research shows early-lead competitors are seen as better and more likely to win, even if the competition ends in a tie or the early lead is due to a head-start. We adapted a “vote-count-race” scenario to explore the CRB’s impact on beliefs in election fraud during the 2020 U.S. presidential election. We propose that the CRB may contribute to perceptions of election fraud independently of partisanship or individual differences. Across seven studies, we presented vote count progressions and measured beliefs in election fraud based on whether the winning candidate showed an early or late lead. Participants judged the winner as better when the lead was early but favored the loser when the win came late. The same election was perceived as more likely fraudulent with a late lead, and this was replicated with vote counts in percentage format. Using real-world vote counts from the 2020 Georgia election, we found that reversing the voting order to create an early lead reduced perceptions of fraud. Participants believed fraud was more likely with a late lead, even when the late lead was explained. In a final study, both Republicans and Democrats judged election fraud supporting Biden less likely with an early lead. Our research demonstrates how the CRB can influence perceptions of an election’s credibility. A sudden reversal of results contradicts biased perceptions, weakening trust in the election’s legitimacy. False beliefs about election fraud may be mitigated by not publishing partial results.

EXPLAINING THE 1-IN-X FORMAT EFFECT

Lucia Savadori, University of Trento

The 1-in-X format effect is a cognitive bias where probabilities expressed as “1 in X” (e.g., 1 in 50) are perceived as higher than mathematically equivalent ratios like “N in NX” (e.g., 20 in 1000). This bias persists across populations and real-world choices, regardless of numeracy skills, but its underlying mechanism remains unclear. In 11 preregistered online experiments with Prolific participants from the USA and UK, we explored potential explanations, focusing on empathy and the availability heuristic. The empathy account suggests that the singular “1” in the numerator enhances empathy, driving the bias. However, our findings ruled out this explanation, showing no link between empathy and the 1-in-X effect, even when manipulating empathic engagement or measuring individual empathy differences. Instead, we found initial support for an availability-based account. The bias appears driven by the greater ease of recalling and visualizing 1-in-X ratios compared to N-in-NX formats. This effect persisted across both highly available (e.g., COVID-19) and less available outcomes (e.g., Anaplasma phagocytophilum infection), indicating outcome availability does not moderate the bias. Participants rated 1-in-X ratios as easier to visualize and perceived real-life examples more easy to recall for this format, though response times for example generation were inconclusive. These results suggest the 1-in-X effect stems from the cognitive availability and frequent occurrence of such ratios in everyday life, making them easier to process. This research enhances understanding of how numerical formats influence probability judgments, with implications for risk communication in healthcare, public policy, and financial decision-making.

WHY ARE AIRCRAFT ACCIDENTS MORE LIKELY WHEN THE CAPTAIN RATHER THAN THE CO-PILOT IS AT THE CONTROLS? A

TEST OF TWO PSYCHOLOGICAL THEORIES

Peter Ayton, University of Leeds

Most commercial aircraft are flown by a flight crew of two pilots: a captain or pilot-in-command (PIC) and a co-pilot or second in command (SIC). One pilot will be allocated the role of the “Pilot Flying” (operating the controls) the other pilot will be allocated the role of the “Pilot Monitoring” (monitoring the “Pilot Flying”). We analyze global civil aviation data for the period 2000–2020 on 841 aircraft accidents and incidents resulting in 5318 fatalities. We find clear evidence of a crew assignment effect: significantly more such events occur, and significantly more fatalities result, when the captain rather than the co-pilot is the “Pilot Flying” – despite the fact that the captain and the co-pilot adopt these roles equally frequently. We propose and test two theories to account for this observation. One theory is that, when the co-pilot is the pilot monitoring, role-dependent status hierarchy effects interfere with effective monitoring, communication and decisions; e.g., due to their unequal status, the co-pilot may be less willing to intervene than the captain would be in the “pilot monitoring” role, and/or the captain may be less willing to respond to intervention than the co-pilot would be in the “pilot flying” role. Another theory is that the crew assignment changes cognitive workloads such that, when the captain is the “pilot flying”, the burden of flying the aircraft detrimentally interferes with the pilot-in-command function. Consistent with the status hierarchy theory we find the crew assignment effect is larger with younger co-pilots. However the cognitive workload theory was not supported: despite studies showing age-related decline in cognitive performance of older pilots, we find the crew assignment effect is independent of the captain’s age.

Consumer Decision Making 1

Aula 1 & Aula 2 SF

LACK OF AUTONOMY AND SPONTANEOUS RECOVERY FROM HEDONIC DECLINE

Jing Hu, University of Macau

People get accustomed to almost all kinds of stimuli over time. That is, their somatic, motivational, and affective (either positive or negative) responses to a stimulus all tend to attenuate over repeated stimulation. When the stimulus is withheld after response decrement, however, people’s responsiveness to the stimulus tends to recover spontaneously over time. Autonomy refers to people’s ability to make decisions on their own, and the perception that their choices are self-determined and directed by their authentic desires and considerations. Providing and exercising free choices are considered an essential component of consumers’ experience of autonomy. As consumers, we seem to be able to freely choose what we want most of the time. Nevertheless, restrictions on consumer choices abound. While the impacts of autonomy (or the lack of) on stimuli evaluation are well documented, little is known about how it influences the rate at which people recover from hedonic declines following repeated consumption. The

present paper aims to fill this research gap. We propose that lack of autonomy in consumption would lead consumers to recover more slowly from hedonic decline caused by repeated consumption, as compared to situations in which the sense of autonomy is not compromised. Across four laboratory studies, we find empirical evidence that consumers recover more slowly from hedonic decline when their choice autonomy is constrained. This research highlights the importance of empowering consumers with meaningful choices, particularly in industries with repeat purchases. By prioritizing consumer autonomy, marketers can effectively avoid factors that hinder recovery, ultimately enhancing overall well-being and satisfaction.

DON'T SAY "VEGAN" OR "PLANT-BASED". LABELING INTERVENTIONS TO PROMOTE FOOD CHOICES WITHOUT MEAT AND DAIRY.

Patrycja Sleboda, Baruch College, City University of New York

Americans' consumption of meat and dairy exceeds health recommendations and is not environmentally sustainable. In two U.S.-wide experiments (Study 1 N=7,341 and Study 2 N=9,911), we studied effects of framing labels on participants' likelihood of choosing a vegan food, over one with meat and dairy. Participants chose between a vegan food basket and another with meat and dairy which were available from an actual online store. A subset of participants was randomly selected to receive the food basket of their choice. In Study 1, only 20% of participants choose the vegan food basket when it was labeled "vegan", and 27% when it was labeled "plant-based." This number increased when the label said "healthy" (42%), "sustainable" (43%) or "healthy and sustainable" (44%). In Study 2, only 23% of participants chose the vegan food basket when it was labeled "vegan" and 32% when it was labeled "plant-based", while 46% when the label said "healthy", 47% when "sustainable", with the "delicious" label performing almost as well (42%). In both studies the label's framing effect was consistent across sociodemographic groups, political affiliation and was even observed among red-meat eaters. These findings suggest that changing the labels of vegan food to focus on positive frames rather than neutral frames shows promise for informing people's food choices. Our findings could potentially be applied in online shopping environments and real-world settings such as cafeterias, restaurants, groceries, supermarkets. Insights from JDM research can help improve both individual health and the health of our planet.

WORTHY OF YOUR BINGE: HOW MEDIA MOMENTUM DRIVES SATISFACTION IN CLUMPED CONSUMPTION

Rachele Ciulli, University of Pennsylvania

We show in 5 experiments and a dataset (<https://researchbox.org/2388> and PEER_REVIEW_passcode=UNJGTP) how binge-worthiness - the likelihood consumers will prefer binge-watching a tv show and be more satisfied with it when they do - depends on the content's degree of media momentum: the positive interaction of its perceived complexity (i.e., the degree of cognitive effort necessary to follow the plot) and resonance (i.e., the degree of cognitive and emotional involvement the plot offers). Clumping content with these characteristics lead to increasing marginal returns on utility and higher product's sa-

tisfaction, offering platforms new ways to identify true binge-worthy content, for the good of consumers, shows, and likely, their own bottom line.

MORE CORRELATIONS SIGNAL CAUSATION: THE REINFORCEMENT EFFECT OF CORRELATIONAL SCOPE ON PERCEIVED CAUSALITY

Yue Zhang, Erasmus University Rotterdam

As more and more data become available to business analysts and scientists, statistical correlations between consumption patterns and individual (e.g., health) conditions are easy to uncover and frequently reported in the media. However, many correlations are spurious, prompting the question of when consumers interpret them as reflecting causal relationships. Across eight studies, we demonstrate that a correlation (e.g., between drinking tea and having healthier bones) is perceived as more likely reflecting a causal relationship (i.e., drinking tea makes bones healthier) when the plausible cause reportedly correlates with additional variables (e.g., heart conditions). Additional correlations enhance perceptions that the plausible cause has a generalized effect on the parent category of the target outcome (e.g., overall health), strengthening the belief that the focal correlation reflects a causal relationship. Consistent with this process, the effect of correlational scope attenuates when the additional and focal correlates are weakly related and thus less obviously associated with any parent categories of the target outcome. We show that correlational scope can affect product choices, and that its effect is mitigated when the correlation presents the plausible cause after the focal outcome. These findings have implications for our understanding of causality judgment and for consumers' well-being.

Social Evaluation 1

San Francisco Church

FLATTERING ADVICE: AVOIDING DISAPPOINTMENT IN ADVICE-GIVING

David Hagmann, HKUST

Good advice improves decision quality but often requires delivering unpleasant truths that may disappoint advisees. Across three pre-registered and incentivized experiments involving real adviser-advisee interactions ($N = 3,900$), we show that advisers prioritize avoiding disappointment at the expense of accuracy and their own earnings. In Study 1, advisers financially rewarded for accuracy still tailor recommendations to aspirational goals expressed by advisees, resulting in worse advice. When incentivized to be liked, advisers provide even more flattering advice, and advisees reward this by rating these advisers as more likable, despite the advice being less honest and less accurate (Study 2). The desire to avoid disappointment may lead to inequities if there are differences in expectations across social groups. In Study 3, we examine a setting in which men expect to perform better than women. We show that advisers take into account these expectations, leading

to systematically different advice for men and women even when their gender is unknown to advisers. Advisers' efforts to avoid disappointment may thus contribute to systematic gender disparities in advice, with implications for downstream decision-making.

MORAL INGREDIENTS TO FINANCIAL MISCONDUCT

Irsa Ajmal, Warwick Business School

This paper explores individual decision-making behaviour under moral dilemmas in a financial market setting to highlight which features (ingredients) of a financial misconduct have a moral force in Finance. We conduct experiments in the form of scenario based surveys to examine how individuals rate the moral acceptability of a trader's actions under the hypothetical scenarios to discover the features of a financial misconduct which lead to emotional moral dilemmas in the field of Finance.

THE N-EFFECT: EXAMINING THE DYNAMICS OF ONLINE OPINION EXPRESSION IN RESPONSE TO VOLUME

Matheus Menezes, IESEG School of Management

Online opinions can accumulate in large volumes, but little is known about how the volume itself can influence future contributions by those posting an opinion. It is also unclear how managers should interpret opinions that accumulate in large volumes and which tactics they can employ to address the effects of volume. In this study, we examine the dynamics of how people express their opinions in response to the growing volume of others' opinions for a given target. The analyses of two datasets and four experimental studies reveal a novel phenomenon, dubbed 'N-effect'. As the volume of opinions (N) for a target increases, the content of those posting an opinion becomes less analytical and more intuitive. Results also show that online contributors interpret N as a cue for how much responsibility they should feel towards readers when sharing their opinions. These findings have implications for managing large volumes of online opinions.

AI DISCLOSURE IN ENVIRONMENTAL APPEALS REDUCES CLIMATE RISK PERCEPTION AND CURTAILS DONATIONS

**Soroush Verdi, Faculty of Economics and Business,
University of Groningen, the Netherlands**

Generative Artificial Intelligence (GenAI) is transforming advertising, offering unprecedented creativity and cost efficiency. Many organizations, including nonprofits, view AI as a promising tool for crafting persuasive ads at lower costs. However, new regulations mandate disclosure of AI involvement in advertising, raising critical questions about consumer responses to such transparency. Our research examines this issue in the context of environmental appeals—ads by environmental organizations and charities aimed at encouraging donations

and action against climate change. Despite AI's appeal to organizations, our findings reveal unintended consequences of transparency from a consumer perspective. Across four studies (three incentivized), we show that AI disclosures in environmental appeals consistently lower consumers' perceived climate change risk and reduce donations to the cause. These negative effects arise from consumers' three negative concerns: (1) doubts about the ad's authenticity, (2) suspicions of manipulative intent, and (3) perceived lack of organizational commitment. Finally, we identify a strategy to mitigate these concerns, restoring climate risk perceptions and enhance monetary donations despite AI-disclosures in the ads. Our findings underscore the complexities of using AI in environmental advertising and the need to balance transparency with approaches that sustain audience engagement and trust.

September 2nd

DAY OVERVIEW

Tuesday 2 sept				
9:00 - 10:15 Parallel Session 1				
Artificial Intelligence 2 San Micheletto Convegni	Prosocial Behavior 2 San Micheletto Affresco	Decision Processes 2 Guinigi SF	Financial Decision Making 2 Aula 1 & Aula 2 SF	Sustainability San Francesco Church
10:15 - 10:45 coffee break San Francesco Complex & San Micheletto Complex				
10:45 - 12:00 Parallel Session 2				
Decision Processes - Broader Perspectives 2 San Micheletto Convegni	Risky choice 3 San Micheletto Affresco	Heuristics & Biases 3 Guinigi SF	Misinformation & polarization 2 Aula 1 & Aula 2 SF	Strategic Sophistication San Francesco Church
12:00 - 13:00 Poster Session & Lunch San Francesco Complex				
13:00 - 14:15 Parallel Session 3				
Predicting & Forecasting San Micheletto Convegni	Risky choice 4 San Micheletto Affresco	Decision from Experience 2 Guinigi SF	Consumer Decision Making 2 Aula 1 & Aula 2 SF	Gender San Francesco Church
14:15 - 14:40 Coffee Break San Francesco Complex & San Micheletto Complex				
14:40 - 16:00 Keynote Speech Prof. G. Lordan The London School of Economics San Francesco Church				
16:00 - 17:00 Parallel Session 4				
Advice taking 2 San Micheletto Convegni	Choice Modelling San Micheletto Affresco	Heuristics & Biases 4 Guinigi SF	Climate Change Aula 1 & Aula 2 SF	Social Evaluation 2 San Francesco Church
17:00 EADM general Assembly San Francesco Church				
19:30 Social event San Francesco Complex				

POSTER SESSION

Day	Author	Title
2-Sep	Alessandra Carella	BEHIND THE SEAMS: PREDICTORS OF SUSTAINABLE FASHION CONSUMPTION AMONG ITALIAN CONSUMERS
2-Sep	Angelica Mori	Entrepreneurship and Compassion Training in Italian Prisons: An Experimental Model for Inclusive Rehabilitation and Reintegration
2-Sep	Aviel Ratson	Rare Breakthroughs in Collective Innovation: Investment in Public Goods With Rare Events
2-Sep	Davide Faipò	Self-Reported Uncertainty in the Sampling Process of Decision from Experience Tasks
2-Sep	Douglas Lee	A Supply and Demand Approach to Information Processing in Decision-Making
2-Sep	Elaine Strittmatter	
2-Sep	Filip Tiljak	Can contributions to public goods be contagious? Tipping points in social decision-making
2-Sep	Fuji Yoichiro	
2-Sep	Hannah Pongratz	Response times in intertemporal choiceMeta-dataset and meta-study
2-Sep	Jakub Krawiec	The Synergistic Effect of Nudge and Boost Interventions on Savings Behavior
2-Sep	Katarzyna Sekścińska	Saving for Tomorrow: The Impact of Time Perspectives on Retirement Planning
2-Sep	Lijun (Shirley) Zhang	The Charity Capacity Curse
2-Sep	Luisa Schulz	Cue integration in metacognitive control decisions
2-Sep	Milica Vdovic	Moral reasoning about real world issue - disparities between online and offline moral judgments in Luigi Mangione case
2-Sep	Panagiota Tsilogianni	A cross-country examination of responses to inequality
2-Sep	Rafal Muda	Using a foreign language increases risk-taking in prenatal testing decisions but not due to attenuated emotional responses
2-Sep	Sara Floriana Zanini	Pre-paid utilities: how virtual stocks affect network services consumption.
2-Sep	Sarah Forst	Deciding fast and slow: A model-based analysis of intuitive and deliberate decisions
2-Sep	Selina Zajdler	Disentangling Familiarity and Recollection in the Truth Effect: A Bayesian Hierarchical Process Dissociation Approach
2-Sep	Tim Rakow	How (well) do those who research risk and uncertainty acknowledge uncertainty or imprecision for the effects they research?
2-Sep	Yarom Sagiv	Does similarity-based customization of algorithmic advice increase advice taking?

Session Breakdown

2-Sep	2 Sept h. 9.00	2 Sept h. 10.45	2 Sept h. 13.00	2 Sept h. 16.00
San Micheletto Convegni	Artificial Intelligence 2	Decision Processes - Broader Perspectives 2	Predicting & Forecasting	Advice taking 2
	Doron Cohen Human-Automation Collaboration, Overreliance, and the Operator's Dilemma	Daniel Banki Is behavioral science predictable?	Adrian Banks AI-Augmented Decision Making: Using Large Language Models to Improve Everyday Decision Making	Florian Scholten The impact of memory modification mechanisms as metacognitive strategies for adaptive decision making
	Piotr Winkielman Effort can have positive, negative, and non-monotonic impacts on outcome value in economic choice. New behavioral data and a novel model.	Marta Caserotti Beyond Borders: Moral Imperatives and Threat Perceptions in Shaping Immigrant Acceptance	Janina Hoffmann Meta-predictions as a solution to the shared information problem?	Maxim Milyavsky Advice or Opinion? How an Autonomy Focus Tips the Scales: The Focal Goal Effect on Social Information Preferences
	Samuel Meyers The Existence of Manual Mode Increases Human Blame for AI Mistakes	Nora Hangel Preregistration and Open Science, the theory in contrast to insights from the practice in JDM: A qualitative research study	Maren Mayer Dependent numerical judgments in sequential collaboration: A computational modeling approach	Nico Gradwohl Balancing experience and advice in a spatially correlated bandit task: Advice is generalized but underused
	Shir Etgar Implicit Gender Cues Can Bias LLMs' Financial Advice	Tatiana Celadin Correlation Neglect and Narratives in the Ageing Society	Adam Harris Outcome severity increases verbal probabilities used to communicate precise likelihoods	Giacomo Sacchetti Learning and Transfer with Environment and Feedback's Manipulations in Normal Form Games
		Tehilla Ostrovsky Most false recognition memory responses are due to reasoning, not genuine memories		

2-Sep	2 Sept h. 9.00	2 Sept h. 10.45	2 Sept h. 13.00	2 Sept h. 16.00
San Micheletto Affresco	Prosocial Behavior 2	Risky choice 3	Risky choice 4	Choice Modelling
	Amy Bruck Group Meta-Perceptions and Their Influence on Generosity Toward Outgroup Members in Minimal Groups	Asher Lawson Psychologically interpretable differences in decision making under uncertainty	Maayan Finegold Killed the Cat, but also Saved it: Curiosity's Dual Impact on Active and Passive Risk Behaviors	Franziska M. Leipold Unbiasing the Measurement of Judgment Accuracy: A Hierarchical Approach to Estimating the Parameters of the Lens Model Equation
	Linh Vu Prosocial by default: Setting prosocial defaults increases overall prosociality even when a fraction of people are unresponsive	Guy Hochman Financial Risk Tolerance during a Major Negative Life Experience: The Case of the COVID-19 Pandemic	Renato Frey A Meta-Analysis Synthesizing 20 Years of Evidence on the Balloon Analogue Risk Task (BART)	Melvin Marti Decomposing financial decisions: A structural modeling approach
	Lorenzo Santini The Impact of Digital Communication Policies to Stimulate Donations and Donor Retention: Evidence from AVIS Toscana	Jake Spicer Mental Sampling in Preferential Choice: Tracing the Process using Random Generation	Ro'i Zultan Deterrence of Unwanted Behavior: a Theoretical and Experimental Investigation	Yitong Lin Bias in Belief Updating: Combining the Bayesian Sampler with Heuristics
	Yossi Tobol Do You Want the Truth? Let's Go to the Pub	Joanna Sokolowska Decisions involving tradeoffs between health and economic losses	Tomáš Jagelka Separating Preferences from Endogenous Effort and Cognitive Noise in Observed Decisions	Craig McKenzie Choices Without Preferences: Principles of Rational Arbitrariness
	Danit Ein-Gar The Effect of Recipient's Gender and Donor's Culture on Donation Choices	Luca Congiu Framing Allais: Is the Paradox Robust to the Pictorial Framing of Lotteries?	Erica Ordali Measuring Changes in Risk Preferences Over the Life Cycle: Experimental Evidence from Economics and Psychology.	

2-Sep	2 Sept h. 9.00	2 Sept h. 10.45	2 Sept h. 13.00	2 Sept h. 16.00
Guinigi SF	Decision Processes 2	Heuristics & Biases 3	Decision from Experience 2	Heuristics & Biases 4
	Moritz Ingendahl Truth assessment on a global level: How people integrate multiple pieces of repeated and non-repeated information into perceptions of truth	Fabio Del Missier Hindsight bias and recollection bias: A relative accessibility account	Marco Biella Navigating the Social Environment Via a Sampling Approach to Trust	Eyal Gamliel Applying Fuzzy-Trace Theory to Attribute-Framing bias: Gist and Verbatim Representations Among Older and Younger Adults
	Nathan Voermans Mood, Anxiety, and Risk	Mandeep K Dhami Confirmation Bias, Judgmental Coherence and Cognitive Reflection in Alternative Hypotheses Evaluation	Kuang-Heng Li The Decision Environment and Confidence in Experiential Risky Choice	Giulia Priolo The robustness of mental accounting: A global perspective
	Tim Mullett Temporal Dynamics of Serial Position Effects in Decision-Making	Nine Adler Challenging the halo effect: how nuanced are trait-trait inferences?	Rebecca West Balancing uncertainty: The role of sample size and variability across decision-making domains	Jon Bogard The Pick-the-Winner-Picker Heuristic: Preference for Categorically Correct Forecasts
	Tomasz Zaleskiewicz Mental Imagery as a Decision-Making Mode: The Comparison of Recreational and Financial Domains	Sonja Kunz The unhealthy=tasty illusion: How contexts and cognitions affect food decisions	Gal Gutman Integrating Social Benefits into Business Models: Impacts on Customer Decision-Making	Wolfgang Gaissmaier Explicit discrimination and ingroup favoritism, but no implicit biases in hypothetical triage decisions during COVID-19

2-Sep	2 Sept h. 9.00	2 Sept h. 10.45	2 Sept h. 13.00	2 Sept h. 16.00
Aula 1 & Aula 2 SF	Financial Decision Making 2	Misinformation & polarization 2	Consumer Decision Making 2	Climate Change
	Gerrit Antonides The effect of trust on household risky financial investments	Erik Løhre Social considerations in overconfidence and uncertainty expression: Results of two registered report replications	Anne G Miller Separate Needs in the Leisure-Consumption Choice	Anne Günther The antagonistic, additive, and synergistic effects of coupling economic and behavioral climate policies
	Sandra Andraszewicz Skin conductance predicts earnings in a market bubble-and-crash scenario	Giulia Maimone Whoever is Not With Me is Against Me: The 'Moderate as Out-Group' Effect	Eduard Brandstätter No Evidence for Opportunity Cost Neglect in Simple Choice Situations After Adjusting for Incomplete Experimental Design Features	Enrico Rubaltelli Climate Justice Support in a Polarized World: The Role of Political Affiliation, Thinking Style, and Perceived Connectedness
	Steve Heinke Do Traders Believe that Public News Give Them an Edge?	Kelly Kirkland Moralization and the Fundamental Attribution Error: How Moral Convictions Drive Misattributions of Character	Jacob L. Orquin Consumer search patterns in online retailing	Marie Juanchich Perceived consensus of scientific predictions about low probability events?
	Yael Mintz Rational by Comparison: The Benefits from Not-Quite-Rational Decisions in a Pyramid Scheme	Santiago Ventura The Role of Political Polarization in Trust and Policy Perception	Yuqi Ye Inequality-related status consumption is linked to impaired health: a decade of daily spending and health outcomes of 470,000 individuals	
	Yefim Roth Warning: Warnings Can Backfire Even When They Provide New and Important Information	Folco Panizza Wish for an authoritarian leader and conspiracy beliefs around the world		

2-Sep	2 Sept h. 9.00	2 Sept h. 10.45	2 Sept h. 13.00	2 Sept h. 16.00
San Francesco Church	Sustainability	Strategic Sophistication	Gender	Social Evaluation 2
	Inbar Sani-Elia Company versus Product-Associated Sustainability Claims and Consumers' Responses to Sustainable Luxury Products	Katya Tentori Forecasting accuracy: From formal models to human intuitions, and back (with a new scoring rule)	Enav Friedmann Gender differences in implicit vs. explicit responses toward traditional and non-traditional advertising	Alexandra Ortmann The Social Learning Trap: Limitations of Social Learning from Incomplete Information in a Dynamic Decision-Making Task
	Jan K. Woike Roll for the future: First results from a novel dice-based game paradigm focusing on sustainable decision making	Konstantinos Armaos The Wason Selection Task in the long-run: Evaluating the truthfulness of universal and probabilistic statements through evidence search	Hagai Rabinovitch Women Inclusion in gender-mixed Coalitions: Cross-cultural Experimental Evidence – A Registered Report	Jingyi Lu Contrast Amplification: Evaluations of Groups (vs. Individuals) Are More Contracted Away From Standards
	Lukas Engel Updating misperceptions of battery-electric vehicles through tailored information-based interventions.	Marcel Zeelenberg Upward Counterfactual Thinking and the Experience of Greed	Lara Többen Cooperation in spite – or because – of the system? How unequal opportunities and satisfaction predict prosocial behavior in economic games	Uriel Haran Doing good for bad reasons: Individual versus corporate framing of ethical actions
	Mattia Galante Trends in European finfish consumption: Evidence from a meta-regression analysis and implications for sustainable supply chains.	Xingyu (Shirley) Liu When Default Options Explain Away Preferences: A Causal Reasoning Account of Mental State Reasoning from Default Options	Lior Avieli Gender Differences in Implicit Contempt Toward Empowerment-themed Advertisements Featuring Muscular Women Across Ad Formats	
	Zahra Rahmani Azad Recurrent Carbon Labels Induce Bipartisan Effects in Environmental Choices Under Risk	Luca Polonio Consistency of Strategic Sophistication and Persistence of Learning in Games	Ruggero Roni Hostility is (almost) gender neutral: an Experimental Study using the Hawk-Dove Game	

SEPTEMBER 2ND, H 9:00

Sustainability

San Francisco Church

COMPANY VERSUS PRODUCT-ASSOCIATED SUSTAINABILITY CLAIMS AND CONSUMERS' RESPONSES TO SUSTAINABLE LUXURY PRODUCTS

Inbar Sani-Elia

As luxury brands increasingly integrate sustainable features into their products, existing research offers contradictory findings regarding consumers' responses to these products. Given the added environmental benefits of sustainable luxury products, it is worth identifying conditions that enhance consumers' positive responses towards these products. This research introduces sustainability association—a marketing communication factor that has not yet been explored in the context of environmental impact—as a potential explanation for these conflicting findings. Specifically, it examines whether marketing communication associated with the sustainable luxury product itself or associated with the company behind it influences consumer responses differently. A field study and two experiments show that consumers respond more favorably to company-focused (as opposed to product-focused) sustainability associations when evaluating sustainable luxury products. Findings also show that this effect is mediated by the perceived positive environmental impact.

ROLL FOR THE FUTURE: FIRST RESULTS FROM A NOVEL DICE-BASED GAME PARADIGM FOCUSING ON SUSTAINABLE DECISION MAKING

Jan K. Woike

Human-made climate change is one of the most pressing challenges of our times, threatening lives and livelihoods. Mitigating the impacts of global heating and reducing global carbon emissions requires global cooperation. However, climate change and its underlying dynamics are a complex system with non-linear growth dynamics, delayed impacts, and a conflict between self-interests and societal benefits. Games allow people to experience these dynamics in the safety of a simulated environment. Going beyond simpler paradigms used in laboratory studies, we present a new incentivized climate change game for experimental studies both offline and online. The game is played with gameboards and multi-colored dice. It includes exponential dynamics and involves decisions between short-term point maximization (risking adverse consequences) and long-term investments that mitigate exponentially increasing adverse consequences. The game can be played in a neutral or a climate-change frame, and as a solo or group versions adding either an intra-group social dilemma (i.e. potential adverse consequences are shared by everyone in the group) or an inter-generational dilemma (i.e., adverse

consequences for future players). I will present the game structure, and the analysis of a first data collection with different variants of the game and a number of cognitive scales and preference measures.

UPDATING MISPERCEPTIONS OF BATTERY-ELECTRIC VEHICLES THROUGH TAILORED INFORMATION-BASED INTERVENTIONS.

Lukas Engel

Widespread adoption of all-electric vehicles (EVs) is crucial for decarbonizing transportation, yet current EV adoption rates are insufficient to reach carbon targets. Misperceptions about EV characteristics, such as their battery range, operating costs and carbon emissions, are significant barriers to consumer uptake. In this study, we aim to quantify three misperceptions about EVs: the underestimation of the compatibility of EV battery ranges with personal mobility demands, the overestimation of relative operating costs of EVs compared to ICEVs, and the underestimation of carbon emission benefits of EVs over ICEVs. In addition, we developed four tailored information-based interventions to correct them: one for each misperception and one combining all three. Furthermore, we investigate motivated reasoning as a potential driver of misperceptions. Based on a preregistered experimental online study with $n = 499$ U.S. citizens, we demonstrate (1) that participants systematically misjudge the three EV characteristics, leading to a lower general EV adoption intention, (2) that the provision of personalized information targeting misperceptions increases the willingness to pay for an EV in most cases (in all but the emission intervention group), and (3) that misperceptions may reflect a low motivation to protect the environment in line with motivated reasoning mechanisms. Our findings highlight the detrimental, cumulated effect of misperceptions on EV adoption, but also the potential of simple tailored information-based interventions to reduce these cognitive barriers to eventually foster EV adoption. In our future research, we will focus on the boundary conditions for the effectiveness of the intervention.

TRENDS IN EUROPEAN FINFISH CONSUMPTION: EVIDENCE FROM A META-REGRESSION ANALYSIS AND IMPLICATIONS FOR SUSTAINABLE SUPPLY CHAINS.

Mattia Galante

Seafood is often referred to as an alternative to improve the sustainability of global food chains and food security. Although technological, managerial and regulatory developments suggest that it is possible to increase seafood production within ecological boundaries, the sector faces environmental challenges including fish stocks health, pressure on resources for fish feed, transport and plastic pollution. To promote and support policies aimed at addressing such issues, it is essential to detect consumers' attitudes towards the characteristics of seafood products and their sustainability. In this paper, a meta-regression analysis is performed on eighteen primary discrete choice experiments to explore the willingness-to-pay of European consumers for seafood sustainability, with focus on finfish. Results show that Europeans

prefer to consume domestically harvested, unprocessed and fresh finfish, are willing to pay a price premium for sustainable products and are open to market innovations but adverse to aquaculture. However, willingness-to-pay is higher for more tangible characteristics of finfish (cut, presentation) than for its sustainability, and the relationship between production practices and environmental impacts seems unclear to consumers. Other aspects such as the impacts of informed consumption, households' income, year and country of study are also investigated and possible policy implications discussed.

RECURRENT CARBON LABELS INDUCE BIPARTISAN EFFECTS IN ENVIRONMENTAL CHOICES UNDER RISK

Zahra Rahmani Azad

Addressing climate change requires substantial shifts in individual behavior. Providing information about climate externalities through carbon labels is a promising tool to foster sustainable choices when individuals weigh environmental against personal outcomes. We study the impact of carbon labels over time and their underlying mechanisms in a repeated decisions task under risk. We ran two preregistered experiments (US samples, N = 1268) with realized carbon and monetary payoffs, examining how choice is influenced by the timing of carbon information (One-off vs. Recurring) and participants' political preference (i.e., Democrat or Republican voters). In Study 1, we find that both Democrats and Republicans reduce carbon emissions when carbon labels were provided. Further, recurring labels significantly reduced carbon choices compared to one-off labels. Study 2 replicated the results in a within-participant design and showed that the impact of recurring carbon labels on sustainable choices cannot be explained by the strength of emission recall. This suggests that recurring labels amplify the importance given to the climate attribute in the decision process, operating via attentional rather than informational mechanisms. Our results emphasize the importance of providing climate externality information at time of use to raise awareness about climate costs and bolster sustainable preferences across population segments.

Artificial Intelligence 2

San Michele Convegno

HUMAN-AUTOMATION COLLABORATION, OVERRELIANCE, AND THE OPERATOR'S DILEMMA

Doron Cohen

Operational control is increasingly shared between humans and redundant automated operators (e.g., artificial intelligence agents) across domains such as semi-autonomous vehicles, financial trading algorithms, healthcare, and defense. Yet little is known on how to best design and manage redundancy systems. For example, different systems might

increase the likelihood operators overrely on automation and shirk their responsibilities (“automation shirking”), leading to suboptimal outcomes. To address this gap, we develop a novel experimental paradigm: the “Operator’s Dilemma”. In this task, human operators must repeatedly decide whether to perform a costly safety check or skip it (i.e., shirk), increasing the risk of significant accidents. We evaluated two system designs: Serial-operators, where the automated operator’s decision is disclosed before human operators decide, and Parallel-operators, where the automation’s decision is disclosed afterwards. Our task isolates the effects of incentives and feedback on automation shirking while minimizing cognitive and situational demands. Across two studies (N=514), we find that the Serial-operator design increases overreliance, shirking, and system failures, but was actively favored by human operators. In contrast, the Parallel-operator design promoted independent operator engagement and reduced accident rates yet was significantly disfavored by human operators. These findings suggest that operators tend to favor suboptimal system designs that reduce their immediate workload but increase overreliance and compromise system reliability. Our study clarifies the mechanisms that drive the effectiveness of automated redundancy, highlighting the critical importance of human behavioral insight when designing and managing such systems.

EFFORT CAN HAVE POSITIVE, NEGATIVE, AND NON-MONOTONIC IMPACTS ON OUTCOME VALUE IN ECONOMIC CHOICE. NEW BEHAVIORAL DATA AND A NOVEL MODEL.

Piotr Winkielman

Decisions are clearly influenced by the level of effort associated with obtaining an option. Interestingly, in some contexts high effort lowers the value of the option, but in other contexts high effort enhances its value. This “paradox of effort” is still poorly understood. Here, we present an empirical study and a computational model that captures the variety of relationships between effort and value and its dependence on situational and individual factors (Marcowski, Bialaszek, and Winkielman, in press). In the empirical study, participants chose between effortless money and an item (a mug) associated with varying levels of effort (climb stairs). For one set of choices, participants had previous experience with physically climbing the stairs and made decisions about a physically present mug (“real” condition). For other choices, the effort and the associated reward were always purely hypothetical. Furthermore, the decisions between the effortless money and the effortful mug were framed as prospective or retrospective – before or after effort exertion. On the behavioral level, we found that in the “real” condition, greater effort decreased outcome value when considered prospectively, but increased outcome value when considered retrospectively. Importantly, we found diverse effort-value relationships. That is, each experimental condition contained participants for whom greater effort increased value, decreased value, and those displaying non-linear patterns, where small effort initially increased outcome value but higher effort decreased it, or the other way around. Our parsimonious model captures the monotonic and non-monotonic relationships by assuming that individuals flexibly integrate costs and benefits of effort. It also outperforms previous solutions.

THE EXISTENCE OF MANUAL MODE INCREASES HUMAN BLAME FOR AI MISTAKES

Samuel Meyers

As people offload many of their tasks to AI, like driving, investing, and medical decisions, they also want to retain ultimate control. Accordingly, when using autonomous machines, people often want a “manual mode” to revert the control to themselves. However, the presence of manual mode, even if not used, can lead to unintended consequences – when the AI errs, people assign more blame to the human agent than another human agent who did not have a manual mode option. This occurs even when the human agent lacks the ability or time to intervene, as seen in cases of self-driving car accidents. Across seven pre-registered experiments (N=1,838), we find that although people prefer having a manual mode option, even when it costs more and the AI mode is more efficient, the mere existence of manual mode increases human blame in the case of an accident. This effect is driven by increased perceptions of causation and counterfactual thinking. These findings highlight a tension between the desire for control and its costs. We discuss implications for delegating tasks to AI and the downsides of control.

IMPLICIT GENDER CUES CAN BIAS LLMS’ FINANCIAL ADVICE

Shir Etgar

For the first time in human history, the era of Large Language Models (LLMs) has enabled humans to communicate directly with AIs in conversation-like interactions. For efficient communication, people are encouraged to prompt LLMs with contextual information. Previous research in machine learning indicates that revealing stereotypical contextual information about oneself can bias responses. The current study explores what happens when we try to avoid such biases by not revealing one’s stereotypical group affiliation to AIs. In other words, this study examines whether biased AI advice persists when group affiliation information is only implied and not explicitly given in prompts. Specifically, the current study explores whether implied gender affiliation, conveyed through stereotypically gendered professions, affects AI responses to financial advice-seeking prompts. Using GPT-4 and replicating using GPT-4o, we initiated 4,800 financial advice-seeking interactions with an LLM. Each prompt included either a feminine or masculine profession, which served as a gender cue. We found that advice given to implied women was less risky, more prevention-oriented, and more simplified and patronizing in tone and wording than advice given to implied men. These findings call attention to implicit biases in LLMs, which are more challenging to identify and debias than biases based on explicit group affiliation, and which could have significant societal implications.

Session: Prosocial Behavior 2

Room: San Micheletto Affresco

GROUP META-PERCEPTIONS AND THEIR INFLUENCE ON GENEROSITY TOWARD OUTGROUP MEMBERS IN MINIMAL GROUPS

Amy Bruck, The Hebrew University

Ilana Ritov, The Hebrew University

The human need for affiliation drives individuals to form group identities, even under minimal conditions (Tajfel et al., 1971). This principle underpins the minimal group paradigm, where individuals are arbitrarily assigned to groups. While research on in-group and out-group biases in minimal groups is well-established, less attention has been given to how individuals perceive others' views of their group (meta-perception). This study examines biases in group perception and meta-perception within minimal group contexts, focusing on emotion and pro-social behavior, exploring the link between giving to the outgroup and biased perception of the outgroup toward one's own group. Across two experiments, participants were consistently biased when evaluating both in-group and out-group emotions and pro-social behavior. Participants believed that their feelings towards the out group are more positive than the out groups feelings towards them, indicating a bias in meta perception. They also viewed their in-group as more pro-social and having more positive emotions compared to the out-group. Participants also perceived themselves as more generous and less biased than both in-group peers and the out-group. Finally, pro-social behavior was influenced by meta-perceptions, as participants who believed the out-group had more positive emotions toward them were more generous toward the out-group. These findings demonstrate that biases in group perception and meta-perception emerge even in minimal group settings without prior group history.

PROSOCIAL BY DEFAULT: SETTING PROSOCIAL DEFAULTS INCREASES OVERALL PROSOCIALITY EVEN WHEN A FRACTION OF PEOPLE ARE UNRESPONSIVE

Linh Vu

Defaults are powerful: whereas wisely set defaults increase prosocial choices, poorly set defaults promote self-serving decisions. We propose a distracted-from-doing-good hypothesis: compared with distraction-free environments, distracting environments lead people to rely more on the default options, particularly self-serving ones. In a preregistered experiment, participants made repeated allocation decisions involving monetary trade-offs between personal gain and charity donations. We manipulated the default type (prosocial vs. self-serving), the presence (vs. absence) of distractions and measured individual differences in mind wandering and social value orientation. Results did not support the hypothesis but offered valuable insights: On average, participants were more likely than chance to accept prosocial defaults, and they accept more prosocial than self-serving defaults. We found

evidence that some individuals use self-serving defaults to justify selfish decisions, particularly those with a prosocial orientation. Interestingly, the aggregate effects were driven by 60 percent of participants; the remaining 40 percent were uninfluenced by defaults, acting according to their social preferences. Individual differences in mind wandering—how easily one is distracted—further moderate the default effects. We discuss how the results inform our understanding of prosocial behaviors in combination with individual heterogeneity and how defaults are a good tool to promote overall prosociality.

THE IMPACT OF DIGITAL COMMUNICATION POLICIES TO STIMULATE DONATIONS AND DONOR RETENTION: EVIDENCE FROM AVIS TOSCANA

Lorenzo Santini

Ensuring a stable blood supply is a critical challenge for healthcare systems, particularly in voluntary donation settings. Demographic shifts and health crises such as pandemics exacerbate shortages and constitute a present and future threat, so increasing donation frequency and improving retention are key policy priorities. While prior studies highlight the role of behavioral nudges in donor engagement, evidence of the large-scale impact of digital interventions remains limited. This work evaluates the impact of two digital communication policies implemented by AVIS, the largest Italian blood donation network, in the Tuscany region, on the number of donations and donor retention. The analyzed services are: 1)Reminder, sending automated emails to donors about upcoming donation opportunities; 2)Thanks-Message, delivering personalized thank-you messages post-donation. Using 913,392 donation records (2012–2019) involving 87,293 donors from 154 branches, we employ a staggered Difference-in-Differences (DiD) approach with robustness checks. Results show that digital interventions increased blood donations by 9%, with stronger effects for women and younger donors, while plasma donations remained unaffected. The policies also enhanced donor retention, leading to shorter intervals between first and second donations and a higher probability of returning, particularly among frequent donors and again with stronger effects for women and younger donors. Future research will analyze the impact of social media activity at the branch level, assessing Facebook and Instagram presence, number of followers, and engagement levels. In this context, we will explore heterogeneity by gender, age, branch size, and geographical classification to identify the most effective engagement strategies.

DO YOU WANT THE TRUTH? LET'S GO TO THE PUB

Yossi Tobol

In this presentation based on our study, we will discuss the Die-Under-the-Cup (DUTC) field experiment we conducted in pubs and shopping malls, involving 301 participants. The aim was to assess the effect of alcohol on honesty and cognition, measured using the Cognitive Reflection Test (CRT). Our findings indicate that, on average, higher blood alcohol concentration (BAC) is associated with increased honesty and lower performance on the CRT. Notably, we identified a critical level of BAC above which honesty significantly incre-

ases while success on the CRT markedly decreases. Conversely, below this critical level, the opposite effect is observed. This presentation, based on our study, explores two factors influencing honesty: “deliberate deception” and “self-control.” Our analysis of the DUTC experiment seeks to explain the dynamics between these tendencies and their impact on honesty. To reinforce our findings, we replicated the initial experiment with a randomized sample of 197 participants, and the results remained consistent.

THE EFFECT OF RECIPIENT’S GENDER AND DONOR’S CULTURE ON DONATION CHOICES

Danit Ein-Gar

This research examines how recipient gender and donor culture influence charitable giving decisions across Western and Eastern societies. Through four studies conducted with US (N=903) and Chinese (N=1,952) participants, we investigate how donors choose between multiple recipients and how cultural contexts shape gender preferences in donation decisions. We hypothesized and found that Western donors show a preference for female recipients, while Eastern donors favor male recipients. In Study 1, when given a choice between a boy and a girl recipient, US participants predominantly chose to donate to the girl, while Chinese participants showed a preference for the boy. Study 2 revealed that presenting donors with different-gender options (boy vs. girl) resulted in lower opt-out rates compared to same-gender choices (two girls) in both cultures. Importantly, when donors could choose between an organization and a child, gender preferences disappeared, suggesting that gender bias emerges primarily when it serves as a decisive factor between otherwise similar options. These findings contribute to our understanding of prosocial decision-making by demonstrating how cultural norms influence gender-based donation preferences. The research has practical implications for charitable organizations, suggesting that campaign strategies should be tailored to cultural contexts while working toward more inclusive approaches. Our results highlight the complex interplay between culture, gender bias, and charitable giving, offering insights for both theoretical development and practical application in fundraising strategies.

Decision Process 2

Guinigi SF

TRUTH ASSESSMENT ON A GLOBAL LEVEL: HOW PEOPLE INTEGRATE MULTIPLE PIECES OF REPEATED AND NON-REPEATED INFORMATION INTO PERCEPTIONS OF TRUTH

Moritz Ingendahl

People are more likely to judge information as true when it has been encountered before, a prominent phenomenon called the truth effect. While this effect is well-studied for single

information pieces, previous research has neglected that people often need to assess the truth of compounds of old and new information (e.g., a news article containing old and new information). In seven preregistered experiments ($N = 1,450$), we tested how people integrate multiple pieces of old or new information into judgments of truth. We found that participants' truth judgments were consistent with an averaging rule with stronger weight given to old relative to new information pieces. This weighted averaging rule implies three boundary conditions for the truth effect: First, more pieces of old/new information do not lead to more extreme global perceptions of truthness or falseness. Second, the effect of repetition from one piece of information substantially reduces when other pieces of old or new information are present. Third, one piece of old information has a stronger impact on truth judgments than one piece of new information. Our findings also suggest that the weighted averaging pattern can be potentially explained by familiarity but not processing fluency and that it influences socially relevant judgments like the perceived trustworthiness of the information source. Our framework and findings shed new light on how repetition influences the perception of truth in more realistic environments that often present a mix of old and new information.

MOOD, ANXIETY, AND RISK

Nathan Voermans

It has repeatedly been shown that emotions can impact our risk attitudes. Research suggests that affective states, such as mood and anxiety, influence decision-making under risk, yet the underlying mechanisms remain unclear. This study examines how affective states shape risk attitudes under Cumulative Prospect Theory (CPT) by analyzing their effects on utility and probability weighting functions. Across two experiments ($N = 271$), we use Abdellaoui's (2000) elicitation task to separately estimate these functions over gains and losses. Experiment 1 ($N = 151$) assessed trait and state anxiety, as well as affect, using well established questionnaires (PANAS, BDI, and STAI). Factor analysis identified two latent factors—negative affect and anxiety. Higher anxiety correlated with a more convex utility function for losses, leading to greater risk-seeking behavior. Additionally, more anxious individuals showed increased discriminability in probability weighting for gains. Experiment 2 ($N = 120$, ongoing) used the Threat of Shock paradigm to induce anxiety in a within-subjects design. Participants made decisions under alternating “threat” (random shocks) and “safe” conditions. Anxiety was significantly higher in the threat condition. While no main effect of anxiety on utility or probability weighting was found, a significant interaction effect showed that participants with higher state anxiety exhibited greater elevation in their probability weighting function under anticipatory anxiety, leading to a higher overweighting of probabilities. Unlike Experiment 1, anxiety did not significantly impact utility curvature. Our findings suggest that both trait and state anxiety influence probability weighting, though effects on utility curvature remain inconsistent.

TEMPORAL DYNAMICS OF SERIAL POSITION EFFECTS IN DECISION-MAKING

Tim Mullett

This study explores the temporal dynamics of primacy and recency effects in decision-making, examining how early and late information influence choices in brief trials with updating dynamic stimuli. Using process tracing methods, including eye-tracking, we analyzed data from three experiments employing dynamic visual stimuli and free-response paradigms. Generalizing from patterns found in memory and recall, these choice-based results consistently revealed a robust primacy effect, where early information strongly and persistently influenced decisions. In contrast, the recency effect was weaker and occurred significantly before the end of deliberation. Critically, the impact of incoming information diminished so much that it had no impact upon choice by the time of response. This time course is compatible with a cognitive decision being reached and then a motor response action being initiated, during which time incoming information has no further impact. Further supporting this account, when the observation time is fixed, and thus the end of observation is decoupled from when a decision is made, there is no apparent recency effect. Critically for models of attention and choice, using eye-tracking data we show that this reduction in the impact of information prior to choice occurs at the same time as the gaze cascade onsets. Thus, showing that there is essentially no new evidence accumulation at the very moment when attention weighted decision models predict that it should be most influential.

MENTAL IMAGERY AS A DECISION-MAKING MODE: THE COMPARISON OF RECREATIONAL AND FINANCIAL DOMAINS

Tomasz Zaleskiewicz

This paper explores mental imagery as a decision-making mode across recreational and financial domains. We propose that, similar to established decision-making modes—calculation, affect, and recognition—mental imagery can serve as an informative cognitive tool but is better suited to recreational (more experiential) than financial (more abstract) contexts. Two preregistered experiments were conducted. Study 1 assessed participants' spontaneous associations when considering their involvement in risky activities, predicting higher imagery usage in the recreational domain. Results confirmed that participants reported more mental imagery for recreational risky activities and more analytical thinking for financial ones. Study 2 further investigated the role of imagery-based decisions within the two domains, again in the context of declared risk taking. It has been found that participants generated more vivid mental images for recreational activities, and the valence of these images was a stronger predictor of risk-taking willingness in the recreational domain (compared to the financial domain).

THE EFFECT OF TRUST ON HOUSEHOLD RISKY FINANCIAL INVESTMENTS

Gerrit Antonides

We investigated the effect of trust on household risky financial market participation, using a recently developed measure of trust radius. Using data from the 2018 China Family Panel Studies, we show that trust increased households' participation and their amount of investment in risky financial markets. However, this effect was not linear but inverted U-shaped. Also, we found that the importance of financial information moderated this effect, such that a higher importance of financial information turned the effect of trust on risky investments into U-shaped. The effect of trust was significant only for wealthier households and for households in regions with better inclusive financial development. Several robustness checks and endogeneity analyses corroborated our results. Implications for policy making are included.

SKIN CONDUCTANCE PREDICTS EARNINGS IN A MARKET BUBBLE-AND-CRASH SCENARIO

Sandra Andraszewicz

In financial markets, profit is usually associated with risk. However, during market bubbles, risk aversion can lead to more profit. Emotion-based warning signals might help to recognize when risk aversion is preferable. We studied this using a trading simulator, where 27 male participants traded on a historical market bubble-and-crash scenario, while we continuously monitored their skin conductance level. We found that participants earning the most were characterized by an adaptive pattern of risk-taking — investing during the initial phase of the bubble and selling before the crash. Their skin conductance level was closely associated with the price trend, peaking before the crash started. This suggests that skin conductance provided a bodily warning signal in this group. High earners used this warning signal to sell stocks. These results underscore the adaptive role of bodily signals in decision-making and elucidate the neural basis of success in uncertain financial markets.

DO TRADERS BELIEVE THAT PUBLIC NEWS GIVE THEM AN EDGE?

Steve Heinke

We investigate whether traders believe that obtaining public information gives them a competitive advantage. Using a novel experimental paradigm, we examine how individuals anticipate the informative value of private and public signals in trading environments. Our findings reveal that traders often misinterpret public information as exclusive, leading to naive trading behaviors. This effect is more pronounced when trading against human parti-

cipants compared to algorithmic traders. We also explore the role of individual differences, such as theory of mind (ToM) and self-control, in shaping these beliefs. Our results contribute to understanding the psychological roots of naive trading behavior and highlight the importance of cognitive abilities in financial decision-making.

RATIONAL BY COMPARISON: THE BENEFITS FROM NOT-QUITE-RATIONAL DECISIONS IN A PYRAMID SCHEME

Yael Mintz

Multi-level marketing companies and pyramid schemes are increasingly prevalent despite their inherent risks, often leading to substantial financial losses for individuals. This paper presents findings from three studies examining the cognitive factors and motivations that drive imprudent risk-taking in investment decisions. Study 1 (N=66) introduces a novel paradigm that models pyramid schemes. Participants were invited to invest in an enticing plan that became progressively riskier as the pyramid expanded. Aware that the pyramid had a finite number of levels, participants could either retain their initial endowment or invest, recruiting two additional participants. Earnings were contingent on whether their invitees and subsequent recruits also chose to invest. Results revealed that, despite the irrationality of investing at later, riskier levels, excessive investment persisted. Study 2 (N=58) extended this paradigm to explore the role of expectations about others' behavior. While expectations influenced investment decisions, they were generally pessimistic compared to the observed over-investment. Interestingly, participants' expected value (EV) remained positive despite suboptimal investment strategies, highlighting how early investors benefited from the risk-taking of later participants. Study 3 (N=84) replicated these findings, confirming that expectations, while influential, were not overly optimistic about others' behavior. This study also identified risk tolerance as a significant factor, with risk-averse individuals investing less during critical phases. Notably, some participants continued taking risks even when the likelihood of gain was minimal, illustrating how the behavior of a few non-rational investors can sustain profitability for others.

WARNING: WARNINGS CAN BACKFIRE EVEN WHEN THEY PROVIDE NEW AND IMPORTANT INFORMATION

Yefim Roth

We extend basic decision research to clarify the conditions under which warnings backfire. Experiment 1 focuses on warnings concerning risky clicks. The results reveal an interaction: the warning was effective when the number of keys was small, but backfired when this number was large. When the probability of a gain was high, experience enhanced the back-firing effect. Experiments 2 and 3 show a similar pattern in more complex environments involving warnings concerning danger zones, and misinformation, respectively. A process predicting this interaction is described.

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Strategic Sophistication

San Francisco Church

FORECASTING ACCURACY: FROM FORMAL MODELS TO HUMAN INTUITIONS, AND BACK (WITH A NEW SCORING RULE)

Katya Tentori

The widespread consensus on the importance of making accurate forecasts does not extend to agreement on how to promote or evaluate their quality. This raises the question of which scoring rule best reflects people's intuitive judgments of forecasting accuracy. We provide an original answer to this question by means of a new experimental paradigm for eliciting ordinal judgments of accuracy concerning pairs of categorical forecasts. Our stimuli have been designed to express various associations and dissociations between the three most popular scoring rules: the Quadratic, the Logarithmic, and the Spherical model. The results showed that, overall, the Logarithmic rule predicts participants' judgments better than the alternatives, but also that there are specific classes of predictions in which participants' judgments – although normatively sound – systematically depart from what would be expected from all three models. This appears to be mainly related to participants' consideration of the ranks in the forecasting distribution, an aspect that is at the core of positional voting systems but that is neglected by classical scoring rules for probabilistic forecasting. Based on these results, we propose a new scoring rule (BLog, for "Borda-adjusted-Log score") that combines the logarithmic rule with the ranking algorithm of the Borda count. We provide a demonstration that this new measure is strictly proper and show that it outperforms the Quadratic, Logarithmic, and Spherical rules on our data. The broad implications of these findings for developing a new family of formal scoring rules that better align with human intuitions are discussed.

THE WASON SELECTION TASK IN THE LONG-RUN: EVALUATING THE TRUTHFULNESS OF UNIVERSAL AND PROBABILISTIC STATEMENTS THROUGH EVIDENCE SEARCH

Konstantinos Armaos

To investigate, in an ecological way, how people evaluate the truthfulness of universal and probabilistic statements we introduce a modified version of the Wason Selection Task. Participants see four decks of cards (instead of four cards), with each card representing a unique observation, and they are asked to turn as many cards as they deem necessary to judge if a given statement is true or false, both for the observed sample (deductive task) and for an imaginary reference population (inductive task). Participants encounter universal ("All P are Q") or probabilistic statements ("more/less than x% of P are Q");

between-subjects). We use abstract, realistic neutral, and realistic polarizing statements (within-subjects) to gauge the effect of content and motivated cognition on evidence search and judgments. We also investigate the effect of incentives: half of the participants receive an endowment for each turn, correct (incorrect) deductive judgments are rewarded (penalized), and turning a card incurs a cost (other half: fixed participation fee). We develop prescriptive models of evidence search (universal and probabilistic statements imply different normative strategies) and contrast them with actual behaviors in two online experiments. We find significant effects of incentives, statement type and content on evidence search and judgments.

UPWARD COUNTERFACTUAL THINKING AND THE EXPERIENCE OF GREED

Marcel Zeelenberg

Greed is the insatiable desire for more. As such, it is likely that greed entails a comparison between what one currently has and lacks, and a mental simulation of a world in which one has the thing one is longing for. We examined the hypothesized role of such mental simulations in the experience of greed in a series of preregistered studies. Study 1 (N = 314) found that individual differences in upward and downward counterfactual thinking were related to individual differences in dispositional greed. Study 2 (N = 304) found that the level of experienced greed in an autobiographical recall was related to how much people engaged in upward counterfactual thinking. Study 3 (N = 542) and 4 (N = 405) found that manipulating counterfactual thinking using a traditional scenario has an impact on the experience greed. Study 5 (N = 333) extended this last finding and found a relation between a manipulation of prefactual thinking and experienced greed. Together, these studies find that mental simulation underly the experience of greed. This finding allows for predictions concerning situations under which greed is likely be more intense and more influential.

WHEN DEFAULT OPTIONS EXPLAIN AWAY PREFERENCES: A CAUSAL REASONING ACCOUNT OF MENTAL STATE REASONING FROM DEFAULT OPTIONS

Xingyu (Shirley) Liu

Greed is the insatiable desire for more. As such, it is likely that greed entails a comparison between what one currently has and lacks, and a mental simulation of a world in which one has the thing one is longing for. We examined the hypothesized role of such mental simulations in the experience of greed in a series of preregistered studies. Study 1 (N = 314) found that individual differences in upward and downward counterfactual thinking were related to individual differences in dispositional greed. Study 2 (N = 304) found that the level of experienced greed in an autobiographical recall was related to how much people engaged in upward counterfactual thinking. Study 3 (N = 542) and 4 (N = 405) found that manipulating counterfactual thinking using a traditional scenario

has an impact on the experience of greed. Study 5 (N = 333) extended this last finding and found a relation between a manipulation of prefactual thinking and experienced greed. Together, these studies find that mental simulation underlies the experience of greed. This finding allows for predictions concerning situations under which greed is likely to be more intense and more influential.

CONSISTENCY OF STRATEGIC SOPHISTICATION AND PERSISTENCE OF LEARNING IN GAMES

Luca Polonio

Research on strategic interactions highlights variability in strategic sophistication and suggests that, under certain learning conditions, humans can improve their strategic thinking. However, it remains unclear whether strategic sophistication is consistent across different games, persists over time, and transfers to new settings. These questions are crucial for understanding how strategic skills acquired in one context can be applied to diverse scenarios. To investigate these research questions, we conducted an experimental eye-tracking study with 250 participants who played a series of games against a rational, profit-maximizing algorithm. The study spanned three sessions over three months. In the first session, 150 participants in the treatment condition received feedback to enhance their strategic sophistication, while the other 100 participants in the control condition played without feedback. The subsequent sessions assessed the persistence of learning over time and its transferability to new strategic contexts. Our findings show that enhanced strategic sophistication persists for at least three months, with participants consistently achieving higher rates of optimal choices, regardless of their initial sophistication or player type. Furthermore, individual levels of strategic sophistication remained stable across games with differing strategic structures. However, we found no evidence supporting transfer of learning across different strategic environments.

Misinformation and Polarization 2

Aula 1 & 2 SF

SOCIAL CONSIDERATIONS IN OVERCONFIDENCE AND UNCERTAINTY EXPRESSION: RESULTS OF TWO REGISTERED REPORT REPLICATIONS

Erik Løhre

Recent theories of overconfidence argue that social motives could play an important role in this phenomenon: people may gain social approval from expressing (excessive) certainty. We report the results from replications of two important, but underpowered original studies taking this perspective. Karmarkar and Tormala (2010) investigated the persuasive effects of (un)certainly, and reported support for an interaction with source expertise: while

non-experts were more persuasive when expressing their opinions with certainty, experts were more persuasive by expressing uncertainty. In a direct replication, we failed to find support for this interaction, and instead found that opinions expressed with certainty led to more persuasion than opinions expressed with uncertainty, regardless of source expertise. The fact that certainty is generally persuasive suggests that social concerns could be a driver for overconfidence. In line with this, Anderson et al. (2012) found a positive correlation between desire for status and overconfidence, suggesting that those who have a stronger need for status are more likely to overestimate their performance relative to others. Our large sample (N = 1100) replication found the same pattern, using both the original and an alternative measure of desire for status, although the effect was smaller than observed in the original. Furthermore, an extension study found that being in a competitive (vs. cooperative) context increased state-level desire for status, which in turn predicted greater overconfidence. Together, the findings of these replications underscore the importance of the social and reputational aspects of overconfidence and uncertainty.

WHOEVER IS NOT WITH ME IS AGAINST ME: THE 'MODERATE AS OUT-GROUP' EFFECT

Giulia Maimone

Common intuition suggests that expressing moderate views would allow people to appeal to the broadest audience possible. But is it really the case? Do moderates please all sides or please no side? Across four preregistered studies (N=2,476), we show that people holding a partisan view on a sociopolitical issue perceive moderates as belonging to the out-group ideology, and we identify the boundary conditions under which this effect occurs, and the psychological mechanism driving it. As for the boundary conditions, we find that the 'moderate as out-group' effect occurs when sociopolitical issues are moralized (i.e., one side is perceived to be moral and the other immoral) and at the same time the opposing side is perceived to be a threat for oneself, close ones, or society at large. As for the psychological mechanism underlying this effect, we show that this effect is due to people's perception that moderates agree with the opposing (immoral and threatening) ideology, rather than disagree with their own. In fact, we observe the 'moderate as out-group' effect when the moderate view is framed as 'pro-both' sides, but it is attenuated when it is framed as 'pro-neither' side.

MORALIZATION AND THE FUNDAMENTAL ATTRIBUTION ERROR: HOW MORAL CONVICTIONS DRIVE MISATTRIBUTIONS OF CHARACTER

Kelly Kirkland

When people encounter moral opinions, they often assume these views reflect the speaker's true character. But what if those opinions were shaped by external pressures? Across three studies, we tested whether moral convictions amplify the fundamental attribution error (FAE)—the tendency to attribute others' attitudes to their character while discoun-

ting situational influences. Participants read essays on moral topics (e.g., immigration, healthcare) where the author's stance was either freely chosen or assigned by a debate coach. Despite clear instructions that the stance was assigned at random, participants still assumed the author truly believed what they wrote—particularly when they strongly moralized the issue. This effect was strongest when participants agreed with the essay's stance, reinforcing the belief that shared moral views signal good character. However, moral conviction did not consistently drive hostility toward authors assigned an opposing stance. These findings suggest that moralization may play a stronger role in reinforcing ingroup bonds than in consistently driving outgroup rejection. Understanding this bias may be important for reducing polarization and fostering more constructive moral dialogue.

THE ROLE OF POLITICAL POLARIZATION IN TRUST AND POLICY PERCEPTION

Santiago Ventura

Political polarization plays a critical role in shaping trust in politicians and public policy preferences, with significant implications for behavioral public policy. This paper presents four studies examining how polarization influences trust in politicians and policy acceptance. Study 1 demonstrates that polarization impacts trust perceptions, with a multi-dimensional measure of trust showing that in highly polarized environments assessments collapse to a single positive-negative dimension instead of the usual three. However, individuals can still adjust their judgments along this dimension when exposed to new information. Study 2 highlights that individuals state higher personal approval for generally bipartisan policies when they are endorsed by a co-partisan representative. This suggests that polarization affects policy perception based on partisan alignment. Study 3 extends these findings by showing that political affiliation similarity with a group shapes policy support in polarized contexts. We show this by modifying Study 2 so that participants see policy support from a political group rather than from a politician. Study 4 confirms that polarization continues to influence policy endorsement even for polarizing policies, with affiliation similarity playing a key role in shaping support. These findings suggest that under polarized environments our trust in politicians follows a one-dimensional approach, reflecting a simplified evaluation of trust. Further, our support for policies is influenced by affiliation similarity, such that we would be willing to endorse a policy more (less) if our political affiliation is the same (opposite) from a reference endorser.

WISH FOR AN AUTHORITARIAN LEADER AND CONSPIRACY BELIEFS AROUND THE WORLD

Folco Panizza

This study uncovers a consistent link between the desire for authoritarian leaders and conspiracy beliefs across diverse countries and cultural contexts. Through a multi-level analysis spanning 71 countries, the findings reveal that the desire for an authoritarian leader is positively associated with conspiracy beliefs, a trend consistently observed at both individual

and national levels. This relationship is not confined to specific regions but is evident across several countries in Europe, the Americas, Africa, and Oceania, suggesting that the association between authoritarianism and conspiracy beliefs may be a global phenomenon. This general association suggests the presence of underlying psychological mechanisms that link authoritarian preferences with conspiracy beliefs. This insight opens new avenues for future research in social and political psychology.

Decision Process-Broader Perspective 2

San Michele Convegni

IS BEHAVIORAL SCIENCE PREDICTABLE?

Daniel Banki

We investigate the extent to which the knowledge generated by behavioral science was already known by lay people. To do this, we asked people to predict a collection of foundational findings in three core fields of behavioral science: behavioral economics, social psychology, and cognitive psychology. Using textbooks, we put together a list of foundational phenomena and we selected representative experimental studies for each of them. Our participants were presented with detailed descriptions of the experimental designs and were asked to predict what would happen in each condition and to explain why. The predictions were then classified as correct or incorrect according to pre-registered criteria. More than 50% of the participants correctly predicted 12 of the 14 phenomena in behavioral economics, 14 of the 18 phenomena in cognitive psychology, and 15 of 22 phenomena in social psychology. In each field, there were phenomena where a majority made the wrong prediction. Moving beyond predictions, many participants provided explanations for the effects that were in line with established ones in this field. These findings suggest that a substantial proportion of foundational knowledge contributed by behavioral science was already known by lay people, which has important implications for research priorities and for the potential to educate people based on their own knowledge.

BEYOND BORDERS: MORAL IMPERATIVES AND THREAT PERCEPTIONS IN SHAPING IMMIGRANT ACCEPTANCE

Marta Caserotti

In recent years, reactions to migrant reception have varied greatly. The 2021 Afghan crisis and 2022 Ukrainian conflict saw different responses, partly due to perceived threat levels. In addition, other causes that have fueled migration flows in the last years included climate change and environmental factors, besides economic instability. We thus explored how migration reasons (Study 1) and immigrants' origins (Study 2) impact public acceptance in an Italian population, considering threat perception and moral obligation as factors. Stu-

dy 1 (N=442) examined willingness to accept (WTA) immigrants based on reasons: war, climate change, or unspecified. Study 2 (N=1387) focused on origins: Ukraine, Afghanistan, or Mediterranean region. Both studies measured WTA, perceived threat, and moral imperative. Results showed higher WTA for war refugees compared to climate migrants. Ukrainians were more welcomed than Afghans, and both of them were more accepted than Mediterranean migrants. Perceived threat decreased acceptance, while moral imperative increased it. Further, moral imperative mediated the effects of migration reasons, migrants' origins, and perceived threat on WTA. This suggests emphasizing moral duty could effectively motivate acceptance. Our research confirmed preferences for war refugees and Ukrainian immigrants, possibly due to the conflict's recency, proximity, and media coverage. It highlighted the significant role of perceived threat in reducing acceptance and moral imperative in increasing it. These findings demonstrate how information about immigrants' origins and reasons for migration influences the moral imperative to assist them, and offer insights for strategies to promote immigrants acceptance.

PREREGISTRATION AND OPEN SCIENCE, THE THEORY IN CONTRAST TO INSIGHTS FROM THE PRACTICE IN JDM: A QUALITATIVE RESEARCH STUDY

Nora Hangel

Since the replication crisis hit psychological science, far-reaching improvements have been made. Korbmacher et. al., (2023) identified positive structural, procedural, and community changes towards scientific credibility. Recently, Glöckner et. al., (2024) named key measures and practices to enhance quality, replicability and transparency in social psychology. Besides pre-registration, and RRRs, they emphasize standard procedures and uniform methods for data preprocessing and how to improve theory specification, among others. Although JDM investigates decision-making in many ways, they do not study their own scientific decision-making processes. The presentation draws from an extensive in-depth interview-study with 40 scientists and participant observation in JDM (2022-2024). Open Science practices are described by researchers from different career levels, they empirically inform the following questions: How do researchers use pre-registration in day-to-day research? How do they conceptualize the role of pre-registration when designing studies and when peer reviewing articles? What is the relationship between doing pilot studies and pre-registering, and what norms and standards are expressed when describing these practices? The presentation invites to reflect on the interdependencies between contributing reliable and robust findings while also striving for theory specification and -revision and fighting publication bias (Renkewitz, Fuchs, and Fiedler, 2011). Many of the self-corrective interventions have been directed to the individual and institutional level (Glöckner, Fiedler and Renkewitz, 2018). My presentation focusses on inter-individual interactions on the group level of scientific practice. It offers insights to help to improve the self-correction of science in JDM.

CORRELATION NEGLECT AND NARRATIVES IN THE AGEING SOCIETY

Tatiana Celadin

In recent years, increasing effort has been devoted to investigating the role of information processing in political, economic, and financial decision-making. Correlation neglect has been identified as a major source of bias in belief formation, showing that many individuals fail to correctly account for the existence of correlations among the sources of information they acquire. Moreover, recent studies have been investigating the role of narratives in affecting people's decision-making processes. Since aging is associated with a decline in cognitive abilities, the purpose of this project is to study, through online experiments, whether elderly people are more likely to suffer from biases when processing information, in order to disentangle heterogeneity in preferences from differences in information processing.

MOST FALSE RECOGNITION MEMORY RESPONSES ARE DUE TO REASONING, NOT GENUINE MEMORIES

Tehilla Ostrovsky

In a typical false-memory experiment, participants study lists of words that include many items from the same category (e.g., countries or body parts). Subsequently, they often falsely recognize unstudied items from the same category during a memory test. Most explanations for such false recognition responses suggest that they represent genuine false memories, arising from a false sense of familiarity generated by unstudied category words. However, others argue that when experimental stimuli have a clear categorical structure, false recognition responses are “strategic” reasoning that test items from the category are more likely to have been studied. We present the results of three experiments. In the first, we use a computational model to demonstrate that people's confidence in their recognition responses is weaker when based on categorical information. We argue this is because they are relying on reasoning rather than memory. In a follow-up experiment, we replicate the study while asking participants to think aloud as they perform the task. The results show that participants often explicitly reason about categorical information, and their verbalizations differ from those they produce when relying on memory. Finally, in a third experiment, we manipulate awareness of categorical information using ad hoc categories (e.g., things a dog chases). We show that false recognition responses are vastly inflated when participants are aware of the categorical information. However, we also observe a slight increase in false recognition rates for a highly prototypical item from the category, even when participants are unaware of the category. This suggests that genuine false memories are possible, albeit rare, in such tasks.

Heuristic and Bias 3

Guinigi SF

HINDSIGHT BIAS AND RECOLLECTION BIAS: A RELATIVE ACCESSIBILITY ACCOUNT

Fabio Del Missier

Research on the hindsight bias with the memory design has focused mainly on the mechanisms underlying the biased reconstruction of the original judgments after the presentation of the correct answers and on the robustness and generalizability of the bias. Less attention has been paid to memory processes hindering the recall of original judgments (recollection bias) and promoting the biased reconstruction of the original judgments (hindsight bias) after the presentation of the correct answers. However, memory processes are important to explain the cognitive underpinnings of these biases. In three experiments with the memory design, we contrasted the relative accessibility, discriminability, and context change hypotheses on the memory underpinnings of the recollection and hindsight biases. Overall, the findings supported the relative accessibility hypothesis: When the memory traces of original judgments were more accessible relative to the interfering traces of correct answers, the recollection and the hindsight bias were smaller.

CONFIRMATION BIAS, JUDGMENTAL COHERENCE AND COGNITIVE REFLECTION IN ALTERNATIVE HYPOTHESES EVALUATION

Mandeep K Dhani

We re-examine the common assumption that intelligence analysts suffer from confirmation bias, and test a popular intervention called the Analyses of Competing Hypotheses (ACH) which aims to debias them. We also investigate if individual differences in judgmental coherence and cognitive reflection are associated with performance in alternative hypotheses evaluation. In Study 1 (N=161), participants completed three hypotheses evaluation tasks where information was structured either as an ACH-style matrix with hypotheses as columns and evidence items in rows (HypCol), a matrix with hypotheses in rows and evidence items in columns (HypRow), or text listing the evidence for each hypothesis in turn (HypText). The HypRow group were significantly less likely to demonstrate confirmation bias, whereas the HypCol and HypText groups were not less likely to demonstrate bias. The HypCol group also did not benefit in terms of increased sensitivity to evidence credibility. In Study 2, the majority of 62 military analysts who completed four alternative hypotheses evaluation tasks demonstrated sensitivity to evidence credibility, and did not suffer from confirmation bias. Instead, they weighted and integrated evidence. In both studies, neither additivity nor Cognitive Reflection Test scores differentiated between better/worse performers. Thus, we do not support the use of the ACH-style matrix, do not concur with the common perception of analysts as suffering from confirmation bias, and suggest that judgmental coherence and cognitive reflection may be unrelated to performance in alternative hypotheses evaluation. There is need for psychologically-informed development and testing of debiasing interventions, and identification of targets for interventions.

CHALLENGING THE HALO EFFECT: HOW NUANCED ARE TRAIT-TRAIT INFERENCES?

Nine Adler

We looked at the halo effect and more specifically, how people reason about trait inferences. Rather than assuming a standard positive-to-positive association we believe people are highly context sensitive and selective of the information they retain and use. Participants (n=957) evaluated a fictional job candidate named Sam through three vignettes. In these, we manipulated Sam's traits, starting with kindness (helping vs. blaming an intern), then their confidence level during an interview (confident vs. unconfident), and finally their skill set (verbal/written vs. analytical/mathematical). Participants rated Sam's kindness, confidence, competence, and trustworthiness on a scale, providing written explanation for the trustworthiness rating. Results showed that among the three trait ratings, only kindness significantly predicted trustworthiness ratings. This was consistent with qualitative data, which showed participants mentioned Sam's kindness (or unkindness) nearly three times more frequently than confidence or competence when explaining their trustworthiness ratings. Analysis of participants' written responses demonstrated sophisticated reasoning, where individuals constructed comprehensive impressions by integrating available information rather than making simplistic trait-to-trait associations. We believe these findings align well with Intuitive Theories (Tenenbaum et al., 2007), positing that people demonstrate selective and contextually aware reasoning, allowing them to build dynamic mental representations that integrate their existing beliefs with new information. This suggests that the halo effect may represent a more sophisticated form of reasoning than previously acknowledged.

THE UNHEALTHY=TASTY ILLUSION: HOW CONTEXTS AND COGNITIONS AFFECT FOOD DECISIONS

Sonja Kunz

Tasty healthy foods are available and consumers often evaluate the same foods as healthy and tasty. Still, many consumers believe unhealthy food tastes better, resulting in more unhealthy food decisions. We propose a cognitive-ecological account for this unhealthy=tasty belief. If there are many unhealthy and tasty foods, consumers think unhealthy foods taste better, regardless of the true health-taste relationship. In two experiments, participants rated the health and taste of restaurant menu items or viewed meal pictures with provided health and taste ratings. They then estimated whether healthy or unhealthy foods tasted better. We measured the actual correlation between participants' health and taste ratings or manipulated the correlation between provided health and taste ratings to be zero. We found that consumers thought unhealthy foods tasted better when there were more unhealthy foods, regardless of the actual correlation between self-generated or provided health and taste ratings. Further, we argue that once consumers formed an unhealthy=tasty belief, they try more unhealthy food and do not learn that healthy food also tastes good. In a taste experiment, consumers first learned that either unhealthy or healthy drinks taste better. They could then choose multiple times between healthy and unhealthy samples. If there were overall more tasty samples, consumers who learned that unhealthy samples tasted better chose

more unhealthy samples and maintained their belief. If there were more not tasty samples, consumers switched more often between healthy and unhealthy options and adjusted their belief according to the true correlation. We conclude that to change consumers' food beliefs and decisions, food contexts (e.g., restaurants) should offer more healthy options.

Risky Choice 3

San Michele Convegno

PSYCHOLOGICALLY INTERPRETABLE DIFFERENCES IN DECISION MAKING UNDER UNCERTAINTY

Asher Lawson

Existing models of decision making under uncertainty typically fit a limited number of parameters to explain behavior in choice tasks. In a notable deviation, two Choice Prediction Competitions found that a model based on many behavioral tendencies (e.g., sensitivity to the signs of prospects) produced superior predictive accuracy. In two datasets (an existing dataset of 27,630 choices and a new dataset of 40,100 choices), I compare the predictive performance of fixed effects models and models adding random effects to these behavioral features, before focusing on psychologically interpreting these relationships. Specifically, I use hierarchical linear models to show that i) there are individual differences in sensitivity to such behavioral features that characterize aspects of decision making processes, ii) these are stable across time, sample population, problem, and context (financial vs. abstract), and iii) that other individual differences (e.g., cognitive reflection) predict these sensitivities. I conclude by discussing the implications of these results for deploying models of decision making under uncertainty that are both predictive and explainable in important decision contexts.

FINANCIAL RISK TOLERANCE DURING A MAJOR NEGATIVE LIFE EXPERIENCE: THE CASE OF THE COVID-19 PANDEMIC

Guy Hochman

This paper investigates the impact of the COVID-19 pandemic on risk-seeking behavior. Using Holt and Laury's (2002) risk tolerance measure, an online survey was conducted with 1643 participants at seven time points before the pandemic and during four restricted and two unrestricted periods. Results showed a significant reduction in financial risk-taking during the pandemic. Notably, the decrease was most evident in the first wave, despite no major differences across the restricted waves. Risk tolerance began to gradually return when restrictions were lifted but did not reach pre-pandemic levels. Subjective risk tolerance during the pandemic, which differed from the objective financial situation, influenced real-life investment decisions. These findings highlight the influence of contextual and emotional factors on risk tolerance. The results are discussed concerning risk-seeking

behavior in commission-free online brokerages like Robinhood during the pandemic, with implications for policy guidelines.

MENTAL SAMPLING IN PREFERENTIAL CHOICE: TRACING THE PROCESS USING RANDOM GENERATION

Jake Spicer

While a number of recent decision making models have used mental sampling mechanisms to explain choice behaviour, there is still little agreement on the specifics of the sampling process, such as whether sampling rates follow any stated probabilities or are systematically biased. Here, we seek to provide greater detail on the sampling process in decision making using a random generation paradigm: In two experiments (total $N = 97$), participants were asked to repeatedly produce potential outcomes from pairs of monetary gambles before choosing between them. The resulting generations were then assessed to look for key signatures of the sampling algorithm, as well as their relation to choice. Results found over-generation of rarer outcomes and under-generation of common outcomes, suggesting sampling was biased towards more uniform weighting of events. Generations were also found to partially predict subsequent choices: participants tended to select options with higher average utility across their responses, implying generations were used to guide selections. These findings support suggestions of systematic biases in mental sampling that may filter through to choices, matching the assumptions of key models like Decision by Sampling or BEAST. We thus suggest random generation offers a valuable method to access underlying choice processes, allowing for new assessments of existing theories of decision making.

DECISIONS INVOLVING TRADEOFFS BETWEEN HEALTH AND ECONOMIC LOSSES

Joanna Sokolowska

We studied choices between the sacred values and other quantities. We examined whether such choices are based on: (1) tradeoffs between health and economic losses; (2) a single criterion - either health or economic losses. To test the compensatory model we tested whether people were willing to trade off health losses against an increase in unemployment - the most salient economic cost of lockdown, and against a decrease in GDP - the most general measure of economic cost. 330 Prolific Academic respondents indicated the amount of economic cost they would accept to limit the spread of the pandemic for three levels of health loss (from low to high). Consistent with compensatory models, the greater the health loss, the higher the accepted economic cost. The single-criterion model was tested to see if it reflected the generalized or local relative importance of attributes. Three indices of health loss were used: daily new cases of COVID-19, daily new deaths, and the basic reproduction index R . We expected respondents to either (1) minimize health losses and accept high economic costs, regardless of the index of the pandemic (generalized relative importance) or (2) minimize health losses more willingly, when described by daily new cases (local relative importance). A majority of respondents (57%) were sensitive to the level of health loss: the higher health loss, the higher economic cost was

accepted. These respondents used a compensatory strategy to balance health and economic losses. The others responded in a way consistent with a single criterion strategy – about 20% accepted no economic costs and about 15% accepted any economic costs to fight pandemic, regardless of the level of health losses and the way in which they were described.

FRAMING ALLAIS: IS THE PARADOX ROBUST TO THE PICTORIAL FRAMING OF LOTTERIES?

Luca Congiu

The Allais paradox entails a violation of Expected Utility Theory (EUT). It refers to a choice problem in which individuals are presented with two lottery pairs, (A,B) and (C,D), and typically prefer A to B and D to C. The choice pattern AD, however, is not rationalizable in terms of EUT. Experimental evidence suggests that the occurrence of the AD choice pattern depends, among other things, on the way the probabilities are presented. In this paper, we contribute to this literature by testing whether framing probabilities pictorially reduces the occurrence of the AD choice pattern. We devise three treatments: in the Baseline, probabilities are provided numerically (as fractions); in Grid and Pie, they are provided through a grid of colored balls and a pie chart, respectively. Based also on the results from a pilot, we expect the AD choice pattern to be less frequent in pictorial treatments than in the Baseline, and in Pie than in Grid.

SEPTEMBER 2ND, H 13:00

Gender

San Francisco Church

GENDER DIFFERENCES IN IMPLICIT VS. EXPLICIT RESPONSES TOWARD TRADITIONAL AND NON-TRADITIONAL ADVERTISING

Enav Friedmann

Empowerment-themed advertisements (ETAs) challenging traditional gender norms have gained prominence, yet research on implicit emotional responses, particularly contempt—a negative reaction to females’ norm deviation—remains limited. This study examines gender differences in implicit contempt toward ETAs featuring muscular female models, integrating Social Dominance Theory to explore men’s endorsement of traditional gender roles. Using Affectiva AI software, two experiments measured implicit responses: a within-between-subjects design with 66 students and a between-subjects design with 142 Prolific users. Findings reveal men exhibit higher contempt for subtle empowerment ads lacking direct messaging, reflecting resistance to gender hierarchy challenges, while women’s responses were shaped by their interpretation of empowerment messages. Results highlight discrepancies between explicit and implicit responses, emphasizing the complexities of evaluating ETAs. Practical insights for advertisers include tailoring messages to mitigate contempt, promote inclusivity, and improve campaign outcomes.

WOMEN INCLUSION IN GENDER-MIXED COALITIONS: CROSS-CULTURAL EXPERIMENTAL EVIDENCE – A REGISTERED REPORT

Hagai Rabinovitch

Women remain underrepresented in decision-making bodies worldwide, often serving as minorities within coalitions, which puts them at risk of exclusion by male majorities. Coalition formation, where individuals join forces to allocate resources or achieve a goal, can marginalize excluded members. This study explores who is included in coalitions and how resources are distributed, with a focus on cross-cultural differences in attitudes toward the exclusion of women. In Stage 1, participants rated the acceptability of proposals excluding either male or female minorities. Results revealed that excluding women was perceived as less acceptable than excluding men, especially by female participants. Stage 2 will extend this research across 20 countries to test how traditional versus secular values and hierarchical norms influence these perceptions. Behavioral experiments will further examine whether disapproval of exclusion translates into inclusion behaviors. This research addresses critical gaps in understanding beliefs and behaviors toward gender inclusion in coalitions across cultures, contributing to broader efforts to advance equality, diversity, and inclusion globally.

COOPERATION IN SPITE – OR BECAUSE – OF THE SYSTEM? HOW UNEQUAL OPPORTUNITIES AND SATISFACTION PREDICT PROSOCIAL BEHAVIOR IN ECONOMIC GAMES

Lara Többen

Economic inequality's impact on prosocial behavior has received increasing attention, with some theories suggesting that inequality fosters social erosion when it is perceived to result from corruption and exploitation. However, empirical evidence is scarce. To test whether unequally distributed opportunities to cheat the system affect a range of prosocial behaviors, we conducted five pre-registered economic games (Dictator Game, Ultimatum Game, Double Dictator Game, Trust Game, and Public Goods Game; total N = 2016). In each, we manipulated whether participants believed that other participants had the opportunity to cheat and thereby distort the distribution of points, referred to as Unfair and Fair conditions, respectively. In all studies, participants in the Unfair condition believed others to be more likely to cheat, but this did not reduce prosocial behavior. Interestingly, participants in the Unfair condition did not perceive the rules of the game to be less fair but paradoxically were more satisfied with their assigned points. This satisfaction subsequently correlated with prosocial behaviors. Furthermore, political orientation moderated prosocial behaviors in such a way that right-leaning participants showed more trust and cooperation in the Unfair than in the Fair condition. Our results show that exposure to a system of alleged exploitation does not affect prosocial behavior. Rather, how we feel about our own lot despite – or because – of this adversity shapes our interactions with others. Conclusively, our research raises as yet unexamined questions about economic inequality and prosocial behavior which future research might address.

GENDER DIFFERENCES IN IMPLICIT CONTEMPT TOWARD EMPOWERMENT-THEMED ADVERTISEMENTS FEATURING MUSCULAR WOMEN ACROSS AD FORMATS

Lior Avieli

Empowerment-themed advertisements (ETAs) challenging traditional gender norms have gained prominence, yet research on implicit emotional responses, particularly contempt—a negative reaction to females' norm deviation—remains limited. This study examines gender differences in implicit contempt toward ETAs featuring muscular female models, integrating Social Dominance Theory to explore men's endorsement of traditional gender roles. Using Affectiva AI software, two experiments measured implicit responses: a within-between-subjects design with 66 students and a between-subjects design with 142 Prolific users. Findings reveal men exhibit higher contempt for subtle empowerment ads lacking direct messaging, reflecting resistance to gender hierarchy challenges, while women's responses were shaped by their interpretation of empowerment messages. Results highlight discrepancies between explicit and implicit responses, emphasizing the complexities of evaluating ETAs. Practical insights for advertisers include tailoring messages to mitigate contempt, promote inclusivity, and improve campaign outcomes.

HOSTILITY IS (ALMOST) GENDER NEUTRAL: AN EXPERIMENTAL STUDY USING THE HAWK-DOVE GAME

Ruggero Roni

This study examines the impact of gender, gender pairing, and order of play on hostile behavior in social conflicts using a series of one-shot Hawk-Dove games with varying levels of conflict harshness. In our experiment, participants can be selected to play either simultaneously, as first movers, or as second movers, with or without information about their counterpart's gender. The results suggest that hostile behavior is largely gender-neutral, though preliminary analysis hints at gender differences among first movers. The findings contribute to the understanding of gender dynamics in competitive and conflict-driven scenarios, with implications for both behavioral economics and social psychology.

Predicting and Forecasting

San Micheletto Convegno

AI-AUGMENTED DECISION MAKING: USING LARGE LANGUAGE MODELS TO IMPROVE EVERYDAY DECISION

Adrian Banks

Large Language Models (LLMs) such as ChatGPT are increasingly used to assist with important decisions. However, it is not known how accurately these models can predict the outcomes of real-life choices. This study investigated how well LLMs, specifically GPT-3.5, predicted the outcomes of everyday decisions compared to humans, and whether LLMs can augment human decision making. Participants facing real-life everyday choices rated their decision options based on attributes they identified; GPT-3.5 generated additional attributes and participants selected from both human- and GPT-generated lists; and GPT-3.5 independently predicted the outcomes of the decision options (N=98). Results showed that while GPT-3.5 could predict decision satisfaction, humans were more accurate in predicting outcomes. However, the augmented decision-making process, which integrated human and GPT attributes, outperformed both individual human and GPT predictions by broadening the attribute set considered. Rapid advances in the capabilities of large language models mean that they may soon overtake or replace human capabilities in many areas. We show that at present GPT-3.5 alone can predict some outcomes of everyday choices, but not as well as unaided humans. However, the most successful approach is to augment human decision making, integrating human and AI cognition for a more relevant and comprehensive decision process.

META-PREDICTIONS AS A SOLUTION TO THE SHARED INFORMATION PROBLEM?

Janina Hoffmann

Forecasting accuracy can be enhanced by incorporating diverse perspectives or seeking independent opinions. However, these methods falter if judgment errors are correlated due to shared information. To counteract the influence of shared information, metapredictions, predictions of another's knowledge, have been incorporated into forecasting methods, but these strategies require one's own and an advisor's metapredictions. This project explores two simplified strategies which pivot forecasts away from pivot from shared information by using one's metaprediction as a reference. Simulation studies shows that PivotMeta, a strategy replacing the advisor's metaprediction with the judge's metaprediction, surpasses mere averaging in low and high shared information contexts, nearing the accuracy of the optimal Global Posterior Expectation. Two experiments tested PivotMeta's effectiveness and its trainability in hypothetical medical scenarios with varying degrees of shared information. Initially, participants judged a disease's likelihood using private information, then received physician advice and re-evaluated their judgments. In a training condition, participants also predicted how others with the same information would judge and were instructed on how to use this information. Although trained participants learned to integrate information accurately, training did not enhance accuracy beyond receiving advice alone. These findings underscore PivotMeta's potential to improve forecasts without advisor metapredictions but highlight the need for effective training methods to ensure its benefits are fully realised.

DEPENDENT NUMERICAL JUDGMENTS IN SEQUENTIAL COLLABORATION: A COMPUTATIONAL MODELING APPROACH

Maren Mayer

Sequential collaboration is a collaborative process in which one contributor starts a sequential chain by creating an entry which is presented to subsequent contributors who decide whether to adjust or maintain it. Sequential collaboration has been successfully tested for numerical judgments. To strengthen the theoretical framework, we developed a mathematical model of sequential collaboration. It assumes that individuals hold a latent distribution of plausible values for numerical judgment questions, considering both item difficulty and contributors' expertise. To provide independent judgments, individuals draw from this distribution. In sequential collaboration, this distribution serves as a standard to assess the plausibility of a previous judgment. Contributors decide to adjust or maintain the judgment based on its plausibility. If maintained, the presented judgment is passed on; if adjusted, a revised judgment is provided which is drawn from an updated distribution that is influenced by the previous judgment. The model accurately accounts for previous empirical findings. We used the model make predictions for long sequential chains of 20 contributors which were confirmed empirically. Moreover, we adapted the model to distinguish between the influence of the possibility to maintain judgments and the sequential aggregation process. The model predicts that both opting out and the sequential process contribute to judgment accuracy which was also con-

firmed empirically. Overall, the model successfully accounts for empirical findings and makes new predictions. Beyond sequential collaboration, this model can be extended to other forms of dependent judgments, thereby aiding theory building.

OUTCOME SEVERITY INCREASES VERBAL PROBABILITIES USED TO COMMUNICATE PRECISE LIKELIHOODS

Adam Harris

Previous research has documented that verbal probability expressions (VPEs) are interpreted as denoting higher numerical probabilities where they refer to severe events, as opposed to more neutral events. Politeness based explanations for this effect suggest that it represents the correction of a tendency for communicators to downplay the likelihood of more severe events. We tested whether communicators really do downplay the likelihood of more severe events in three studies. In each study, participants read four scenarios including a numerical probability of either a severe or non-severe negative outcome, and were asked to communicate this probability 'to a friend' using a VPE. Our results did not show that communicators downplayed the likelihood of more severe events. In three out of four scenarios, participants provided higher VPEs to communicate the same numerical probability when that probability referred to a severe versus a non-severe event. This result was observed when participants communicated about events for which there were actionable protective actions that could be taken (Study 1) and where there were not (Studies 2 and 3). Similar results were observed when participants chose a VPE from a pre-specified list (Studies 1 and 2) and where they chose their communication freely (Study 3). The finding suggests a reinforcement of the influence of severity on subjective probability.

Decision from Experience 2

Guinigi SF

NAVIGATING THE SOCIAL ENVIRONMENT VIA A SAMPLING APPROACH TO TRUST

Marco Biella

This research investigates the process of impression formation by examining how individuals actively collect information about social targets, particularly focusing on trustworthiness. Four experiments explore how information search is shaped by different goals: interested search (seeking trustworthy partners) versus disinterested search (forming accurate trustworthiness evaluations). Using a trust game paradigm, participants generate behaviors that can be later sampled. In the sampling phase, participants gather information about whether players reciprocated or exploited trust, mimicking real-life social exploration. After sampling, participants provide trustworthiness ratings and engage in non-anonymous trust games to act on their formed impressions. Experiment 1 validates the paradigm and

establishes baseline findings. Experiments 2 and 3 enhance ecological validity by relaxing trial constraints, while Experiment 4 introduces a behavior prediction task. Results reveal that interested search triggers a negativity-induced early truncation bias, where participants stop sampling after encountering untrustworthy behavior, leading to small, negatively biased samples and skewed impressions. In contrast, disinterested search fosters extensive, systematic sampling, mitigating biases. Despite variations in search behavior, participants process obtained information linearly to form trustworthiness judgments. The findings underscore how impression formation and subsequent social decisions are shaped by goal-driven search dynamics. This research highlights the critical role of active information gathering in shaping trustworthiness perceptions and broadens our understanding of how social environments influence judgment and decision-making processes.

THE DECISION ENVIRONMENT AND CONFIDENCE IN EXPERIENTIAL RISKY CHOICE

Kuang-Heng Li

We investigated how the decision environment influences choice and confidence in a binary decisions-from-experience (DfE) task. We manipulated four aspects of the decision environment: option composition (safe vs. risky; SR, or risky vs. risky; RR), the riskiness of the EV-maximizing choice, feedback type (partial or full), and problem order (SR before or after RR). We found that participants made more EV-maximizing choices and were more confident in SR environments and when the EV-maximizing choice was the safer option. Participants' behaviour was influenced by their understanding of the incentive structure: confidence dropped sharply after discovering a previously unexpected outcome, and experiencing RR first led to over-sampling and reduced rewards in later SR environments. Our results shed light on how decision environment features interact to shape sampling biases, subsequently altering learning and decision-making outcomes.

BALANCING UNCERTAINTY: THE ROLE OF SAMPLE SIZE AND VARIABILITY ACROSS DECISION-MAKING DOMAINS

Rebecca West

People rely on uncertain information when making decisions, and accurately assessing this uncertainty is essential for adaptive responses. Despite its importance, it is unclear how people respond to different types of uncertainty and whether this differs across decision-making domains. To address this, we investigated how individuals incorporate the amount and reliability of information when making orientation- and number-based decisions. Specifically, participants ($N = 85$) completed a task in which they tracked the mean of a sequence and made probability judgments about its category. We manipulated sample size (n : 4 or 16) and variability (SD : 7.5, 15, or 30). We analyzed both subjective probability judgments and objective accuracy (Brier score). We found that accuracy and perceived probability increased with sample size and decreased with variability, suggesting sensitivity to both sources of uncertainty across modalities. Participants also accounted for the trade-off between these

factors, as accuracy and perceived probability did not differ between conditions match for standard error (SD/ checkmark n). Interestingly, subjective probability judgments were influenced by an interaction between sample size and variability, while accuracy was not. When variability was low, participants overestimated probabilities for larger samples, exceeding the corresponding gain in accuracy. When variability was high, they underestimated probabilities as sample size increased. To identify the factors influencing participants' judgments, we fit cognitive models to the data. Our results indicated that participants' judgments deviated from statistically optimal computations across modalities, highlighting systematic biases in how people account for uncertainty when making decisions.

INTEGRATING SOCIAL BENEFITS INTO BUSINESS MODELS: IMPACTS ON CUSTOMER DECISION-MAKING

Gal Gutman

This study examines how integrating social benefits impacts customer-perceived value, focusing on decision making processes such as perceptions, preferences, and choices. Drawing on Goal Systems Theory and Multi-attribute Value Maximization principles, it investigates two opposing theoretical constructs: Multifinality, suggesting that combining benefits enhances perceived value, and the Dilution Effect, proposing that linking multiple benefits to a single offering may reduce the perceived value of each, diminishing overall value. To better understand customer value, three integration strategies were analyzed: Corporate Social Responsibility (CSR), Fair Trade, and Work Integration Social Enterprises (WISE). Study 1 used a survey to assess customer preferences for businesses integrating social benefits, highlighting perceptual trade-offs between social and business value. Study 2 employed a choice-based conjoint experiment to examine decision-making and identify when customers engage in trade-offs. Findings reveal an integration continuum: as businesses emphasize social orientation, perceived business value declines, and vice versa. WISE models, with their strong social focus, achieved the highest perceived social value but the lowest business value. A distinction emerged between preference and choice—customers preferred businesses integrating social benefits but faced pronounced dilution effects when explicit trade-offs were required. This research highlights the complexities of ethical consumerism and perceptual trade-offs in integrating social benefits. By suggesting strategies to mitigate dilution effects, it offers actionable insights for socially oriented enterprises to enhance market positioning while maintaining customer-perceived value.

Consumer Decision Making 2

Aula 1 & Aula 2 SF

SEPARATE NEEDS IN THE LEISURE-CONSUMPTION CHOICE

Anne G. Miller

Bounded cardinal utility theory is based on three axioms. • Van Praag's (1968) S-shaped, cardinal utility, based on multiplicative lognormal distribution functions, is bounded above and below, ($0 \leq u \leq 1$). • A 'leaning-S-shaped' utility function represents both the individual's intensity-of-need and his/her experience of fulfilment of a need – deprivation (increasing marginal utility (MU)), subsistence (an inflection point), sufficiency (diminishing MU), and satiation at either finite or infinite consumption. • The utilities of commodities fulfilling the same need are weakly separable (multiplicative) and of those fulfilling different needs are strongly separable (additive). Functional forms for leisure and consumption, derived from a utility function created by adding two normal distribution functions with satiation at infinity, are functions of the real wage rate and unearned consumption. The indifference curve map and labour supply diagram are explored. Main outcomes: • Concave- and convex-to-the-origin indifference curves, (the former defining 'dysfunctional poverty'), are separated by a straight-line indifference curve, (an absolute poverty line with slope defined by the relative-intensities-of-need). • Both leisure and consumption respond as ultra-superior, superior-normal, inferior-normal, (including inferior-Giffen when combined with extreme deprivation in the other need), in different areas of the convex-to-the-origin indifference curves. Their boundaries are reflected in envelope curves in the labour supply diagram. • The labour supply diagram also reveals involuntary unemployment, disequilibrium, sticky wage rates associated with the straight-line indifference curve and greater wage elasticity associated with deprivation.

NO EVIDENCE FOR OPPORTUNITY COST NEGLECT IN SIMPLE CHOICE SITUATIONS AFTER ADJUSTING FOR INCOMPLETE EXPERIMENTAL DESIGN FEATURES

Eduard Brandstätter

Opportunity costs involve the foregone benefits of Option A when choosing Option B. In a classic study using the standard experimental paradigm, participants chose between buying or not buying a DVD (Frederick et al., 2009). In the experimental condition, they were told that they would save 14 dollars.99 if they did not buy the DVD. If so, they chose the DVD less often compared to the control condition without this reminder. This and many other studies within this experimental paradigm led to the conclusion that people neglect opportunity costs (Maguire et al., 2023). We argue that the standard paradigm is not well suited for testing opportunity cost neglect, because it ignores two other experimental conditions, namely, (a) the opportunity costs of not buying the DVD (i.e., to be able to watch the movie), and (b) the experimental condition that mentions opportunity costs of both options (i.e., "save 14.99 if you do not buy" and "watch the movie if you buy"). This extended experimental design, thus, contains four rather than two conditions. Most important, we argue that the critical test of whether people neglect opportunity costs or not is not between the control condition and the two conditions in which opportunity costs are mentioned for only one of the two options, but between the control condition and the condition in which opportunity costs are mentioned for both options. To test the possible neglect of opportunity costs in an extended design, 1,138 participants received the same six, binary choice scenarios using four conditions. Results revealed no evidence for opportunity cost neglect after adjusting for incomplete experimental design features.

Together, our results indicate that people are more rational than suggested by previous studies on opportunity cost neglect.

CONSUMER SEARCH PATTERNS IN ONLINE RETAILING

Jacob L. Orquin

This study advances our understanding of consumer search in online retailing using a data-driven approach and sheds light on three important questions: a) do consumers rely on single or multiple search processes? b) do consumers search a fixed number of options or decide sequentially when to stop searching? c) are there qualitatively different stages in consumer search? To answer these questions, we developed a novel method to track and combine eye-tracking data, mouse-scroll behavior, product preferences, and choice data of 121 participants during an online shopping task on a live retail website. Data streams were classified into sequences of search behaviors (e.g., scan, examine, compare, scroll), which were compared using optimal string alignment, and similarity values were then clustered to explore relationships between search behaviors, choices, and preferences. We identified three clusters of search sequences: fast, intermediate, and slow. The clusters differ qualitatively on several parameters suggesting that consumers rely on multiple search processes or heuristics. In fast sequences, the chosen product is seen late, indicating a sequential search process while in slow sequences it is seen early indicating a fixed sample search. We find evidence of a screening-out process where several products of a low subjective value are scanned, fewer products of a higher value are examined, and a small number of products of very high value are compared and finally chosen. There is little evidence that the screening process unfolds in consecutive stages. Regardless of the cluster, consumers tend to choose top-row products underscoring the importance of product placement.

INEQUALITY-RELATED STATUS CONSUMPTION IS LINKED TO IMPAIRED HEALTH: A DECADE OF DAILY SPENDING AND HEALTH OUTCOMES OF 470.000 INDIVIDUALS

Yuqi Ye

Income inequality negatively impacts public health. It also shapes both general economic conditions and individual behaviors such as status signaling through conspicuous consumption. However, the relation between inequality-induced status consumption and reduced health remains unclear. Moreover, most prior research has examined inequality's effects at large spatial scales, such as nation or US State, but people's personal experiences of inequality likely depend on everyday encounters within smaller geographical regions. This study therefore examines how health outcomes are linked to status-enhancing consumption and zip code-level income inequality. Our dataset combines ten years of daily decision making, covering 650 million purchases, with chronic health outcomes for 470,000 individuals. We find an association between short-term indicators of status enhancement behavior and long-term health: conspicuous consumption is greater when local income inequality is high, and this status-enhancing spending is negatively associated with health. A 1 percentage point

increase in the status consumption score is associated with a 3 percentage point increase in the logodds of anxiety and depression when inequality is high, but no change when inequality is low. Results are consistent with the hypotheses that (a) local income inequality increases status-related consumption, and (b) increased status related consumption impairs health. We discuss alternative interpretations and implications for public health strategies and inequality-mitigating economic policies.

Risky Choice 4

San Michele Affresco

KILLED THE CAT, BUT ALSO SAVED IT: CURIOSITY'S DUAL IMPACT ON ACTIVE AND PASSIVE RISK BEHAVIORS

Maayan Finegold

Decision-making involves uncertainty and risk, which can arise from actions (active risks) like bungee jumping from inactions (passive risks) such as avoiding medical screenings. Active risks tend to have immediate consequences, while passive risks are often perceived as less dangerous and receive less attention. This creates challenges for risk mitigation, as individuals may feel less responsible and motivated to address passive risks. This research explores the connection between epistemic curiosity, information, and these two types of risk-taking. Information is critical for effective risk assessment, yet individuals frequently avoid instrumental information, particularly in passive risk contexts. We propose that curiosity can serve as a key mechanism for influencing risk management. In two studies with 561 participants, we investigated how epistemic curiosity relates to risk-taking tendencies. Our findings revealed that epistemic curiosity negatively correlates with passive risk-taking but positively correlates with active risk-taking. Structural equation modeling (SEM) showed that instrumental information-seeking mediates the negative association between epistemic curiosity and passive risk-taking, while sensation-seeking mediates the positive association with active risk-taking. The findings highlight the intricate role of curiosity in risk-related behaviors. These findings provide a new basis for future interventions aimed at reducing passive risk, potentially improving outcomes in areas like health prevention and financial planning. The findings may offer practical implications for strategies that responsibly enhance curiosity, thereby fostering improved risk management behaviors.

A META-ANALYSIS SYNTHESIZING 20 YEARS OF EVIDENCE ON THE BALLOON ANALOGUE RISK TASK (BART)

Renato Frey

While psychological science suffers from measurement proliferation and fragmentation (Anvari et al., 2024), some measures prosper: With over 3,000 citations since its publication, the Balloon Analogue Risk Task (BART; Lejuez et al., 2002) remains a state-of-the-art mea-

surement instrument of the behavioral and clinical sciences to date. Surprisingly, however, despite its prominence and widespread adoption this task has undergone only a limited degree of systematic and rigorous validation research. One reason for this unsatisfactory state of affairs might be that the BART has been implemented very flexibly and with many researchers' degrees of freedom, thus making integrative and cumulative scientific insights rather difficult. Thus, the goals of this project were twofold: First, we took stock of the basic test-theoretic properties of the BART (e.g., reliability, differentiation ability, convergent and divergent validity, predictive validity) by means of a robust meta-analysis using Bayesian model-averaging. Second, we quantified the degree of measurement flexibility (e.g., regarding task implementation) and estimated its impact on the aforementioned criteria by means of a Bayesian meta-regression. We found that although the BART shows moderate reliability, it does not correlate with other measures of risk taking and with frequencies of real-life behaviors, and flexibility in task implementation substantially influences the task's basic test-theoretic characteristics. In sum, our meta-analysis highlights the strengths and limitations of this state-of-the-art measurement tool, and with the BART as a case study illustrates how psychological science more generally may profit from adopting similar analytic approaches to thus become a more integrative and cumulative field.

DETERRENCE OF UNWANTED BEHAVIOR: A THEORETICAL AND EXPERIMENTAL INVESTIGATION

Ro'i Zultan

A policymaker can deter anti-social behavior by imposing fines and penalties. The effectiveness of such deterrence largely depends on the probability of enforcement. Inspired by the Bayesian persuasion literature, we explore the efficacy of splitting enforcement on violations. We show theoretically that splitting is more likely to be effective in environments with high temptation to violate. The rationale is that splitting can decrease violation rates by convexifying concave violation curves. Under general assumptions, the violation curve is concave and then convex. High temptation moves the curve upwards and to the right, thereby increasing the concave region. Therefore, there is a single switching point where splitting becomes socially beneficial as temptation increases, for optimal splitting and for any given splitting probabilities. We test this novel insight in a laboratory experiment. We compare environments characterized by low, medium, and high temptation. In line with the theoretical analysis, we find that the violation curve is concave under high temptation and convex under low temptation. Consequently, splitting is socially beneficial under high temptation yet detrimental under low temptation.

SEPARATING PREFERENCES FROM ENDOGENOUS EFFORT AND COGNITIVE NOISE IN OBSERVED DECISIONS

Tomáš Jagelka

We develop a micro-founded framework for accounting for individuals' effort and cognitive noise which confound estimates of preferences based on observed behavior. Using a

large-scale experimental dataset we estimate that failure to properly account for decision errors due to (rational) inattention on a more complex, but commonly used, task design biases estimates of risk aversion by 50% for the median individual. Effort Propensities recovered from preference elicitation tasks generalize to other settings and predict performance on an OECD-sponsored achievement test used to make international comparisons. Furthermore, accounting for endogenous effort allows us to empirically reconcile competing models of discrete choice.

MEASURING CHANGES IN RISK PREFERENCES OVER THE LIFE CYCLE: EXPERIMENTAL EVIDENCE FROM ECONOMICS AND PSYCHOLOGY

Erica Ordali

Risk preferences are important determinants of decision-making, however, there is not much agreement across Psychology and Economics regarding how risk preferences are defined. As recent meta-analytical evidence shows, these inconsistencies across fields regard not only pure definitions but also methodologies, resulting in different results. On top of these differences, we might need to consider that risk preferences encompass various constructs, such as learning and cognitive abilities, that are often overlooked. In this paper, we aim to identify the role of the learning process in modifying risk preferences over repeated measurements indifferent age groups, interconnecting economic and psychological techniques. We expect to observe significant differences from baseline measurement after learning, with individuals possibly reaching risk neutrality. In Addition, we expect that the magnitude of this difference will depend on the interaction between the learning process, the cognitive abilities, and the participants' health, therefore posing that a single task might not fully capture the regularities observed empirically.

SEPTEMBER 2ND, H 16:00

Choice Modelling

San Michele Affresco

UNBIASING THE MEASUREMENT OF JUDGMENT ACCURACY: A HIERARCHICAL APPROACH TO ESTIMATING THE PARAMETERS OF THE LENS MODEL EQUATION

Franziska M. Leipold

When making judgments in probabilistic environments, it is often assumed that people rely on cues that are to some extent predictive of the true criterion value. Since neither the judgments nor the criterion are perfectly predictable by these cues, quantifying judgment accuracy by computing their correlation underestimates true accuracy. To address this issue, the matching parameter of the lens model equation was introduced as an attenuation-corrected measure of this correlation. As a result, this measure has been used extensively over the past decades in various fields within and outside psychology to study judgment accuracy. However, building on early research criticizing it, we show through simulation studies that the conventional matching parameter is unreliable and systematically biased, often underestimating judgment accuracy, particularly when judgments are highly accurate, under high-noise conditions, and when models fail to capture all systematic influences. As an alternative, we propose a hierarchical extension of the matching parameter that accounts for the clustered structure of typical judgment data and mitigates biases in the conventional approach through greater model flexibility. Through simulations and reanalysis of seven datasets from two research domains, we demonstrate that the hierarchical matching parameter provides more valid and reliable estimates of judgment accuracy. These findings challenge long-held beliefs about human judgment accuracy based on the conventional lens model approach. To avoid misinterpretations due to biased measurement, we recommend adopting the hierarchical version in future research as a more reliable measure of judgment accuracy.

DECOMPOSING FINANCIAL DECISIONS: A STRUCTURAL MODELING APPROACH

Melvin Marti

In behavioral economics and finance an in-depth exchange between theorists and applied researchers is key to its success in identifying promising explanations for human behavior. However, as part of its success, an ever-growing number of explanations have emerged, leaving uncertainty about which ones should be included in models. In this study, we focus on explanations of financial decision making among behavioral economists and finance researchers. We aim to systematically analyze how combining mechanisms (i.e. components of theories) improves explanatory power of models explaining financial decisions. In a first step, we

identified as most relevant explanations, with a corpus of scientific papers and review articles from an expert survey: risk/loss aversion, probability weighting, habits, asymmetric learning, Bayesian updating and reinforcement learning (RL). In a second step, these mechanisms were translated into structural behavioral models and compared in a specification analysis to see how they explain financial decisions within two independent dataset. Both datasets enabled comparison against the optimal trading behavior of a Bayesian expected value maximizer. While all mechanisms improved explanatory power over the rational benchmark, their relative importance varied. Habits and asymmetric learning, especially overreacting to gains and underreaction to losses, showed the greatest improvements. Compared to Bayesian updating, modeling learning with aRL improves explanatory power, especially for simpler models. The results suggest that modeling learning mechanisms - by incorporating habits and AL - is crucial and significantly enhances the explanatory power of trading behavior in investment tasks.

BIAS IN BELIEF UPDATING: COMBINING THE BAYESIAN SAMPLER WITH HEURISTICS

Yitong Lin

People systematically deviate from rational Bayesian updating in belief formation, displaying biases such as base-rate neglect and conservatism. Two very different types of model aim to explain these biases: simple heuristics and stochastic sampling approximations of the Bayesian solution, like the Bayesian Sampler. However, neither of these approaches alone accounts for the entire range of responses. Here we explore a new model that integrates simple heuristics with a Bayesian sampler. In this framework, an initial discrete estimate is generated using a simple heuristic, which serves as an anchor. This estimate is then refined through a Bayesian sampling process that approximates the ideal Bayesian posterior. A probabilistic switching mechanism within the model determines the number of samples drawn. If no samples are drawn, heuristic response is produced, but additional samples will further refine the final judgment. Analyses of data from a new experiment (N=200) revealed that this integrative approach outperformed purely heuristic or purely Bayesian models in explaining how people update their beliefs in diagnostic tasks. Our findings suggest that people flexibly combine mental shortcuts and approximate Bayesian processes, illuminating why some responses appear purely heuristics while others reflect approximate Bayesian updating.

CHOICES WITHOUT PREFERENCES: PRINCIPLES OF RATIONAL ARBITRARINESS

Craig McKenzie

The traditional theory of rational choice assumes that preferences are complete, but the completeness axiom is neither normatively compelling nor psychologically plausible. Building on recent work in economics, we develop a rational analysis of decision making with incomplete preferences. The analysis sheds surprising light on several behavioral “anomalies,” including status quo maintenance, the endowment effect, coherent arbitrariness, and the sunk cost effect. When preferences are incomplete, an “implementation policy” is needed

to select among unranked alternatives. We show that conservative and coherently arbitrary implementation policies are adaptive in simple choice environments. Notably, a conservative implementation policy predicts an endowment effect (even in the absence of loss aversion), and a coherently arbitrary implementation policy generates rational sunk cost effects. We review recent evidence that the endowment effect may result from conservative implementation, as suggested by the rational analysis, rather than loss aversion. The rational analysis offers a new perspective on history-dependence, in which human acts are sensitive to the actor's status quo and past choices. Some well-known forms of history-dependent choice, which have traditionally been regarded as counter-normative, may instead be signatures of rational implementation.

Climate Change

Aula 1 & Aula 2 SF

THE ANTAGONISTIC, ADDITIVE, AND SYNERGISTIC EFFECTS OF COUPLING ECONOMIC AND BEHAVIORAL CLIMATE POLICIES

Anne Günther

Policy mixes are essential for climate change mitigation, yet the cognitive and behavioral responses to combined interventions remain underexplored. In a preregistered study (N = 1,589) across Mexico, South Africa, the USA, and the UK, we examined how a climate label and a carbon tax, individually and in combination, influence attention allocation, product choices, and policy support. Using stated choice experiments with mouse tracking, we found that taxes and labels competed for attention, demonstrating antagonistic effects. At the behavioral level, participants were more likely to choose sustainable products when both interventions were present, with additive effects observed across all countries. Labels partially mitigated taxes' negative impact on policy support, revealing synergistic effects. These findings advance the understanding of how behavior change interventions jointly influence decision-making, providing insights for designing more effective and publicly supported climate policies.

CLIMATE JUSTICE SUPPORT IN A POLARIZED WORLD: THE ROLE OF POLITICAL AFFILIATION, THINKING STYLE, AND PERCEIVED CONNECTEDNESS

Enrico Rubaltelli

Public support for climate justice policies is influenced by political preferences, cognitive styles, and perceptions of issue interconnectedness. This study examines how these factors shape attitudes toward adaptation, mitigation, and climate justice policies. We assessed U.S. participants' policy support, political affiliation, and thinking styles and manipulated the perceptions of connectedness between climate change and broader societal issues to

test its influence on policy support. Results show that political affiliation strongly predicts policy support, with liberals being more supportive than conservatives. Higher perceived connectedness correlates with greater policy endorsement, particularly for climate justice measures. Additionally, individuals scoring higher in analytical thinking show greater differentiation in policy preferences, whereas affect-driven responses are more uniformly associated with policy support. The findings highlight the psychological mechanisms underlying climate policy support, emphasizing the role of framing and cognitive engagement in fostering policy acceptance.

PERCEIVED CONSENSUS OF SCIENTIFIC PREDICTIONS ABOUT LOW PROBABILITY EVENTS?

Marie Juanchich

Scientific claims are sometimes reported in the media by headlines stating what “scientists” say or believe without identifying exact source or evidence. Such generic statements imply some generality but remain silent about how large is the consensus group. The present studies compared scientific statements reported to be certain, e.g. “climate scientists say they are certain that by 2050, mean temperatures will be at least 1.5 degrees higher than today”, with corresponding unqualified statements, where the word certain was omitted. Two preregistered experiments (N = 881) concerning climate change predictions revealed: (1) That Predictions explicitly claiming to be certain implied less consensus than predictions that did not mention certainty (2) Such predictions were also perceived to be less based on scientific evidence (3) And were judged to have a lower probability of being accurate. (4) Personal claims of certainty (“we are certain”) were less believable than corresponding impersonal claims (“It is certain”) We conclude that claims of certainty make predictions appear less reliable because they indicate that they are based on human judgments, rather than on objective, measurable facts.

Advice Taking 2

San Michele Convegni

THE IMPACT OF MEMORY MODIFICATION MECHANISMS AS METACOGNITIVE STRATEGIES FOR ADAPTIVE DECISION MAKING

Florian Scholten

According to metacognitive myopia, decision makers are highly sensitive to even complex samples, but adhere to sample trends in an uncritical and naive manner. In this study, we examined the efficacy of intentional forgetting and directed encoding as tools to correct for the influence of invalid advice in a subsequent judgment task. To this end, we contrasted different strategies of memory modification by combining them with the advice-taking paradigm. In two experiments (Ntotal = 319), participants were prompted to engage in financial

planning for house construction. Two lists containing prices for different trades from a valid and an invalid form were presented to the participants. The timing of the validity instructions was varied to induce the two memory modification mechanisms. Following the learning phase, participants were prompted to recall the price lists in a cued recall test and estimate the costs associated with constructing a house. As a result, directed forgetting induced more forgetting of invalid values and remembering of valid values than directed encoding. Strikingly, participants in the directed encoding condition still elicited more strategic encoding of valid and invalid advice by exploiting the trade structure that they translated directly into online judgments. As stronger memory for invalid values made participants in the directed encoding condition persistently susceptible to invalid advice, intentional forgetting appears to have greater potential to serve as an adaptive metacognitive strategy. The implications of intentional forgetting and directed encoding mechanisms as metacognitive strategies are discussed.

ADVICE OR OPINION? HOW AN AUTONOMY FOCUS TIPS THE SCALES: THE FOCAL GOAL EFFECT ON SOCIAL INFORMATION PREFERENCES

Maxim Milyavsky

People are constantly subject to social influences such as advice and opinions. A tacit assumption in the advice-taking literature is that decision makers treat these inputs equally (Kämmer et al., 2023). Based on the goal-systemic approach, we challenge this notion (Kruglanski et al., 2002; 2015), arguing that decision makers treat advice and opinions differently contingent on their focal goal. Specifically, when aiming for accuracy, people prefer advice; when seeking autonomy, this tendency diminishes or reverses. We tested this hypothesis in four preregistered experiments (N = 860). In Study 1, participants imagined starting a new project at work with success defined in terms of accurate (technical, procedure-driven) or autonomous (creative, original) performance. Under the accuracy focus, most participants preferred advice; however, when autonomy is highlighted, this preference disappeared. Study 2 replicated these findings with the project description held constant while varying only the focal goal. In Study 3, we extended the focal goal effect to an academic context (scholarship application) using a more subtle manipulation of the focal goal by merely describing the task as creative (vs. technical). An accuracy focus led to a preference for advice, whereas an autonomy focus reversed this preference. Study 4 examined advice-opinion choices when autonomy and accuracy goals were manipulated within participants using parental input. Advice was favored in the accuracy-focused (i.e., technical) part; this preference reversed in the autonomy-focused (i.e., creative) part of the task. Our findings show that people treat advice and opinions differently contingent on the focal goal, highlighting the critical role of focal goals in shaping how social information is valued.

BALANCING EXPERIENCE AND ADVICE IN A SPATIALLY CORRELATED BANDIT TASK: ADVICE IS GENERALIZED BUT UNDERUSED

Nico Gradwohl

How people use advice to balance exploration and exploitation in foraging tasks is an important question. We investigate a spatially correlated bandit task, where individuals can generalize previously encountered rewards to unknown options, allowing them to exploit advice, generalize from it, or ignore it. While individuals often assign less weight to advice than to their own experience in judgment tasks, agent-based simulations indicate that exploiting advice can help maximize rewards here. To examine how successfully individuals integrate different types of advice, 402 participants in an online experiment explored different bandits, receiving one tile as advice that they could follow by clicking on it (receiving no advice in 2 grids). Based on factors affecting the weight of advice, we varied three factors in a 2 x 2 x 2 within-subjects design: (1) recipient experience (5 vs. 15 clicks before receiving advice), (2) advice value (high vs. low), and (3) familiarity, reflecting the distance of advice to previously explored options (familiar vs. novel). Participants rarely ignored advice and explored closer to high-value advice. Notably, individuals explored further from novel, low-value advice-tiles, suggesting successful generalization and avoidance. Less experienced participants explored closer to familiar advice than to other options, while more experienced participants explored closer to self-selected options, reflecting that they discount advice based on previous experience. Despite being drawn to advice, participants generally continued exploring their environment rather than exploiting advice by repeatedly clicking on it. This suggests that individuals adaptively integrate advice into their exploration strategy but assign less weight to it than would be optimal.

LEARNING AND TRANSFER WITH ENVIRONMENT AND FEEDBACK'S MANIPULATIONS IN NORMAL FORM GAMES

Giacomo Sacchetti

This study investigates how feedback frequency and environmental structure influence learning in repeated strategic interactions. While behavior in one-shot versus repeated games often diverges due to various factors—including randomness, strategic sophistication, and social preferences—this experiment isolates learning as the sole driver of behavioral change. To rule out alternative explanations, participants interact with computer opponents, excluding social dynamics and strategy signaling. The study builds on inconclusive findings from psychology and economics regarding feedback's role in learning, noting that while frequent feedback typically aids performance, its absence or delay can sometimes promote deeper engagement with task structure. We introduce an experimental design with eight treatments varying both the timing of feedback (after every play, every five or ten plays, or never) and the structure of the game sequence (well-structured vs. random). Our results reveal that players receiving frequent feedback in a well-structured, curriculum-like environment learn and perform best. Conversely, frequent feedback in a disordered environment hinders learning more than any other treatment. Remarkably, players in well-structured environments learn effectively even with infrequent or no feedback, suggesting that environmental structure

alone can drive learning. These findings indicate that stable, thoughtfully sequenced environments may play a more pivotal role than feedback itself in facilitating learning in games. This challenges conventional assumptions and suggests new directions for designing learning environments in strategic settings.

Social Evaluation 2

San Francisco Church

THE SOCIAL LEARNING TRAP: LIMITATIONS OF SOCIAL LEARNING FROM INCOMPLETE INFORMATION IN A DYNAMIC DECISION-MAKING TASK

Alexandra Ortmann

What consequences our actions have is often not entirely clear. Some actions may seem great in one moment but may turn out to be suboptimal in the long-run. Optimally balancing exploration and exploitation in such dynamic environments is challenging and experimental interventions to help this balancing act have had limited success. In the current study, we asked how participants contending with a dynamic decision-making task can use incomplete information shared by a partner to improve their own decision-making performance. In two experiments ($N = 72$, $N = 79$), we found that social learning, even from an optimally choosing partner, can hurt decision performance when only limited information is available. In addition, participants imitated their partners' exploration-exploitation behavior, but imitation alone was not sufficient to benefit performance. Further, information beyond the partners' reward information did not improve participants' performance. A reinforcement learning model suggested that different types of information impact different aspects of the learning process. Switch information seemed to impact the learning rate parameter, and reward information seemed to impact the memory decay parameter. Overall, our results suggest that people use imitation and inference-making as social learning mechanisms, but that imitation without inference-making may not be sufficient to learn and succeed in dynamic decision-making environments.

CONTRAST AMPLIFICATION: EVALUATIONS OF GROUPS (VS. INDIVIDUALS) ARE MORE CONTRACTED AWAY FROM STANDARDS

Jingyi Lu

The contrast effect, in which the evaluation of a target experiences a shift away from a comparison standard. While most research focuses on individuals, understanding how group evaluations are shaped by comparison standards is crucial. Our research explores how the evaluation target (individual or group) influences the magnitude of the contrast effect. We

propose the amplified contrast effect for groups: the contrast effect is amplified when the evaluation target shifts from an individual to a group. Studies 1 and 2 tested the amplified contrast effect for groups. We found that the difference in ratings between the upward and downward comparison conditions was larger for the target group than for the target individual. Studies 3 and 4 investigated the mechanism for the amplified contrast effect for groups. Study 3 provided process evidence for the mechanism by measuring raters' focus on differences between individuals or groups. Reuters Reported focus on differences between two groups was greater than their focus on differences between two individuals. This difference was correlated with the amplified contrast effect for groups. Study 4 guided readers' attention to similarities between individuals or groups and found that the amplified contrast effect for groups was reduced. Study 5 explored a boundary condition. When the target and comparison standard were in a cooperative (vs. competitive) relationship, the amplified contrast effect for groups was attenuated. Our research contributes to the literature on the antecedents of the contrast effect by incorporating the perspective of the evaluation target. We also extend the literature on differences between perceptions of an individual and a group to the difference between interpersonal and intergroup perceptions.

DOING GOOD FOR BAD REASONS: INDIVIDUAL VERSUS CORPORATE FRAMING OF ETHICAL ACTIONS

Uriel Haran

People perceive corporations and individuals differently in their capacity for moral intentions and behavior, leading to biases in moral judgments of unethical acts. We suggest this may also explain judgments of corporate social responsibility (CSR), which plays a key role in public perceptions of corporations but is not yet fully understood. While CSR is essentially corporations' way of acting prosocially, it is judged differently from human prosocial behavior. We examine how agent identity (person or corporation) and motivations affect attributions of moral credit for prosocial behavior. Four studies (N=2800) find that corporations and individuals receive similar moral credit for prosocial actions motivated by moral concerns, but actions driven by self-oriented motivations yield a more complex pattern. Individuals, but not corporations, received significantly less moral credit for a donation motivated to boost reputation than when the motive behind it was to fulfil societal expectations (Studies 1a-b). Participants expected corporations a-priori to be motivated more by reputation and less by genuine care than individuals (Study 2). Study 3 identified perceived authenticity as an underlying mechanism. Compared to CSR driven by societal expectations, reputation-motivated CSR was rated as equally authentic for corporations but significantly less so for individuals, affecting participants moral judgments and willingness to do business with the agent. These findings suggest that the perception of corporations as less morally motivated may actually help them mitigate backlash to their CSR activities. The studies advance our understanding of how people evaluate corporate and individual prosocial behavior and highlight the role of authenticity in shaping moral judgments.

Heuristics & Biases 4

Guinigi SF

APPLYING FUZZY-TRACE THEORY TO ATTRIBUTE-FRAMING BIAS: GIST AND VERBATIM REPRESENTATIONS AMONG OLDER AND YOUNGER ADULTS

Eyal Gamliel

Attribute framing bias reflects the tendency to evaluate objects more favorably when framed positively (e.g., 85% chance of success) rather than negatively (e.g., 15% chance of failure). Evaluations are also influenced by polarization levels of quantitative information (e.g., a medical operation is viewed more favorably at a 90% compared to a 70% chance of success). Fuzzy-trace theory explains these effects through a dissociation between gist representations, linked to attribute framing, and verbatim representations, linked to polarization levels. It further suggests that older adults may rely more on gist due to poorer verbatim representations, making them more susceptible to framing bias and less sensitive to polarization levels. Study 1 examined these effects through in person sampling of older adults from community centers and younger adults. Older adults were more susceptible to attribute framing than younger adults, consistent with reliance on gist. They also showed lower sensitivity to polarization levels (although this interaction was not significant). Study 2 used an online panel to find comparable effects of attribute framing and polarization levels across age groups, suggesting that online older adults relied on both gist and verbatim representations similarly to younger adults. These findings support fuzzy-trace theory, emphasizing a dissociation between gist and verbatim processing. Critically, they suggest that susceptibility to biases in judgement and decision making varies with age and may also depend on social-cognitive environment (e.g., community centers vs. online setting).

THE ROBUSTNESS OF MENTAL ACCOUNTING: A GLOBAL PERSPECTIVE

Giulia Priolo

Mental accounting refers to a series of mental operations by which people organize, evaluate, and keep track of financial activities, explaining how individuals assess financial values based on context rather than actual amounts. This construct is central to behavioral sciences and challenges the assumptions of classical economic theory. This pre-registered work tests the replicability of seven key studies covering the most important effects associated with mental accounting, including emotion, relative values, and sunk costs. Across 5,589 participants from 21 countries, hierarchical Bayesian meta-analyses revealed a 100% replication rate for all seven studies. Unpooled analysis showed a 90.5% replication rate (133 out of 147 effects), with effect sizes only slightly weaker than the original studies. Exploratory analysis of the moderating effects of financial literacy and socio-demographic information was inconclusive, reaffirming mental accounting as a pervasive phenomenon. Additionally,

notable differences emerged across countries, with higher GDP per capita correlating with stronger mental accounting. Although exploratory and correlational, this insight underscores the value of large-scale cross-country comparisons. These findings support the original studies across time ⁷ and culture, confirming the critical role of mental accounting as a driver of human decision-making and its implications for understanding economic behavior on a global scale.

THE PICK-THE-WINNER-PICKER HEURISTIC: PREFERENCE FOR CATEGORICALLY CORRECT FORECASTS

Jon Bogard

Experts typically characterize good forecasting as minimization of continuous prediction error. By contrast, the present work reveals that laypeople typically evaluate predictions according to a different criterion: Good forecasts are those that correctly predict the categorical outcome. Both within- and between-subjects, and even when forecaster choices are incentivized, people prefer forecasters who correctly identify the categorical outcome (e.g., winner of a contest) to those who minimize continuous prediction error (e.g., margin of victory). Nine studies demonstrate this “pick-the-winner-picker” heuristic as well as its psychological mechanism: People evaluate overall forecast quality by the accuracy with which it predicted whichever outcome - categorical or continuous - matters most for that situation. Thus, in the common case when categorical outcomes matter more than continuous outcomes (e.g., sports contests), people prize forecasts that correctly identify the categorical outcome; when the stakes of the categorical outcome are experimentally reduced, a commensurate attenuation of this phenomenon is observed. While people may often evaluate forecasters in this way, it is noteworthy that an outcome’s importance is not necessarily related to its diagnosticity of forecaster skill or reliability. Accordingly, utilizing a pick-the-winner-picker heuristic is shown to lead to mistaken decisions, while framing manipulations help debias judgments.

EXPLICIT DISCRIMINATION AND INGROUP FAVORITISM, BUT NO IMPLICIT BIASES IN HYPOTHETICAL TRIAGE DECISIONS DURING COVID-19

Wolfgang Gaissmaier

The COVID-19 pandemic forced healthcare professionals to make difficult triage decisions under conditions of resource scarcity. This study examines how laypeople make similar hypothetical triage decisions, focusing on explicit discrimination, ingroup favoritism, and implicit biases. In a large-scale online experiment (N = 2296), participants evaluated 19 patient pairs differing only in a single feature, deciding whether to allocate a ventilator or use a random selection method. Results revealed clear patterns of explicit discrimination based on health status, social contributions, and familial roles. Patients perceived as healthier, younger, or having dependents were systematically favored, while those with behaviors considered risky (e.g., excessive drinking) or unethical were disadvantaged. Social roles

also played a role, with healthcare workers and police officers receiving priority. Surprisingly, participants did not exhibit covert discrimination through asymmetric random allocations. When given the option to withdraw care from a pre-allocated patient, favoritism persisted in direct allocation choices but was not masked by seemingly impartial random decisions. These findings highlight the gap between ethical guidelines advocating impartiality and public moral intuitions shaped by social and individual responsibility considerations. The study underscores the persistence of overt biases in triage decisions while challenging assumptions about implicit bias in these contexts.

September 3rd

DAY OVERVIEW

Wednesday 3 sept					
9: 00 - 10:15 Parallel Session 1					
Artificial Intelligence 3 San Micheleto Convegni	Prosocial Behavior 3 San Micheleto Affresco	Loss Aversion Guinigi SF	Consumer Decision Making 3 Aula 1 & Aula 2 SF	Trust San Francesco Church	
10:15 - 10:45 coffee break San Francesco Complex & San Micheleto Complex					
10:45 - 12:00 Parallel Session 2					
Decision Processes 3 San Micheleto Convegni	Risky choice 5 San Micheleto Affresco	Beliefs Guinigi SF	Behavior change Aula 1 & Aula 2 SF	Attention San Francesco Church	
12:00 - 13:00 Poster Session & Lunch San Francesco Complex					
13:00 - 14:15 Parallel Session 3					
Dishonesty San Micheleto Convegni	Decision Processes 4 San Micheleto Affresco	Inequality Guinigi SF	Ambiguity Aula 1 & Aula 2 SF	Motivated Reasoning San Francesco Church	
14:15 - 14:40 Coffeee Break San Francesco Complex & San Micheleto Complex					
14:40 - 16:00 Flash Talks					
Decision making San Micheleto Convegni	Prosociality and emotions San Micheleto Affresco	Technologies & Information + Finance, Accounting, & Management Guinigi SF	Consumer Decision Making & Sustainability Aula 1 SF	Choice Modelling & Theory San Francesco Church	Heuristics & Biases Aula 2 SF
16:00 - 17:00 Parallel Session 4					
Communication San Micheleto Convegni	Choice Modelling San Micheleto Affresco	Decision from Experience 3 Guinigi SF	Misinformation & polarization 3 Aula 1 & Aula 2 SF	Nudge San Francesco Church	
17:00 - 18:30 Awards San Francesco Church					

POSTER SESSION

Day	Author	Title
3-Sep	Alexandra Ortmann	
3-Sep	Anti-Eero Lattula	
3-Sep	Axel Perini	Quantum Cognition and Judgment Consistency: An Investigation of the Zeno Effect
3-Sep	Eldad Tal-Shir	Designing behavioral interventions with explainable AI
3-Sep	Giorgio Gronchi	
3-Sep	Irina Heimbach	DO AI LITERACY AND AESTETIC FLEUNCY HELP RECOGNIZING AI-GENERATED IMAGES AND ARTWORK
3-Sep	John Gubernath	
3-Sep	Keita Kawasugi	The Relationship Between Attitudes and Behavior Under Uncertainty: Evidence from a Capsule Toy Task
3-Sep	Lishi Tan	
3-Sep	Lukas Bantle	Disentangling Ellsberg - What drives Ambiguity Attitudes?
3-Sep	Marta Mangiarulo	Fairness Outweighs Perceived Status in Ultimatum Game Decisions
3-Sep	Moral Fridberg	Advice taking as a social token: The effect of advisor prosociality and reciprocity motivation on advice taking
3-Sep	Petra Filkukova	
3-Sep	Ritta Issa	The Warm Glow of Giving: Affective Forecasting and Scope Sensitivity of Warm Glow - Comparisons Between Joint and Separate Evaluations
3-Sep	Sandra Andraszewicz	What makes decision-making complex? - A literature-based conceptual framework of complexity in decision-making
3-Sep	Silvia Tedeschi	Managing Complexity in New Product Development: A Framework for Assessing and Mitigating Over Featuring
3-Sep	Wai Lam Leung	
3-Sep	Yuki Tamari	A Kappa-Based Analysis of Decision Strategy Classification: Examining Accuracy Ratios and Elementary Information Processing
3-Sep	Zepeng Sun	How descriptions moderate memory biases in experience-based risky choice

Session Breakdown

3-Sep	3 Sept h. 9.00	3 Sept h. 10.45	3 Sept h. 13.00	3 Sept h. 16.00
San Micheletto Convegno	Artificial Intelligence 3	Decision Processes 3	Dishonesty	Communication
	Claudia Cival Human contact in the digital age: a scarce luxury good?	Florian Seitz Eve Movements Reveal the Cognitive Processes Underlying Quantitative Judgments	Julia Nolte Susceptibility to Fraud under Cognitive Load: Does Age Make a Difference?	Edith Shalev Search Or Scroll: How Credibility Versus Likability Premiums Shape Following Decisions on Digital Platforms
	Esther Kaufmann A Critical Overview on AI Use Theories	Marta Mangiarulo Evidential Impact Shapes Confidence but Not Accuracy in Inductive Perceptual Reasoning	Lau Lilleholt Exploring the Effectiveness of Dishonesty Interventions Across 29 Societies	Friedericke Fromme Suspicion and Communication
	Piers Fleming Predictors of AI use across stages of academic work by higher education students	Ruobing Fu Interpersonal Cost of Using Rejection: Interactions with Rejection Users are Considered Less Pleasant than Interactions with Choice Users	Lukasz Markiewicz Monetary priming reduces children's sensitivity to variations in potential gain magnitude in a cheating scenario	Jack Soll Aversion to Disagreement: Psychological Barriers to Harnessing Cognitive Diversity
	Yarden Ganish The Impact of AI- versus Human-generated Feedback on Creative Self-Efficacy	Tim Mullett Attentional Dilution in Multi-Attribute Choice: Behavioural and Eye-Tracking Evidence	Mathilde Hedegaard Tønnesen How Do Organizational Structures Impact Collaborative Corruption: Investigating the Role of Diffusion and Displacement of Responsibility	Martina Barjaková Communication of synergistic health risks
			Qinyu Xiao Text-based behavioural interventions for increasing payment morale in an honour system: A large-scale field experiment in Austria	

3-Sep	3 Sept h. 9.00	3 Sept h. 10.45	3 Sept h. 13.00	3 Sept h. 16.00
San Micheletto Affresco	Prosocial Behavior 3	Risky choice 5	Decision Processes 4	Misinformation & polarization 3
	Avantika Dev Sharing Gains and Losses: Dictator Game Decisions with Robot Opponents	Eyal Ert Self-other differences in risky choice: An evaluation of risk-taking, EV maximization, and decision time in a large set of choice problems	Jakub Traczyk The Parking Task: The development and validation of a novel cognitive task measuring adaptive decision making	Anna Schulte How Distinctiveness Drives Information Selection in Communication
	Benedicta Hermanns Risk and Prosociality: Can Experimental Decisions Predict Health Behavior?	Ronald Klingebiel Uncertainty Preferences in Resource Allocation	Philipp Chapkovski Experiments In Reflective Equilibrium Using The Socrates Platform	Greta Arancia Sanna The Role of Worldview Congruence in Misinformation Correction: A Bayesian Approach to Belief Updating
	Tom Gordon-Hecker Individual differences may require time to shape prosocial behaviors	Stefania Merone Information encoding and the fourfold pattern of risk attitudes	Rastislav Rehak Bayesian Second-Guessing: Sequential Sampling Model of Post-Decisional Confidence	Jun Liu The Effects of Post-Narrative Correction and Credibility Label on Mitigating the Impact of Misinformation
	Antonia Krefeld-Schwalb Targeting Interventions to Reasons for Sustainable Behavior	Yun-Xiao Li How utility influences repeated mental simulations of lotteries	Achiel Fenneman Cascading memory search bridges episodic memories and semantic knowledge	Si-Qi Zhang Shades of uncertainty in (mis)information: linguistic patterns and their impact on readers
		Zepeng Sun How descriptions moderate memory biases in experience-based risky choice	Tadeusz Tyszka Moral decision-making: how do people solve the conflict between material incentives and moral norms?	

3-Sep	3 Sept h. 9.00	3 Sept h. 10.45	3 Sept h. 13.00	3 Sept h. 16.00
Guinigi SF	Loss Aversion	Beliefs	Inequality	Decision from Experience 3
	Bernd Figner Chasing losses versus wins in a novel sequential risky gambling task: Mechanisms, moderators, and psychometric properties	Edona Selimaj How does new information influence the uncertainty of individuals' beliefs?	Bar Shlomo AI in Medical Decision-Making: Effects on Physicians' Choices, Culpability, and Emotional Burden	Uri Barnea Who's on first, who's on second? When engaging in experiences, people prefer to alternate
	Eldad Yechiam A re-meta-analysis of loss aversion: Beyond the sum of all individual studies	Sahana Shankar The Role of Prior Beliefs in Shaping Contingency Judgments	Dianna Amasino Fairness and attention in the face of shifting inequality	Tim Rakow What predicts the next choice in repeated binary choice in dynamic environments when full feedback is available?
	Nuno Busch Is there a description-experience gap in loss aversion? A meta-analysis with cumulative prospect theory	Calvin Deans-Browne For Everyday Arguments Prior Beliefs Play a Larger Role on Perceived Quality Than Argument Quality Itself	Francisco Miguel Soler Martinez The Common Ground of Inequality: Cross-Ideological Consensus on Economic Disparities in Health and Education	Nicholas Owsley Discriminating because others might: Anticipating discrimination by others causes discrimination
		Barbara Fasolo When accurate forecasting tournament reports reduce prediction accuracy in a professional sample	Yair Nahari When coin flips seem less fair: Divergent endorsement of lotteries in allocating gains and losses	Vanessa Rettkowski Inaction Inertia: A Meta-Analysis Spanning 30 Years of Research, Examining the Effect's Robustness and Potential Moderators

3-Sep	3 Sept h. 9.00	3 Sept h. 10.45	3 Sept h. 13.00	3 Sept h. 16.00
Aula 1 & Aula 2 SF	Consumer Decision Making 3	Behavior change	Ambiguity	Choice Modelling
	Bianca Sanesi Modeling Moral Trade-offs in Utility Functions Across Multiple Ethical Domains	Carolin Echterbeck Do impact-based weather warnings improve decisions to reduce casualties? A natural experiment in Southeast Asia.	Hideki Iwaki A note on ambiguity-adjusted asset pricing.	Alessandro Gioffré A non-strategic solution to the electronic mail game paradox
	Fenqi Guo Awareness and Transparency of Choice Architectures in Marketing	Nicolo Bertani Every Man is an Island: Reminder Timing for Heterogeneous Mobile Users	Karl Halvor Teigen Perceived consensus of scientific predictions of events claimed to be "certain"	Niyaz Mukhametzynov On the robustness of compromise effect in decisions from experience
	Yaniv Shani ONGOING REGRET: THE ROLE OF MISSED OPPORTUNITY SALIENCE IN CONSUMER REGRET	Wandi BRUINE DE BRUIN De-sludging Elicits Less Opposition Than Nudging		
	Damien Mayaux Marketing Cues and Rationally Attentive Consumers	Yujia Yang On the nature of recency in decisions from experience		
		Kinneret Teodorescu Don't Give Up: Exploring the Path to Effective Behavioral Change Interventions		

3-Sep	3 Sept h. 9.00	3 Sept h. 10.45	3 Sept h. 13.00	3 Sept h. 16.00
San Francesco Church	Trust	Attention	Motivated Reasoning	Nudge
	Daniel Navarro-Martinez Trust Across Contexts: The US vs. Japan	Ben Newell A Timeline of Cognitive Costs	Angelo Di Carlo Individual Behavior, Market Selection, and Price Informative Efficiency Under Uncertainty	Aba Szollosi The limits of default nudges
	Jan Engelmann Trust Dynamics under Conflict and Cooperation	Jan Hausfeld Attention Discrimination and Performance Evaluation	Kevin Tiede The Intention-Behavior Gap in Pluralistic Ignorance: The Direction of Misperceptions of Public Climate Action Depends on Its Measurement	Alina Panizza THE IMPACT OF MORAL NUDGES ON PRO-ENVIRONMENTAL BEHAVIOUR
	Li Jia Household borrowing and trust in China's credit market	Lidor Krava Pay Attention and Take an Action! The Consequences of Prioritizing Passive Risks	Siria Xiyueyao Luo Incentive designs with uncertainty: Keep the hope alive	Stefan Herzog Boosting: Empowering citizens with behavioral science
	Shankha Basu Revealing resilience: Exploring people's reluctance to share personal stories of resilience	Sonja Perkovic Covert Attention Leads to Fast and Accurate Decision-Making	Edona Selimaj Is the virtual crowd the wiser crowd?	
		Veronika Zilker The attentional reflection effect		

SEPTEMBER 3RD, H 9:00

Artificial Intelligence 3

San Micheletto Convegni

HUMAN CONTACT IN THE DIGITAL AGE: A SCARCE LUXURY GOOD?

Claudia Civali

The advantages of digitalisation have been widely acknowledged, yet its potential drawbacks remain less explored - particularly the gradual erosion of human interaction in daily life. What are the psycho-social consequences of this shift? Do people still value human contact, and does its perceived scarcity increase its worth, effectively transforming it into a luxury good? To address these questions, we conducted four pre-registered online studies (N=3,521) across diverse domains, including education, finance, mental health, and fitness. Participants were presented with hypothetical scenarios and a willingness-to-pay task, where they indicated how much they would pay for a service either involving human interaction (e.g., a financial advisor) or a fully digital alternative (e.g., a financial advice app). Our findings revealed that services incorporating human contact are consistently valued higher than their digital counterparts, as indicated both by the money participants are willing to pay for them, and the self-reported importance of human contact in the services presented; moreover, higher-income individuals are willing to pay significantly more for services offering human interaction, but not for digital ones. Importantly, when participants were nudged to perceive human interaction as scarce, its perceived value increased, leading to higher willingness to pay and reported importance. Neither age nor digital skills affected these results, which were replicated in two UK samples and an Italian sample, all of which were representative of the population for age, gender, and ethnicity. These findings suggest that the shift toward digitalization may inadvertently create a new form of inequality, that of access to human interaction.

A CRITICAL OVERVIEW ON AI USE THEORIES

Esther Kaufmann

Our overview focuses on the impact of digitalization on daily judgment and decision-making processes, specifically focusing on the use of algorithmic advice and the underlying theory applied. We highlight the growing popularity and effectiveness of AI and algorithms in various domains like business and education. Although there are numerous studies and overviews on AI acceptance, there is no overview focusing on theories used in AI studies. We highlight the need for a theoretical framework to provide an appropriate structure for understanding when people use algorithmic advice. A theoretical framework can also help provide guidelines for increasing people's use of AI. An evaluation guided by a theory that considers e.g., different task properties points us toward task preferences for algorithm advice and those deemed aversive to such advice. Such knowledge is crucial in order to

lead, for example, different types of organizations (macro-level) and prepare experts and workers for the acceptance (micro-level) of algorithmic advice. Thus, to develop and evaluate a consideration for algorithm advice by decision-makers, we need a theoretical framework. Hence, we conducted a comprehensive overview of theories on algorithm use, scrutinizing 145 studies of four recent systematic overviews. In our overview, we integrated a text mining approach to increase the objectivity of our overview. Overall, we are separated theories as social or technological, implying two different research disciplines. We discuss further the pros and cons of the various theories and critically discuss potential theories for the evaluation of AI used to finally support the idea of integrating different research approaches to a comprehensive overall theory on AI use.

PREDICTORS OF AI USE ACROSS STAGES OF ACADEMIC WORK BY HIGHER EDUCATION STUDENTS

Piers Fleming

Just as with the introduction of the calculator and the internet, the availability of AI chatbots in higher education has raised concerns for the potential to both undermine and support student learning. We conducted an online survey with 435 students aged 18-24 years, studying in the UK, to identify factors that predict intentions to use AI to assist understanding, planning, editing, and writing academic assignments. We found some differences in AI use across those different stages both in use and predictors. Our findings suggest that students discriminate in their AI use and support a nuanced approach to engagement with students regarding AI use.

THE IMPACT OF AI VERSUS HUMAN-GENERATED FEEDBACK ON CREATIVE SELF-EFFICACY

Yarden Ganish

As artificial intelligence (AI) becomes increasingly integrated into modern work environments, its impact on human creativity remains an open question. Given that people often perceive themselves as less creative than they actually are, feedback plays a crucial role in fostering creativity. AI systems can provide personalized, detailed feedback, but little is known about how individuals perceive and respond to AI-generated feedback compared to human feedback. This study examined whether people react differently to AI- versus human-generated feedback, by manipulating feedback source (AI vs. human) and feedback valence (positive vs. negative), in a between-subjects design. Participants (N = 92) completed two trials of the Alternative Uses Task, receiving randomly assigned positive or negative feedback after the first trial. The content of the feedback in each valence condition was identical across source conditions, with only the attributed source (AI or human) varying. We assessed participants' perception of feedback, creative self-efficacy, emotional responses, and trust in the feedback source. We found that negative AI feedback was perceived as harsher than negative human feedback, whereas positive feedback was perceived similarly regardless of source. Moreover, feedback valence influenced creative self-efficacy only in the AI condition, where negative AI feedback led to lower creative

self-efficacy. Self-efficacy was similar for positive and negative feedback in the human feedback. While emotional responses to feedback were similar across source conditions, participants rated AI as less trustworthy than the human evaluator, possibly reflecting broader algorithm aversion. We discuss implications for the implementation of AI-based feedback systems in creative settings.

Prosocial Behavior 3

San Michele Affresco

SHARING GAINS AND LOSSES: DICTATOR GAME DECISIONS WITH ROBOT OPPONENTS

Avantika Dev

Dictator Games (DGs) are often used to study generosity, yet research mainly focuses on gain allocation, overlooking losses that are frequent in real-world decisions. Testing and extending the findings from Cochard and Flage's (2024) meta-analysis, this study examines DG behavior in gain and loss frames when recipients are non-human agents like robots. We tested whether sharing behavior changes when allocating gains versus losses, considering the effects of Prospect Theory (predicting low offers in loss frames due to loss aversion) and Inequality Aversion (predicting higher offers for losses). Participants (N = 152) played the DG with 22 different robots in either a gain-frame or loss-frame condition. Significant offer differences emerged between conditions. Results indicate higher offers when sharing losses (a gain equivalent offer of 38%) than when sharing gains (about 23%), even with robot recipients, mirroring the findings with human opponents. We also find that a large proportion of total offers to robots exceed the expected 50% ceiling, with a few participants even sharing the entire stake, violating the assumptions frequently made from the Inequality Aversion Model. Our findings suggest that participants might be more sensitive to the inequity of burden distribution than to personal losses in loss contexts. This observation even with robot recipients, where social reciprocity and reputation are minimized, is particularly noteworthy. It suggests the increased offers in loss frames isn't solely due to human-human social dynamics, but may stem from a more fundamental shift in decision-making when sharing losses.

RISK AND PROSOCIALITY: CAN EXPERIMENTAL DECISIONS PREDICT HEALTH BEHAVIOR?

Benedicta Hermanns

Preventive behavior is crucial for containing the spread of infectious diseases, as demonstrated by the COVID-19 pandemic. This study aims to investigate whether experimentally elicited attitudes toward risk and prosociality can predict health-related behaviors during the pandemic in seven European countries. Two online experiments were conducted, comprising a total of four different conditions. The results, based on data from over 3500 par-

ticipants, showed that experimental decisions from both experiments significantly predict health-related behaviors. Experiments solely on risk-taking predicted behaviors focused on avoiding one's own infections, such as wearing face masks. Experimental measures that incorporated prosocial aspects were strong predictors of behaviors aimed at preventing others from becoming infected. The findings emphasize the importance of considering prosocial motives as well as experimental conditions when studying health behaviors and developing effective public health policies. Understanding the underlying mechanisms can enable targeted interventions and contribute to the development of comprehensive strategies for managing infectious diseases.

INDIVIDUAL DIFFERENCES MAY REQUIRE TIME TO SHAPE PROSOCIAL BEHAVIORS

Tom Gordon-Hecker

People differ from one another in their tendency to act prosocially. While some may be more inclined to be generous, cooperative or trusting, others might be more selfish. Little is known, however, about the mechanism through which personality affects prosociality. In this research, we ask whether our personality shapes our prosocial behavior intuitively, or through deliberation. We investigate how time pressure influences the expression of personality traits in prosocial behavior. In two experiments, we explored whether traits like risk preference and honesty-humility impact decisions to act prosocially, and more importantly, whether time pressure moderates this effect. In the first experiment, participants' trust behavior in a trust game was influenced by their risk preferences, but only when they had ample time to deliberate. Similarly, in the second experiment, participants' generosity in a dictator game correlated with their honesty-humility, but this link was absent under time pressure. These findings suggest that personality traits drive prosocial actions primarily when individuals have time to reflect on their choices. Personality traits do not seem to manifest themselves automatically. Instead, it seems that – when given time – personality overrides our intuitive responses to guide our behavior.

TARGETING INTERVENTIONS TO REASONS FOR SUSTAINABLE BEHAVIOR

Antonia Krefeld-Schwalb

Individual behavioral change is essential for climate change mitigation and adaptation. However, interventions encouraging more sustainable choices often do not achieve the desired behavioral change. To address this, we first measured the mental representation of sustainable behavior in different situations to understand why individuals behave (un)sustainably. Using a large language model, we identified 14 relevant reasons for sustainable behavior from responses to open-ended questions on sustainable behavior in multinational survey data. We explain how reasons vary across individuals and situations by performing variance decomposition and predicting reasons from demographic and economic preferences. Reasons for sustainable behavior can be divided into situation-specific reasons, such as health, and general reasons, such as cost. Sustainable behavior in some situations (e.g.

setting the heating temperature at home) is mainly associated with general reasons, while behavior in others (e.g. food consumption) is primarily driven by situation-specific reasons. We applied these insights in a field experiment on food consumption, in which respondents received messages encouraging less meat and dairy consumption. We randomly varied the message content, using situation-specific or general reasons (besides a control condition in which we only reminded participants to report data). Only the condition that included situation-specific messages significantly reduced respondents' meat and dairy consumption during the 7-day study and increased the likelihood of choosing a vegan restaurant in an incentivized choice task after the experiment. Our results offer promising opportunities for developing more effective interventions by examining mental representations of the target behavior.

Loss Aversion

Guinigi SF

CHASING LOSSES VERSUS WINS IN A NOVEL SEQUENTIAL RISKY GAMBLING TASK: MECHANISMS, MODERATORS, AND PSYCHOMETRIC PROPERTIES

Bernd Figner

Gambling is a common form of risky decision making that can lead to serious negative consequences when engaged in excessively. Importantly, continuing or intensifying betting after a win or loss—called win- and loss-chasing—is a key characteristic of problematic gambling that can lead to a vicious circle but has so far received little attention from the decision sciences. Existing risk tasks (e.g., BART or CCT) capture some aspects of win- or loss-chasing, but no existing paradigm investigates them simultaneously under strictly comparable conditions. We developed the novel Chasing Losses And Wins (CLAW) sequential risky choice task to assess win- and loss-chasing and to identify important factors moderating chasing. Across 3 experiments (total N > 400; preregistered, data collected mainly via Prolific), we reliably observed the following patterns: Win-chasing decreased with increasing stake amounts, while loss-chasing either increased with or was unaffected by stakes. In rounds with 2 consecutive chasing opportunities, chasing markedly escalated after the first loss-chasing attempt but clearly decreased after a previous gain-chasing attempt; reminiscent of gamblers' strong urge to break even after a loss. Further, win- and loss-chasing showed satisfactory split-half reliability while moderate correlations between win- and loss-chasing suggest both shared and distinct underlying mechanisms. Modest though significant correlations of task-derived chasing indicators (model-free and based on drift diffusion models) with self-reported problem gambling and chasing tendencies indicate some external validity of the task. These results make the task a promising tool to investigate the psychological mechanisms underlying chasing behaviors in healthy and clinical populations.

A RE-META-ANALYSIS OF LOSS AVERSION: BEYOND THE SUM OF ALL INDIVIDUAL STUDIES

Eldad Yechiam

There is an ongoing debate in the literature about the existence and boundary conditions of loss aversion. In a recent paper Brown et al. (2024) meta-analyzed the literature on empirical estimates of loss aversion, spanning thirty years, and reported strong loss aversion across studies. Here, we re-meta-analyzed their dataset, dividing studies into those with asymmetric gains and losses (typically smaller losses than gains) versus symmetric gains and losses, and studies where the presentation of gains or losses was ordered by size compared to those with no ordering. This analysis was possible for 84 papers (163 estimates of loss aversion, $n = 149,218$). The results showed that while the findings of strong loss aversion are replicated when losses are smaller than gains and when gain and losses are presented in an ordered fashion, for studies with symmetric gains and losses and no ordering of items, the loss aversion parameter was approximately 1.07 and not significantly above 1.0, suggesting similar weighting of gains and losses. This casts considerable doubts on the robustness of loss aversion.

IS THERE A DESCRIPTION-EXPERIENCE GAP IN LOSS AVERSION? A META-ANALYSIS WITH CUMULATIVE PROSPECT THEORY

Nuno Busch

Loss aversion is one of the most prominent concepts in the study of decision making under risk. Traditionally, research on loss aversion has used paradigms in which participants choose between risky options whose payoff distributions are given as summary descriptions (decisions from description). But to what extent does loss aversion also emerge in situations in which the payoff distributions are learned from experiential sampling—that is, in decisions from experience? To address this question, we conducted a meta-analysis, synthesizing and re-analyzing all existing datasets (total $n > 430$ per condition) that allow for a direct comparison of decisions from description and decisions from experience based on mixed gambles (i.e., where the options can lead to either a gain or a loss). We analyzed the choices with cumulative prospect theory using a multi-level Bayesian framework. The results reveal a small but robust difference between learning modes, such that loss aversion is more pronounced in decisions from experience than in decisions from description. Possible mechanisms leading to this novel description-experience gap, such as asymmetric reinforcement learning and attentional effects during experiential sampling, are discussed.

Consumer Decision Making 3

Aula 1 & Aula 2 SF

MODELING MORAL TRADE-OFFS IN UTILITY FUNCTIONS ACROSS

MULTIPLE ETHICAL DOMAINS

Bianca Sanesi

This paper explores the role of moral satisfaction in economic decision-making by distinguishing between two channels of utility: outcome-based and rule-based. While traditional economic models focus primarily on outcomes, we emphasize the moral aspect of decision-making. This perspective values the satisfaction that comes from the fact that actions adhere to some rule based on their meaning and intensity, regardless of the actual consequences they produce. We propose a formal model that incorporates a moral premium for actions that satisfy personal moral principles, and we investigate the shape of this premium. We build four hypotheses based on behavioral economic and psychological literature conjecturing how the desire to adhere to multiple moral domains, such as environmental and social concerns, contributes to the moral premium. Are there complementarities or substitution effects among ethical domains? Does the contribution of moral actions to the premium change with their number and intensity? In order to test such hypotheses we design a 3x2 experiment, where the outcome-based incentives are held constant across treatments, but we manipulate the perception of moral adherence across multiple domains. Each theoretical hypothesis makes a clear prediction for the experimental results. Thus, any result the experiment will produce allows us to identify the shape of the moral premium that aligns with the observed results among those hypothesized. The paper also discusses the potential policy implications, including the social cost of suboptimal allocation of scarce personal moral incentive and strategic use of moral satisfaction by firms.

AWARENESS AND TRANSPARENCY OF CHOICE ARCHITECTURES IN MARKETING

Fenqi Guo

We extend the discussion of nudge transparency by considering the effects of Choice Architecture manipulations (CA) in marketing, and by looking at background awareness - information about the CA gained from sources other than the direct disclosure by the choice architect. We investigate the influence of awareness on consumer behavior and perceptions through a preregistered online survey experiment based on a 2 (CA vs no CA) x 2 (aware vs not aware) design. We deployed an anchor plus default CA and a decoy plus reference dependence CA in two shopping scenarios. We used a third scenario to generate awareness about how these CAs affect behavior. Awareness has different impacts on the two CAs. In the marketing scenario that combines anchor and default effect, this CA has the predicted effect of increasing willingness to pay. Awareness has a standalone main effect, leading to a decreased willingness to pay, irrespective of whether the CA is deployed, with no interaction. In the marketing scenario that combines the decoy and reference dependence, the CA remains effective, leading participants to choose the target product (significant main effect of CA). However, awareness of the CA does not change participants' choices (insignificant main effect of awareness and interaction effect). Our research has direct implications for the use of CAs in marketings and more broadly.

ONGOING REGRET: THE ROLE OF MISSED OPPORTUNITY SALIENCE IN CONSUMER REGRET

Yaniv Shani

This research examines the emotional and economic impact of factors that heighten the salience of missed Happy Hour promotions, hindering consumers' ability to achieve closure with the missed purchase opportunity. The first two studies show that missing future promotions that one "can" potentially undo generates more regret than past misses. Study 1 shows that temporally close future misses evoke greater regret than those in the past or further away in time. Study 2 shows that physical proximity to future misses intensifies this regret. We propose that the potential to undo a future miss and the discomfort of re-experiencing the proximal and temporal loss during the upcoming promotion might augment the sensation of loss—what we term ongoing regret. Study 3 focuses on post-promotion regret, indeed showing that "ongoing loss" intensifies regret when others nearby continue to enjoy the promotion compared to when they do not. Study 4, using real-world data, shows that removing reminders of ongoing missed promotions boosts consumption and spending, as diners move on from promotions potentially still being enjoyed by others nearby. This study also examines how long regret persists once reminders of ongoing losses are removed.

MARKETING CUES AND RATIONALLY ATTENTIVE CONSUMERS

Damien Mayaux

Retailers and e-commerce websites often use salient visual elements, known as marketing cues, to promote specific choices. This paper proposes a tractable model of how these cues influence consumer decision-making and tests it experimentally. The cue is introduced as a free signal in a model of discrete choice under rational attention. The model aligns with a multinomial logit specification, where the cue has an additive effect on the value of the promoted choice. The direction and magnitude of the cue effect depends on information costs and beliefs about the cue. The model is validated through a choice experiment with induced values, varying visual elements and their attribution. Significant cue effects are observed. Beliefs about the cue evolve with repeated observation, initially varying strongly across visual elements but eventually correcting (partially) based on cue attribution. Information costs and beliefs about the cue correlate with the cue effect, both between and within treatment groups.

TRUST ACROSS CONTEXTS: THE US VS. JAPAN

Daniel Navarro-Martinez

We investigate how well commonly used measures of trust capture trust across different contexts. In a preregistered study, we measure trust in three different ways: using the trust game, two measures commonly used in surveys, and 14 real-life scenarios that cover various aspects of people's personal and professional lives. We find that the trust game is a poor predictor of how people behave in real-life scenarios. Survey measures predict behavior in individual real-life scenarios better, and their accuracy further increases when predicting a person's average behavior across the situations. As a further demonstration that trust is context-dependent, we compare two culturally distinct countries – the US and Japan – using our measures. We find that Americans are more trusting according to survey measures and real-life scenarios, but less trusting if we base this comparison on the trust game instead. Taken together, our results suggest that not all measures of trust are created equal, and researchers need to think carefully about the measures of trust that are best suited to the contexts they are interested in.

TRUST DYNAMICS UNDER CONFLICT AND COOPERATION

Jan Engelmann

As international tensions and economic interdependence grow, trust remains essential for stable interactions. This preregistered study examines trust and trustworthiness under conflict and cooperation. In an online experiment, 400 participants were assigned as trustor or trustee in a trust game and one of two conditions: a cooperative or competitive intermediate game. After five baseline rounds of the trust game, pairs played either the Attacker-Defender Game (conflict condition, with the trustor as the defender) or the Stag-Hunt Game (cooperation condition), followed by five additional trust game rounds to assess changes in trust and trustworthiness. After each phase (TG1, ADG/SHG, TG2), participants rated their counterpart's trustworthiness (-3 to +3), affect (happiness, anger, betrayal) on a 4-point Likert scale, and social connection via the Inclusion of Other in the Self Scale. Additional measures included the Honesty-Humility scale (HEXACO) and an adapted Social Value Orientation (SVO) scale. Results show the conflict condition significantly reduced perceived trustworthiness, happiness, and social connection while increasing betrayal and anger. However, trust levels remained unchanged between conditions. SVO moderated these effects, with individualists reacting more strongly to experimental conditions. Affect mediated the effects of condition on trustworthiness, with closeness and happiness as positive mediators and betrayal as a negative mediator. Despite temporary declines in perceived trustworthiness and increased negative affect, trust quickly recovered after conflict. These findings suggest trust is resilient even after competitive interactions. Future studies will explore the robustness of these effects across contexts.

HOUSEHOLD BORROWING AND TRUST IN CHINA'S CREDIT MARKET

Li Jia

We examine the effect of trust on household borrowing, both formally from banks and informally from relatives and friends, as well as the proportion of informal borrowing in the total amount of debt held. To conduct this study, we utilize data from the 2016, 2018, and 2020 waves of the China Family Panel Studies (CFPS), including detailed information on both spouses' trust and borrowing decisions. We employ trust radius, which is a recently developed method of measuring trust, capturing the rate of decrease in trust in people at different social distances from the trustor. Trust radius significantly increased the probability of household borrowing (both formal and informal), while decreasing the proportion of informal borrowing in the total debt. Meanwhile, spousal trust radius further enhanced these effects. Internet access positively mediated the relation between trust and debt holding, but not the relation with proportion of informal borrowing. Heterogeneity analysis indicated that the trust effect on informal borrowing proportion was significantly negative only for female financial respondents' households, low-educated households, and rural households. Finally, endogeneity analyses were conducted using the instrumental variable of neighbor's trust, confirming our main results. Policy implications are discussed.

REVEALING RESILIENCE: EXPLORING PEOPLE'S RELUCTANCE TO SHARE PERSONAL STORIES OF RESILIENCE

Shankha Basu

People generally perceive resilience as a positive quality. How willing are people, therefore, to share their stories about resilience and overcoming life's challenges? Across six studies (N = 1,134; one using archival data), we found that people were less willing to share their own stories of resilience but encouraged others to do so. People evaluated individuals who shared stories about overcoming challenges more positively than those who did not (Study 1). However, they were less likely to share their own stories of resilience (Studies 2 through 4) while recommending others to do so (Studies 3 and 4). We observed this difference regardless of whether the challenges that people overcame were caused by their own actions (Study 2) or not (Study 3). Furthermore, we found that people were unwilling to share their resilience story because of the belief that others would doubt their motive for sharing the story rather than their concern that others will not believe the content of their story (Study 5). Finally, people were more likely to share their resilience stories when they had greater trust in their organizational environment (Study 6). The results provide important insight about a positive workplace behavior – sharing stories of resilience – and how organizations can encourage this behavior.

Decision Processes 3

San Micheletto Convegno

EYE MOVEMENTS REVEAL THE COGNITIVE PROCESSES UNDERLYING QUANTITATIVE JUDGMENTS

Florian Seitz

This project uses eye tracking to investigate the cognitive processes underlying quantitative judgments. Quantitative judgments are ubiquitous: Doctors assess disease severity, real estate agents price houses, and hiring managers evaluate job applicants. Research suggests such judgments arise from two cognitive processes: One estimates values using similar past exemplars; the other combines cues using a rule, like a linear model. For example, a hiring manager may evaluate an applicant by comparing them to past hires or by summing up their skills. We test if similarity-based processing is reflected in gaze behavior, specifically through 'looking-at-nothing'—a phenomenon where people revisit empty locations of previously encoded exemplars. We conducted two eye-tracking experiments in which participants judged objects with two multi-valued cues linked to the criterion via additive ($N = 19$) or multiplicative functions ($N = 48$). Participants first learned to associate exemplars with distinct screen locations and criterion values, then estimated criterion values for briefly presented test stimuli, while eye tracking recorded fixations on the now-blank exemplar locations. Cognitive modeling (RuEx-J framework) quantified individuals' reliance on similarity- over rule-based processing. The results show that participants relying more on similarity-based processing exhibited more looking-at-nothing, particularly in the multiplicative environment ($\tau = .25$, $p = .01$). Looking-at-nothing peaked midway through a trial, with participants fixating on the most similar exemplar's location. These findings establish a clear link between cognitive modeling and process tracing, demonstrating that gaze behavior provides deep insights into the cognitive processes behind quantitative judgments.

EVIDENTIAL IMPACT SHAPES CONFIDENCE BUT NOT ACCURACY IN INDUCTIVE PERCEPTUAL REASONING

Marta Mangiarulo

Research has long documented deviations from probability theory in human reasoning, often seen as suboptimal. Early studies attributed this to cognitive limitations, but more recent approaches suggest reasoning is adaptive in real-world contexts. This study examines one explanation for these deviations: that reasoning relies more on estimating evidential impact than computing posterior probabilities. Prior work has applied this idea to probabilistic reasoning errors and linguistic corpora. Here, we test its role in perceptual decision-making, by looking at how confirmation relations influence accuracy, response times (RTs), and subjective confidence. The perceptual task included 60 inductive arguments consisting of sets of figures

varying in curvature (straight/wavy) and direction (vertical/horizontal). Probabilistic associations between these two features created three argument types with identical posteriors but differing evidential impact: (a) negative (disconfirming the more probable hypothesis), (b) null (neither confirming nor disconfirming), and (c) positive (confirming). In each trial, participants saw a set of figures and were informed of one feature in a randomly drawn figure; then, they would guess the other feature (the 'hypothesis'), and rate their confidence. Results revealed no preference for the confirmed option, nor were there differences in accuracy or RTs between conditions a, b, and c. However, subjective confidence was significantly higher when evidence had a confirming or disconfirming impact compared to when its impact was null: while evidential impact does not enhance objective performance, its presence boosts subjective confidence, raising questions about the cognitive mechanisms that dissociate confidence from actual task accuracy.

INTERPERSONAL COST OF USING REJECTION: INTERACTIONS WITH REJECTION USERS ARE CONSIDERED LESS PLEASANT THAN INTERACTIONS WITH CHOICE USERS

Ruobing Fu

Decision-makers employ either a choice strategy to select desirable options or a rejection strategy to eliminate undesirable ones. While prior research has revealed the intrapersonal effects, showing how these two strategies influence decision processes and outcomes, the interpersonal influences remain understudied. The current research fills this gap by documenting that interactions with rejection users are expected to be less pleasant than those with choice users due to the belief that rejection users focus more on negativity. Across five studies, we examined the interpersonal cost of using rejection, uncovering its underlying mechanism, boundary condition, and consequence. Study 1 compared how observers anticipated the interaction experience with a choice user versus a rejection user, showing that interactions with rejection users were considered less pleasant. Study 2 tested the mechanism and found that this effect was mediated by the belief that rejection users focused more on negativity. Study 3 tested the boundary by varying decision valence. We found that the basic effect persisted in positive tasks aimed at identifying the best option, while the pattern reversed for negative decisions aimed at identifying the worst option. Studies 4 and 5 revealed the consequence that people were less willing to interact with rejection users in a hypothetical scenario and a real decision, respectively. Our research contributes to the literature on decision strategy by revealing the social effect of choice and rejection, and to the literature on choice perception by showing that decision strategy shapes the way observers view decision-makers.

ATTENTIONAL DILUTION IN MULTI-ATTRIBUTE CHOICE: BEHAVIOURAL AND EYE-TRACKING EVIDENCE

Tim Mullett

We present a series of behavioural laboratory experiments and eye tracking experiments to demonstrate the phenomena of attentional dilution in multi-attribute choice. This de-

scribes the pattern that in multi-attribute choice attention is focussed upon those attributes that differentiate the options available on the current trial. This attention is spread equally amongst those attributes, with non-differentiating attributes being ignored once they are identified as such. As a consequence, in choices where the options differ across many attributes attention is diluted and these attributes have less impact upon preference and their perceived utility also being diluted in revealed preferences. In choices where the options differ on few attributes attention is concentrated upon these and decision makers behave as though these attributes provide greater utility. We demonstrate this effect behaviourally across a number of experiments and domains including restaurant preference, credit cards, intertemporal preference and food choice. In binary choice and relative preference strength elicitation we find that the weight of an attribute diminishes in proportion to the number of other differentiating attributes. This pattern is present across all levels of complexity examined. Furthermore, we show that this pattern is mirrored in the looking time proportion patterns in eye tracking data, showing the effect both in visual attention and in implied cognitive attention or weight given to an attribute. This effect has significant implications for multi attribute choice studies and conjoint analysis, where this bias is not explicitly controlled for, but we find it is large and seemingly ubiquitous across domains.

Risky Choice 5

San Micheletto Affresco

SELF-OTHER DIFFERENCES IN RISKY CHOICE: AN EVALUATION OF RISK-TAKING, EV MAXIMIZATION, AND DECISION TIME IN A LARGE SET OF CHOICE PROBLEMS

Eyal Ert

The question of whether individuals are more risk averse when deciding for themselves versus others has been associated with mixed results. Some studies report no self-other differences, while others suggest either increased or decreased risk-taking when deciding on behalf of others. One limitation of previous research is its reliance on a limited set of choice problems, limiting generalizability of the results. This study addresses this gap by examining self-other decisions across 90 binary choice problems covering different payoff domains and varying levels of risk and expected value. In an incentivized lab experiment, 100 students completed these choice problems twice: once for themselves and once on behalf of another participant. Results showed no significant differences in overall risk-taking or decision quality (EV maximization) between self and other decisions. Decision time was slightly longer when choosing for others, mainly in the gain and loss domains. These findings suggest no overall difference in self-other risk-taking. They suggest that when making decisions for an unknown other, individuals may project their own preferences onto the choice context, leading to similar decision patterns for self and for others.

UNCERTAINTY PREFERENCES IN RESOURCE ALLOCATION

Ronald Klingebiel

We reveal uncertainty-type preference shifts in an incentivized resource-allocation task. Lab participants persist with their preference for commission uncertainty over omission uncertainty when receiving positive performance feedback, and shift it when receiving negative feedback. The behavioral pattern can help explain observations of firms' heterogeneous likelihood to fund innovation projects, for example. We also find that the level of uncertainty that decision makers are ready to countenance for their project commissions is insensitive to feedback. Acknowledging that resource-allocation decision makers cannot avoid uncertainty but merely choose its type stands to improve predictions of risky choice and behavioral theory of organizations.

INFORMATION ENCODING AND THE FOURFOLD PATTERN OF RISK ATTITUDES

Stefania Merone

I develop a theory of lottery pricing in which the process of evaluation of a risky item is modeled as the approximation of a non-degenerate lottery with a degenerate one. Mistakes deriving from information encoding are costly, and the individual assigns a value to each lottery by minimizing the overall cost of information aggregation. I prove that this approach admits a dual interpretation in terms of regret minimization under maximal skepticism, and can predict the fourfold pattern of risk attitudes without probability weighting, breaking the duality between this type of empirical evidence and prospect theory. I also provide a characterization of the encoding mechanism in terms of mental effort and optimal transport. I explore the connection between this approach and alternative models of choice under risk, reconciling it with the predictions of Expected Utility and Quantile Maximization. Finally, I develop a model of preferences based on encoded values rather than on complete alternatives. I prove these preferences are complete, transitive, continuous and satisfy first order stochastic dominance.

HOW UTILITY INFLUENCES REPEATED MENTAL SIMULATIONS OF LOTTERIES

Yun-Xiao Li

A fundamental question in the study of risk and uncertainty is how individuals mentally represent probabilities. Growing evidence suggests that people often rely on mental simulations to evaluate risky events. However, when these events involve explicit utilities, such as monetary rewards, it remains unclear whether and how these utilities influence the simulation process. Across four experiments (N=206), we investigated how utilities shape mental simulations of lottery outcomes using a random generation paradigm. These responses were compared both directly to probability judgments and also to predictions. Contrary to previous work predicting systematic oversampling or undersampling of outcomes based on utility, most participants demonstrated neutrality, with utilities showing no reliable influence on their sampling distri-

butions. Nevertheless, biases emerged under specific conditions, including a preference for smaller or more probable outcomes as the starting point of simulations and optimism in single-response predictions. Additionally, we found evidence suggesting that probability judgments, predictions, and random generation tasks may rely on a shared underlying mental process. These findings highlight the importance of considering individual differences in sampling models of judgment and decision making, particularly in capturing when and how utilities shape the sampling process.

HOW DESCRIPTIONS MODERATE MEMORY BIASES IN EXPERIENCE-BASED RISKY CHOICE

Zepeng Sun

Individuals receive information about risk mainly via two ways: description, which provides explicit outcomes and associated probabilities of available choice options; and experience, where individuals interact with the choice options and receive feedback from their choices. In real-world decision-making, these two sources of information often coexist, raising questions about their interaction and relative influence. In this study, we investigate how the presence of descriptions in a risky experience-based task influenced choice behaviour and memory processes. Participants made repeated choices in either an experience-only condition (learning purely through feedback) or a description-plus-experience condition (receiving descriptions alongside feedback). Results showed that participants were more risk seeking in the description-plus-experience condition than in the experience-only condition, particularly in the domain of losses. Moreover, participants who received descriptions took longer to decide in the loss domain than those with experience only. This suggests that descriptions exert a stronger influence on decision-making in loss contexts than in gain contexts. While the presence of descriptions did not eliminate memory biases (i.e., overweighting the best and worst experienced outcomes), memory biases' impact on risk preference was reduced. Future research will explore the underlying mechanisms of this effect.

Beliefs

Guinigi SF

HOW DOES NEW INFORMATION INFLUENCE THE UNCERTAINTY OF INDIVIDUALS' BELIEFS?

Edona Selimaj

Individuals' belief updating has been extensively examined in experimental settings with two states of the world. However, focusing on two states only does not allow to disentangle the effect of signal sets on (1) the expected state of the world and (2) the dispersion of the state probability distribution. To address this research gap, we conducted two experiments with multi-state settings to examine the normative and behavioral implications of

new information for the formation of beliefs with respect to state probability dispersion. We demonstrate that individuals do not adequately account for the dispersion of the prior and the uncertainty-reducing effect of signal sets.

THE ROLE OF PRIOR BELIEFS IN SHAPING CONTINGENCY JUDGMENTS

Sahana Shankar

Individuals with strong prior beliefs are more vulnerable to causal illusions, while those with weaker beliefs are resistant to them. We explored the nature and generality of this effect across four scenarios for which beliefs could vary both in strength and direction. For each scenario, our contingency learning experiment (N = 204) examined whether belief moderated the outcome density effect (a causal illusion whereby cue-outcome contingencies are overestimated when the proportion of outcomes is high). Main effects of outcome density on contingency judgment were found across all four scenarios. Importantly, prior beliefs sometimes interacted with outcome density such that beliefs were positively associated with judgment for high outcome-density conditions but weakly related to judgment for low outcome density. Accordingly, individuals who expected a strong positive cue-outcome association showed a large outcome density effect, those with weak expectations showed a small outcome density effect, while those who expected a negative association showed no outcome density effect. Our findings confirm the generality of the outcome density effect across diverse domains but also show that, in part, the effect could be related to an individual's beliefs about the specific contingency they are asked to judge. Our findings illustrate the value of varying scenarios when researching contingency judgment and highlight the value of measuring individual differences when studying human learning.

FOR EVERYDAY ARGUMENTS PRIOR BELIEFS PLAY A LARGER ROLE ON PERCEIVED QUALITY THAN ARGUMENT QUALITY ITSELF

Calvin Deans-Browne

Social media is often used as a platform where individuals engage in debate regarding topics that are important to them. Not all arguments are equally convincing, and whilst a given argument may be persuasive to some people, it is often seen as inadequate by others. We are interested in both the individual and argument level differences that make 'everyday' arguments such as those on social media persuasive. We investigate this question using a paradigm that consists of two parts. In the first part, we measure participants' individual beliefs about eight claims each referring to a political topic (e.g., "Abortion should be legal in the US"). In the second part, participants rated an argument for each of these claims that was designed to be either 'good' or 'bad'. Good arguments always summarized arguments from an educational bipartisan website. Bad arguments were either circular, contained internal inconsistencies, or were based on appeals to authority. We ran an additional experiment specifically to compare different types of bad arguments; internally inconsistent versus authority-based arguments. We found that participants rated the quality of arguments in line with their prior beliefs. We also found that participants could discriminate the qualities

of different arguments – good arguments were rated as better than any other type of argument, and inconsistent arguments were rated as better than those making appeals to authority. The implications are first that people do not evaluate arguments independently of the background beliefs they hold about the arguments. Secondly, people are willing to ignore inconsistencies in arguments more than they are willing to accept authority endorsement as adequate evidence for the conclusion of an argument.

Behavior change

Aula 1 & Aula 2 SF

DO IMPACT-BASED WEATHER WARNINGS IMPROVE DECISIONS TO REDUCE CASUALTIES? A NATURAL EXPERIMENT IN SOUTHEAST ASIA.

Carolyn Echterbeck

Effective warning systems are seen to be critical to reduce the impacts associated with extreme weather events. Impact-based weather warnings (IBWs) aim to improve people's decision-making by communicating the severity and likelihood of weather impacts. While IBWs have been widely adopted, their added value compared to traditional (hazard-based) weather warnings has not been quantified. We propose a method to address this question and demonstrate its application using Indonesia as a case study. Indonesia's nationwide implementation of IBWs on July 1, 2019, enabled a before-and-after comparison of the number of deaths associated with severe weather using a regression discontinuity design. This quasi-experimental approach allows causal inference by analysing discontinuous changes in reported deaths at a threshold (i.e., day of IBW implementation). The running variable was the number of days relative to the threshold and the number of deaths served as the outcome variable. We analysed 394 severe weather events over six years. Our results provided evidence that IBWs may reduce more casualties than traditional warnings, with a significant difference observed at the threshold. The effect remained robust when including season (i.e., monsoon vs dry) as a covariate. When excluding events with high numbers of deaths ($n = 9$, 2.3% of total events), the difference between IBWs and traditional warnings was no longer significant ($p = .056$), providing insight into where the benefits of IBWs may be most pronounced. Our results demonstrate the potential utility of regression discontinuity to quantify the added value of IBWs. This method could also be employed dynamically to see how IBWs improve over time, and extended to various impacts beyond mortality.

EVERY MAN IS AN ISLAND: REMINDER TIMING FOR HETEROGENEOUS MOBILE USERS

Nicolo Bertani

This paper studies whether and how effective reminder policy can be formulated in the

presence of behavioral heterogeneity. We consider two types of heterogeneity that are key to policy formulation: behavioral types, i.e., different individuals responding differently to a reminder, and type inconsistency, i.e., the same individual responding differently when the reminder policy changes. Taking mobile data consumption as a case study, we start by observing that aggregate analysis would mislead policy formulation. As a consequence, we construct analytical models that define individual behavioral types, using concepts of limited attention and overconfidence, and derive the optimal reminder policy associated with each type. In a large field experiment with a corporate partner, we classify each mobile user into one of these behavioral types using a Bayesian mixture model. We find that, given the heterogeneity of behavioral types recorded among the users, no single policy would be optimal for everyone. Further, while the prevalence of each behavioral type among the users is consistent to changes in policy and over time, the behavior of an individual user is not. This challenges the possibility of policy personalization and questions its viability as a solution to optimal policy formulation, beyond practical implementation difficulties.

DE-SLUDGING ELICITS LESS OPPOSITION THAN NUDGING

Wandi Bruine De Bruin

Health promotion often requires personal action. Behavior change interventions have been designed to promote behavior change through “nudging” or steering people towards recommended behaviors. Alternatively, “de-sludging” refers to interventions that remove “sludge” or “frictions” that make it unnecessarily difficult to implement recommended behaviors. Nudging has attracted controversy, perhaps especially among Conservatives, but little is known about public attitudes towards de-sludging. Here, we therefore examined whether nudging or de-sludging would face more opposition and other negative responses from U.S. residents, and whether those findings varied by political affiliation. A sample of 8,735 U.S. residents was randomized to read about one of ten interventions intended to increase uptake of colorectal screening, including five nudging and five de-sludging interventions. Nudging was more likely than de-sludging to elicit opposition, perceived ineffectiveness, and perceived threats to freedom, with findings holding for Republicans, Independents/others, and Democrats. These findings suggest widespread support for prioritizing de-sludging over nudging.

ON THE NATURE OF RECENCY IN DECISIONS FROM EXPERIENCE

Yujia Yang

How does experiencing a rare event, like a car accident or a lottery win, influence decision-makers' consecutive decisions? Past research on recency effects supports both positive (win-stay-lose-shift) and negative recency (win-shift-lose-stay), and thus two opposing behavioral patterns. As rare events tend to have a greater impact on behavior than common events, we posit that recency effects can be captured by examining behavioral changes in response to experiencing rare events. To clarify the prevalence and conditions underlying positive and negative recency, we analyzed how people respond to rare events based

on a large decisions-from-experience database, including 4 million choices from 12,000 participants in 174 studies. This analysis provides key insights into the nature of recency effects, including evidence that positive recency prevails, how this prevalence changes with experience, and in which situation negative recency is elevated. These findings provide a reference for subsequent research on recency in different contexts and inform a novel conceptual framework on recency effects in decisions from experience.

DON'T GIVE UP: EXPLORING THE PATH TO EFFECTIVE BEHAVIORAL CHANGE INTERVENTIONS

Kinneret Teodorescu

Many social challenges stem from individuals' tendency to prefer immediately rewarding but suboptimal behaviors ("Give-Up" options) over more costly endeavors that yield much better outcomes in the long run ("Try" options). For example, many people forgo the long-term benefits of formal education, healthy diets, learning new technologies, and even finding true love. This paper examines various incentivization programs that combine external rewards and punishments to discourage such counterproductive behaviors, which often result in only temporary behavioral change. Our findings suggest that some interventions' limited impact may be due to their focus on only shifting behaviors from "Give-Up" (e.g., dropping out of college, avoiding the gym) to "Try" (e.g., attending college, exercising regularly), without promoting sufficient exploration of these "Try" options. Yet exploration of the long-term benefits of "Trying" may be crucial to increase the chances of long-term learning and commitment. Using a simplified abstraction of this dilemma, our results show a high tendency to choose "Give-Up" options prior to intervention. Examination of four different incentivization strategies suggests that only rewarding exploration of new "Try" options is a straightforward strategy to increase exploration and optimal choice. Punishing both the selection of "Give-Up" options and the choice to exploit suboptimal "Try" options produced similar results. Other common guidance strategies were less effective, as these strategies simply tended to replace one suboptimal behavior with another. I will conclude with a field study in the context of nutrition, demonstrating how the above insights from the lab can help in developing real world interventions.

Attention

San Francisco Church

A TIMELINE OF COGNITIVE COSTS

Ben Newell

Recent research from economics, psychology, cognitive science, computer science, and marketing is increasingly interested in the idea that people face cognitive costs when making decisions. Synthesizing this research, we develop a framework of cognitive costs that

organizes concepts along a temporal dimension and maps out when costs occur in the decision-making process and how they impact decisions. Our unifying framework broadens the scope of research on cognitive costs to a wider timeline of cognitive processing that considers cognitive costs in the learning following a decision as well as cognitive costs that are incurred in the lead up to a decision. We identify implications and recommendations emerging from our framework for intervening on behavior to tackle some of the most pressing issues of our day, from improving health and saving decisions to mitigating the consequences of climate change.

ATTENTION DISCRIMINATION AND PERFORMANCE EVALUATION

Jan Hausfeld

Managers decide on the promotion/dismissal of workers. To accurately evaluate the worker's effort/performance, managers must pay attention to all workers, which is often not possible. Instead, they must decide how to allocate their attention. This selective focus is likely affected by stereotypes, so called "attention discrimination". For example, a negatively stereotyped worker might receive less attention in promotion decisions, but receives more attention in dismissal decision, both of which can lead to unjust decisions. We ran 3 eye-tracking studies with 426 subjects acting as managers to investigate this "attention discrimination" in a workplace-mimicking setup. We hypothesized different allocation of attention dependent on the stereotype of the task and the incentives. We first created a video data set of 105 workers who did manual tasks like creating metal planes or bracelets. In study 1, eye-tracked managers (n=120) saw 6 worker's videos at the same time and managers had to correctly report the performance per worker. We created a finding the "best" worker and a finding the "worst" worker setup by varying incentives. In study 2 (n=60) and study 3 (n=124), we zoom in on the effect of only stereotypes (study 2) and overconfident signals (study 3). We find that managers' attention and evaluation is affected by stereotypes. The negatively stereotyped workers receive less attention when the manager has to detect the "best" performers, and they receive more attention and accurate evaluations when managers find the "worst". Importantly, these differences in attention and evaluation are not driven by worker's true performances. The results confirm that promotion/dismissal decisions can be affected by attention discrimination.

PAY ATTENTION AND TAKE AN ACTION! THE CONSEQUENCES OF PRIORITIZING PASSIVE RISKS

Lidor Krava

Passive risks, namely risks resulting from inaction, such as avoiding a medical screening test, can be minimized with proper action. However, people tend to overlook them and fail to take necessary precautions. Passive risks often go unnoticed in everyday life, leading to underestimation. This study examines whether directing attention towards passive risks increases their risk estimations and the willingness to mitigate them. Three experiments were conducted using an attentional search manipulation. The findings indicate that when attention is directed towards passive risks, they are perceived as more severe, more likely to occur; elicit more fear, and motivate a higher willingness to mitigate them.

COVERT ATTENTION LEADS TO FAST AND ACCURATE DECISION-MAKING

Sonja Perkovic

Decision-makers are regularly faced with more choice information than they can directly gaze at within a limited amount of time. Many theories assume that because decision-makers attend to information sequentially and overtly – with direct gaze – they must respond to information overload by trading off between speed and decision accuracy. By reanalyzing five published studies, we show that participants, in addition to using overt attention, also rely on covert attention. Without being instructed to do so, participants attend to information without a direct gaze to evaluate choice attributes, leading them to choose the best or reject the worst option. We show that the use of covert attention is common among most participants and is even more pronounced when information is easily identifiable in the peripheral visual field due to its size or visual salience. Covert attention is associated with faster decision times, suggesting that participants might simultaneously process multiple pieces of information using distributed attention. Our findings highlight the importance of covert attention in decision-making and demonstrate how decision-makers may gain speed while maintaining high levels of decision accuracy.

THE ATTENTIONAL REFLECTION EFFECT

Veronika Zilker

In decisions about potential gains, the more attention is allocated towards an option, the more likely it is to be chosen. One of the most prominent models to accommodate this robust behavioral phenomenon, the attentional Drift Diffusion Model (aDDM), predicts that this effect of attention allocation on preference should reverse in decisions about negatively-valued prospects. That is, the more attention is allocated towards a potential loss, the less likely it should be chosen. To date, this prediction remains largely untested. To fill this gap, we exogenously manipulated option-specific attention allocation in a passive version of the sampling paradigm for decisions from experience. Results confirm that directing attention toward an option increased its likelihood of being chosen in the gain domain but decreased it in the loss domain. That is, the effect of the attentional manipulation on preference indeed reversed between the domain of gains and losses, reminiscent of other types of reflection effects in decision making. After establishing this novel behavioral phenomenon, we turn towards the underlying mechanisms. A second experiment contrasts the mechanism proposed by the aDDM, where differences in mere exposure duration are assumed to modulate preference formation, with an alternative account, which explains the phenomenon based on a reversal in how people deal with attention-modulated uncertainty in the domain of gains and losses. Overall, the current work establishes a new empirical phenomenon, elucidates the underlying mechanisms of preference formation, and points towards a potential for an integrative understanding of the cognitive foundations underlying various types of reflection effects in decision making.

WHEN ACCURATE FORECASTING TOURNAMENT REPORTS REDUCE PREDICTION ACCURACY IN A PROFESSIONAL SAMPLE

Barbara Fasolo, London School of Economics

Decision-making in policy and professional spheres often requires assessing uncertain future events. There are a variety of decision aids that can be drawn upon. We focus on reports from “judgemental forecasting tournaments,” which aggregate probabilistic forecasts from multiple competing participants, drawing on the “wisdom of the crowd”. These tournaments have previously been shown to have relatively high prediction accuracy in short-to-medium term geopolitical questions—but have not yet been extensively studied as input to support others’ decisions. To test the impact of forecasting tournament output on the forecasting accuracy of a set of professionals, we ran a 3-months forecasting tournament with 316 forecasters on topical questions such as US politics, green energy, and AI, and summarised the results in a 13-page report. At least 4 weeks prior to question resolution, we randomly assigned this report to professionals who had to make predictions on related but different events. Across two pre-registered experiments (N=885), we found that, despite the forecasting tournament’s high accuracy, predictions of participants in the treatment condition were less accurate and less well-calibrated than those of the participants in the control condition who did their own independent research and did not receive the report. We suggest that a potential mechanism behind the findings might be potential biases in the use of the report, such as anchoring on the provided estimates without translating them to a new context.

SEPTEMBER 3RD, H 13:00

Dishonesty

San Micheletto Convegno

SUSCEPTIBILITY TO FRAUD UNDER COGNITIVE LOAD: DOES AGE MAKE A DIFFERENCE?

Julia Nolte

Decision makers who are experiencing higher levels of cognitive load (e.g., due to distraction or media multitasking) or more limited cognitive capacity (e.g., due to older age) tend to perform more poorly on choice tasks. However, it remains unknown whether cognitive load also interferes with the ability to detect fraudulent solicitations and if the effect of cognitive load differs depending on cognitive capacity (i.e., between younger, middle-aged, and older adults). The present two online experiments address this gap in the literature. Participants under or above the age of 65 years (N1 = 216, 18–65 years, M = 39.1; SD = 12.68, 48% women; N2 = 213; 66–80 years, M = 70.05, SD = 3.58, 50% women) evaluated 3 fraudulent solicitations while either experiencing no (0 digits), low (2 digits), or a high (8 digits) level of cognitive load. In addition, participants responded to assessments of sociodemographic background, risk tolerance, and trait impulsivity. Experiencing either low or high levels of cognitive load rendered younger and middle-aged adults more susceptible to a lottery or investment solicitation, whereas it rendered older adults more susceptible to a website solicitation. Across solicitations and age groups, perceptions of solicitation-related risks, benefits, or authenticity were unaffected by cognitive load. With respect to covariate measures, only higher levels of risk tolerance reliably put decision makers at higher risk of victimization. We conclude that even low levels of cognitive load can make decision makers more susceptible to online fraud solicitations. All age groups were vulnerable to the negative impact of cognitive load, but the effect was only evident for solicitations for which vulnerability is comparatively low while cognitive load is absent.

EXPLORING THE EFFECTIVENESS OF DISHONESTY INTERVENTIONS ACROSS 29 SOCIETIES

Lau Lilleholt

Dishonesty is pervasive and costly for societies. In the shape of corruption it stunts economic growth and reduces trade and price stability. In the form of tax evasion and fraud it imposes a global cost on societies of no less than 5.83 – 5.93 trillion USD annually. Adding to this, its victims often experience psychological distress in response to being duped, scammed, or defrauded. With these and other negative consequences in mind, researchers across the social sciences have made great strides to identify, develop, and test the effectiveness of different dishonesty interventions. Building on theories from economics and psychology, interventions aiming at changing the expected utility of lying, increasing the perceived psychological and/or reputa-

tional cost of being dishonest, and applying the power of social norms to influence individuals' behavior, have all been found to effectively reduce dishonesty. Yet not all studies confirms this pattern with mixed evidence for the effectiveness of social norms and interventions aimed at increasing the psychological costs of being dishonest. To understand which, and under what circumstances, different dishonesty interventions work, more evidence is thus needed. Here we provide such evidence based on a preregistered cross-national experiment involving 21,082 participants across 29 societies worldwide. In doing so, we bridge prior research testing the effectiveness of different dishonesty interventions with cross-cultural research exploring the variability in dishonesty between nations. By integrating these two line of research, the present study sheds new light on the overall effectiveness of different dishonesty interventions, and how their effectiveness varies with relevant individual, societal, and cultural factors.

MONETARY PRIMING REDUCES CHILDREN'S SENSITIVITY TO VARIATIONS IN POTENTIAL GAIN MAGNITUDE IN A CHEATING SCENARIO

Łukasz Markiewicz

This study examines whether monetary priming increases children's cheating and whether monetary priming moderates the effect of prize attractiveness on children's cheating behavior. While rational economic theory suggests that individuals cheat more when incentives are greater, previous findings have been inconsistent. We propose that monetary priming could explain these mixed results, hypothesizing that it may not only increase cheating but also influence sensitivity to reward magnitude. We conducted a quasi-experimental study in which children (7–10 years old, N=178) were primed (or not) with money (real or symbolic money) before participating in a "roll a die" task that determined the number of rewards they could obtain. This task utilized an electronic die (DICE+) which enabled us to identify both actual and self-reported values of die rolls. As expected, monetary priming (both real and symbolic) increased cheating among the children. Furthermore, our results demonstrated that while participants were more inclined to cheat for more attractive prizes in non-monetary priming conditions, they became insensitive to the attractiveness of potential gains after monetary priming. These findings suggest that monetary priming may activate a business decision frame in which rewards of any size can prompt action, and proportionality is not taken into account. Our results may help explain inconsistencies in previous studies on the relationship between incentives and cheating, suggesting that unintentional monetary priming (e.g., through monetary incentives) in some experiments could mask the effects of reward size

HOW DO ORGANIZATIONAL STRUCTURES IMPACT COLLABORATIVE CORRUPTION: INVESTIGATING THE ROLE OF DIFFUSION AND DISPLACEMENT OF RESPONSIBILITY

Mathilde Hedegaard Tønnesen

How are diffusion and displacement of responsibility related to organizational decision structures, such as flat and hierarchical decision structures, and which structure is more

prone to corrupt collaborations? Through three online experiments ($N_{\text{total}} = 2,520$), we investigated how decision structures influence responsibility attribution and dishonesty in teams. Study 1 found that observers perceived responsibility as more equally distributed in flat decision structures, while responsibility was more likely to be displaced onto team members placed last in hierarchical decision structures. In Studies 2 and 3, we replicated and extended this finding in teams interacting in real-time, showing that diffusion of responsibility was the dominant mechanism across decision structures. Teams working in a flat decision structure were more likely to diffuse responsibility among them, while displacement of responsibility was more prevalent in hierarchical decision structures. Our results further revealed that hierarchical structures led to more coordinated dishonesty, potentially by allowing both leaders and subordinates to diffuse and displace the responsibility. Our studies are the first to directly study the differential effect of organizational decision structures on diffusion and displacement of responsibility and corrupt collaborations. Our findings underscore the importance of organizational design in mitigating unethical behavior and provide a framework for future research to explore the underlying mechanisms that shape moral environments in organizations.

TEXT-BASED BEHAVIOURAL INTERVENTIONS FOR INCREASING PAYMENT MORALE IN AN HONOUR SYSTEM: A LARGE-SCALE FIELD EXPERIMENT IN AUSTRIA

Qinyu Xiao

Press companies sometimes sell newspapers using an honour system, which involves placing the papers at unmonitored distribution points and expecting customers to pay honestly. The system is useful for selling papers during weekends and holidays. Yet, without control mechanisms or payment enforcement, many people pay too little or nothing at all. We studied text-based behavioural interventions for increasing payment morale in an honour system in a large-scale, longitudinal field experiment in Austria, targeting newspaper customers (daily circulation of about 240,000) in two major Austrian cities (i.e., Vienna and Graz, with a total population of around 2.3 million). We crowdsourced intervention proposals from behavioural science communities, had 19 of them evaluated by a representative online sample from Germany ($n \sim 900$), and implemented the two most promising interventions over a three-week period. One intervention promised a charitable donation from newspaper revenues if payments reached a pre-announced threshold, while the other invited customers to participate in an “honesty contest” between all neighbourhoods. Compared with the control treatment, both interventions substantially increased payment (for $\sim 40\%$ on average), and the effect persisted to some extent following the end of the intervention. There was, however, considerable heterogeneity in the effect. The effect was mainly driven by observations from Graz where pre-intervention payment rates were much higher than in Vienna. Our findings contribute to the literature on preferences for honesty and have implications for the design of honour systems.

Decision Processes 4

San Micheletto Affresco

THE PARKING TASK: THE DEVELOPMENT AND VALIDATION OF A NOVEL COGNITIVE TASK MEASURING ADAPTIVE DECISION MAKING

Jakub Traczyk

Adaptive decision making involves balancing risks, benefits, and time constraints in dynamic environments. Prior research primarily relied on monetary lottery tasks, limiting ecological validity. This study introduced the Parking Task, a user-friendly video game designed to model real-life decision-making processes, including adaptive strategy selection, reinforcement learning, and optimal stopping. Across three studies, participants navigated a one-way road, selecting parking spots while minimizing time loss. Closer spots were less available, while farther spots increased travel time. Numeracy was assessed using the Berlin Numeracy Test. Study 1 examined how environmental changes (stable vs. modified) and numeracy influenced decision-making. Study 2 tested whether probability distribution order affected performance and its relationship to lottery-based tasks. Study 3 investigated how goal instructions influenced parking time and satisfaction. Results showed that numeracy was linked to adaptive strategy selection ($p = .027$). The Parking Task demonstrated test-retest reliability ($r = .28$, $p = .025$) and a link between payoff sensitivity and adaptive behavior ($r = -0.28$, $p = .045$). Instructional framing impacted performance, with participants aiming to “save time” parking faster ($p = .020$), while those focused on “not being late” reported higher satisfaction ($p = .050$). The findings validate the Parking Task as a reliable tool for studying adaptive decision-making in dynamic settings.

EXPERIMENTS IN REFLECTIVE EQUILIBRIUM USING THE SOCRATES PLATFORM

Philipp Chapkovski

How can reflection, dialogue, and cash incentives improve decisions? We report a replication and extension of real-time, online, dissenting chats (compared to online solitary written reflection) and financial performance bonuses on decisions involving logic, probability, and philosophy. We found that dissenting chats caused more reflective thinking and that this social reflection caused more consequentialist moral decisions. Both before and after either solitary or social reflection, participants ($N = 2500$) made decisions about a low- or high-stakes scenario. Prior to reflection, most participants chose faulty or else deontological responses. However — controlling for a dozen confounds — social reflection yielded at least three times more changes to orthodox decisions than solitary reflection did. Indeed, the chats produced bigger effects than the cash! Those effects confirm dual process theorists' expectation that reflective thinking supports both calculation and consequentialism. We also observed pre-intervention confidence predict lower odds of dual process theorists' expected decisions, which is compatible with myside bias. Overall, these data suggest that reflective discussions can fulfill both process tracing and

decision enhancement. For example, various decisions may benefit more from social than solitary reflection, financial incentives, or confidence.

BAYESIAN SECOND-GUESSING: SEQUENTIAL SAMPLING MODEL OF POST-DECISIONAL CONFIDENCE

Rastislav Rehak

We theoretically investigate dynamic dissociations between decisions and decision confidence, focusing on the role of post-decisional information in confidence formation. Motivated by existing experimental evidence, we develop a framework grounded in optimal learning theory to explain the post-decisional stage. While our model allows ample room for post-decisional information acquisition to emerge, we find that engaging in it is not always optimal. Instead, a more nuanced pattern arises: post-decisional information acquisition can occur only for relatively fast decisions and is entirely absent for sufficiently slow decisions.

CASCADING MEMORY SEARCH BRIDGES EPISODIC MEMORIES AND SEMANTIC KNOWLEDGE

Achiel Fenneman

When making decisions in new and unfamiliar situations, we can draw on both our past experiences (episodic memories) and on our general knowledge of the world (semantic knowledge). Despite growing interest, key questions remain on the interplay between these systems. How does semantic knowledge guide our ability to retrieve past experiences? Conversely, how do learn abstract semantic relationships from everyday observations, and how low-level abstractions transformed into higher-order knowledge structures? By synthesizing insights from cognitive neuroscience with recent work in memory-based decision-making, we propose that the search of our episodic memories through a process of cascading sampling offers a bridging mechanism between these two systems. We detail a mechanism through which semantic representations can guide the search path of episodic recall – favoring the consecutive recall of memories with semantically similar features. We additionally propose that memory search forms an internal source of information to facilitate the Hebbian learning of abstract representations – as well as the bootstrapped learning of higher-order semantic knowledge. We validate and support this mechanism through two online experiments. These experiments illustrate how episodic memories with semantically similar features are more likely to be sequentially recalled (experiment 1). Conversely, the repeated (sequential) retrieval of episodic memories guides the formation of mnemonic clusters, in turn facilitating subsequent memory search (experiment 2). These findings support the role of cascading memory search as a bridge between semantic knowledge and episodic memories, with implications for memory-based decision-making and learning.

MORAL DECISION-MAKING: HOW DO PEOPLE SOLVE THE CONFLICT BETWEEN MATERIAL INCENTIVES AND MORAL NORMS?

Tadeusz Tyszka

Decision-making often involves conflicts between competing attributes, such as maximizing material gain versus upholding moral values. Formal models (e.g., Expected Utility) assume decisions are value-based, with individuals trading off attributes to maximize utility. In contrast, reason-based models (e.g., dominance structuring) suggest that decision-makers (DMs) construct justifications to resolve conflict. Our study investigates which model better describes lying decisions—whether DMs trade off moral and monetary values or seek justifications to rationalize dishonesty. In the present study, 50 participants completed an online task similar to the “dots task,” in which they identified which side of a box contained more dots. The task involved repeated binary decisions about whether to provide a truthful or false report (DV) on the state of the world under different payment schemes. We examined two independent variables: (IV1) stimulus ambiguity, which could lead to a certain number of errors regardless of the decision-maker’s intentions, and (IV2) the structure of financial incentives, which could encourage - or not - deliberate false responses. An interaction effect between these variables supported the reason-based model: DMs identified a “promising alternative” and restructured the decision context to make the desired option appear dominant.

Inequality

Guinigi SF

AI IN MEDICAL DECISION-MAKING: EFFECTS ON PHYSICIANS’ CHOICES, CULPABILITY, AND EMOTIONAL BURDEN

Bar Shlomo

Artificial intelligence (AI) is increasingly incorporated into medical decision-making, yet its influence on physicians’ choices and emotions remains unclear. We examine whether physicians’ (a) treatment choices are affected by AI recommendations and (b) culpability varies when facing fatal outcomes of choices that aligned with, contradicted, or occurred without AI input. Additionally, we explore the moderating role of gender and seniority. 425 physicians were presented with a clinical case, randomly assigned to one of three AI conditions: (1) AI recommends antibiotics, (2) AI recommends follow-up, (3) no AI input, and chose a treatment. All physicians, independent of their choice, then faced a tragic outcome. Results show that AI recommendations did not alter treatment choices, but physicians who contradicted AI advice reported significantly higher culpability than those who followed AI or had no AI input. Gender and seniority moderated these effects: Across conditions, female physicians reported higher culpability, and senior physicians reported lower culpability. These findings suggest that AI’s presence alone does not guarantee

adherence and that rejecting AI advice may create psychological burdens. More generally, they highlight emotional and professional barriers to AI integration in healthcare, raising critical questions about physician autonomy, algorithmic trust, and the psychological costs of resisting automation.

FAIRNESS AND ATTENTION IN THE FACE OF SHIFTING INEQUALITY

Dianna Amasino

We explore how the level of inequality impacts self-serving allocation biases in dividing jointly-earned rewards. Previous work finds that those advantaged by luck allocate a higher proportion of joint earnings to themselves, but that merit is even more relevant than luck in acceptance of inequality. Therefore, more extreme inequality due to luck could either i) be used by the advantaged to justify keeping even more for themselves or ii) it could backfire by increasing the prominence of luck and undermining self-serving justifications, reducing allocation biases. In this study, we use a controlled setting in which merit and luck are explicit and luck impacts the level of inequality such that the advantaged earn 3, 7, or 15 times the disadvantaged per correct answer across rounds, with increasing or decreasing inequality in blocks of 10 trials. We also measure attention to performance (merit) and monetary contributions (merit x luck). We find that the advantaged keep more for themselves overall, and they keep increasingly more for themselves as the pay ratio increases, although not in proportion with the increasing pay ratio. This suggests that inequality due to luck is used as a justification to keep more for themselves but not to the full extent. Further, in exploratory analyses, we find that the direction of inequality matters, with the disadvantaged keeping more for themselves when inequality starts low and increases compared to when inequality decreases, suggesting that increases in inequality might lead to stronger reactance by the disadvantaged. We do not find any overall differences between (dis)advantage in attentional patterns, but we do find that attention moderates the use of merit information.

THE COMMON GROUND OF INEQUALITY: CROSS-IDEOLOGICAL CONSENSUS ON ECONOMIC DISPARITIES IN HEALTH AND EDUCATION

Francisco Miguel Soler Martínez

Rising inequality intensifies ideological polarization, making it increasingly difficult to reach consensus on addressing social disparities. To break this cycle and better understand potential areas of agreement, this research examines public attitudes toward economic disparities across three critical domains—health, education, and income—and explores the role of political ideology in shaping these perceptions. We conducted two field studies (N1 = 258; N2 = 282) during the Spanish elections in 2023 and 2024, as well as an experimental study (Study 3, ongoing data collection) designed to replicate and expand upon previous findings under more controlled conditions. Results from Studies 1 and 2 indicate that people generally find inequalities in health and education less acceptable than those in income, expressing stronger support for redistributive measures in these areas. Notably, ideological divisions were less pronounced when it came to health disparities (Study 1) and support for redistribution in health and education (Study 2)

compared to the income domain, where ideological differences were more evident. Additionally, meritocratic beliefs had a stronger negative influence on support for income redistribution than for education (Study 2), reinforcing the idea that different types of inequality are perceived and justified in distinct ways. These findings suggest that health and education disparities may serve as common ground for bipartisan agreement, providing valuable insights for policymakers seeking to implement more widely accepted and effective inequality-reduction strategies.

WHEN COIN FLIPS SEEM LESS FAIR: DIVERGENT ENDORSEMENT OF LOTTERIES IN ALLOCATING GAINS AND LOSSES

Yair Nahari

When allocating resources, equity and efficiency often conflict. For example, a manager who can give a single gift-card as bonus, but has two equally-deserving employees, faces a dilemma. The manager can give the gift-card to one of the employees (efficient yet inequitable), or give it to neither, letting it expire but keeping fairness (equitable yet inefficient). Research indicates that decision makers frequently use random allocation devices to make such decisions, giving extra resources to only some of the equally deserving recipients, but preserving fairness. In four studies (N = 819), we consistently found that participants were less likely to use lotteries for solving equity-efficiency dilemmas involving losses (e.g., giving pay cuts) than gains (e.g., giving bonuses). We also found that people perceive lotteries as considerably less fair when used for allocating unequal losses than for gains. This perception led to greater inefficiency in the domain of losses—people wasted resources rather than using impartial randomization procedures. This effect was observed in carefully controlled scenario studies as well as in a real world consequential decision-making task. The differing endorsement of lotteries for resolving equity-efficiency conflicts was mediated by participants' expectations of recipients' reactions. Specifically, participants anticipated more negative responses to inequality in losses than in gains. We discuss these findings in the context of fairness theories and explore implications for management, policy-making, and everyday life.

Ambiguity

Aula 1 & Aula 2 SF

CERTAINTY AMID UNCERTAINTY: RELATIONSHIP BETWEEN AGGREGATE UNCERTAINTY AND INDIVIDUAL EXPECTATIONS

Giulia Piccillo

We study how individual income expectations adjust in times of high aggregate uncertainty, using survey data of professional forecasters and households. We find that mean expectations decrease disproportionally with rising aggregate uncertainty, as predicted by most economics and finance models. However, the relationship between aggregate uncertainty

and individual subjective uncertainty is more nuanced. While there is a significant positive correlation for professional forecasters, this is not the case for households. In fact, for households the correlation is often significantly negative, contrary to what is typically predicted. We demonstrate that our empirical results can be reconciled with max-min expected utility and smooth ambiguity preferences. This has implications for economics and finance research aiming to study the effects of aggregate uncertainty.

A NOTE ON AMBIGUITY-ADJUSTED ASSET PRICING

Hideki Iwaki

This paper presents an asset pricing formula that accounts for risk and ambiguity, assuming these two factors drive the representative agent's decision-making. While properly controlling for risk is paramount for any decision-maker, precisely defining the probabilities associated with risky events poses a significant challenge in many real-world situations. Rarely is there a single agreed-upon probability distribution that captures future uncertainty. Instead, many candidate probability models often need clarification and adjustment from the decision-maker based on their beliefs and information. The perceived probability measure is a derived concept that incorporates this set of possible probability distributions along with the decision-maker's attitude toward ambiguity. It allows for a flexible representation of uncertainty by distorting the probabilities according to how the decision-maker views the ambiguity in each scenario. This paper presents the asset pricing formula based on this perceived probability so that the resulting asset prices naturally incorporate the combined effects of risk and ambiguity aversion. Crucially, we further show that the overall premium in expected market returns can be decomposed into separate risk premium and ambiguity premium components. This disentanglement clearly interprets how much each factor contributes to the total premium investors demand. By grounding the analysis in the perceived probabilities, the formula provides a theoretically consistent way to quantify the ambiguity portion of the premium beyond just risk compensation.

PERCEIVED CONSENSUS OF SCIENTIFIC PREDICTIONS OF EVENTS CLAIMED TO BE "CERTAIN"

Karl Halvor Teigen

Scientific claims are sometimes reported in the media by headlines stating what "scientists" say or believe without identifying exact source or evidence. Such generic statements imply some generality but remain silent about how large is the consensus group. The present studies compared scientific statements reported to be certain, e.g. "climate scientists say they are certain that by 2050, mean temperatures will be at least 1.5 degrees higher than today", with corresponding unqualified statements, where the word certain was omitted. Two preregistered experiments (N = 881) concerning climate change predictions revealed: (1) That predictions explicitly claiming to be certain implied less consensus than predictions that did not mention certainty (2) Such predictions were also perceived to be less based on scientific evidence (3) And were judged to have a lower probability of being accurate. (4) Personal claims of certainty

("we are certain") were less believable than corresponding impersonal claims ("It is certain") We conclude that claims of certainty make predictions appear less reliable because they indicate that they are based on human judgments , rather than on objective, measurable facts.

Motivated Reasoning

San Francisco Church

INDIVIDUAL BEHAVIOR, MARKET SELECTION, AND PRICE INFORMATIVE EFFICIENCY UNDER UNCERTAINTY

Angelo Di Carlo

The market selection hypothesis suggests that agents with correct beliefs will dominate financial markets in the long run. However, empirical evidence highlights the significant role of uncertainty in decision-making, leading to deviations from the fully rational Expected Utility agent. This paper, grounded in the Evolutionary Finance literature, proposes a new agent behavior model that adds new elements to the literature while maintaining a bridge with the Expected Utility framework. Specifically, the model allows us to investigate: (i) a behavioral dimension, where agents internalize the possibility of being uncertain about the informativeness of their beliefs and adopt strategies that, through evolutionary reasoning, are shown to enhance survival when uninformativeness plays a major role; (ii) a learning dimension, where agents recognize the potential issue for learning in a misspecified context and adopt a more aware and cautious approach to updating beliefs; and (iii) a strategic dimension, where agents, on one hand, aim to influence market prices as much as possible, aligning their actions with market dynamics regardless of the correctness of their own beliefs. On the other hand, the agent's precautionary behavior may conflict with the standard idea of efficiency of market prices. The rationale behind this last element resides in the mechanism where agents with more accurate beliefs face too much uncertainty and consequently align their ideas with market prices, where inaccurate beliefs play an important role.

THE INTENTION-BEHAVIOR GAP IN PLURALISTIC IGNORANCE: THE DIRECTION OF MISPERCEPTIONS OF PUBLIC CLIMATE ACTION DEPENDS ON ITS MEASUREMENT

Kevin Tiede

Previous research has consistently shown that people underestimate the proportion of people believing in climate change and supporting climate action, a phenomenon termed pluralistic ignorance. It has been argued that the underestimation of public support poses a challenge for climate action and that communicating the broad support for climate action could be a powerful strategy to promote it. However, as previous research has almost exclusively relied on inconsequential, self-report measures of climate action and attitudes, it is unclear whether people also underestimate public climate action when assessed

in terms of real, consequential behavior. To test this, we ran three preregistered studies with representative samples of German citizens. We asked participants if they would like to participate in a real public lawsuit against the German government demanding stricter climate policies (Study 1; $N = 2,409$) and donate 1% of their household income to fight climate change (Study 2; $N = 1,130$) and if so, gave them the opportunity to do so. Subsequently, we assessed participants' beliefs about other participants' behavior. In both studies, we found that only a small minority of participants verifiably participated in the lawsuit and donated their own money. Crucially, with this behavior, we found pluralistic ignorance in the opposite direction: Participants considerably overestimated the proportion of people participating in the lawsuit and donating money. In Study 3 ($N = 883$), we found that people underestimated behavior shown by a majority of participants. Together, our results highlight the importance of considering the behavior or attitude in question when studying pluralistic ignorance and drawing conclusions about possible strategies to boost climate action.

INCENTIVE DESIGNS WITH UNCERTAINTY: KEEP THE HOPE ALIVE

Siria Xiyueyao Luo

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 with uncertainty in an effort-score-payoff system. This research contrasts two incentive designs: 1st-degree uncertainty (uncertainty between effort and score) and 2nd-degree uncertainty (uncertainty between score and final payoffs), controlling the overall conversion rate from effort to payoff. For example, in the first-degree design, people press a key and each press may or may not earn them a point, but every point they earn for sure can be exchanged for their payments. In the second-degree design, people press a key and earn a point per press, but not every point they earn can be exchanged for their payments. Across six real-effort experiments ($N = 1,472$) employing this key-pressing task, we demonstrate that 2nd-degree uncertainty is more motivating than 1st-degree uncertainty, even when expected payoffs are identical. The experiments also ruled out explanations including zero-aversion, medium maximization, and some beliefs in magical thinking (i.e., “the harder I work, the better the luck I will have”). The 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 in general.

IS THE VIRTUAL CROWD THE WISER CROWD?

Edona Selimaj

We explore how different types of social interaction influence the wisdom of the crowd (WOC). In a large-scale experiment, subjects provided estimates on various quantities and also discussed these estimates in groups of six. The discussions occurred (1) in face-to-face meetings, (2) via Zoom, or (3) in the virtual reality (VR) using VR headsets and interacting via avatars in a virtual workroom. We compare the pre-discussion WOC, i.e., the simple average of individual pre-discussion estimates, with the consensus estimate provided by the group and the post-discussion WOC. We find that, first, the group consensus tends to be generally less accurate than the pre-discussion WOC on average. Second, video conferences via Zoom turn out to be least suited for exploiting crowd wisdom as the slight improvement in individual calibration is overcompensated by the strongly reduced diversity of judgments and the resulting negative effect on the WOC. Third, this does not hold true for the VR condition. While social interaction in a virtual workroom generates the same pattern of improved individual calibration and reduced diversity of judgments, both effects are more favorable than in the Zoom condition (more improvement in calibration, less loss of diversity). In the VR, we even observe a slight improvement in WOC estimation accuracy compared to the pre-discussion figures, which is not achieved in the face-to-face condition. The combination of generating comparable improvements in individual calibration while outperforming face-to-face meetings in preserving diversity gives VR crowds an advantage when it comes to harnessing the wisdom of crowds.

SEPTEMBER 3RD, H 16:00

Communication

San Micheletto Convegno

SEARCH OR SCROLL: HOW CREDIBILITY VERSUS LIKABILITY PREMIUMS SHAPE FOLLOWING DECISIONS ON DIGITAL PLATFORMS

Edith Shalev

People's choices of whom to follow on digital platforms shape their informational landscape. Given the prevalence of misinformation (Ecker et al., 2022; Pennycook and Rand 2021) and the importance of exposure to credible content, understanding what drives following decisions is essential. This research examines (1) When do people prioritize communicator credibility over likability in decisions to follow? and (2) How do multiple credibility and likability cues shape these decisions? Analysis of four large datasets reveals that content consumption orientation—goal-directed (“search”) vs. experiential (“scroll”)—is key. Communicator credibility drives following on search-driven platforms (Yelp, Goodreads), while likability drives following on scroll-driven ones (Twitter, Instagram). Aggregate communicator sentiment serves as a cross-platform indicator of credibility and likability, and its effect on follower-count varies by platform. On scroll-driven platforms, positive communicators benefit from a likeability premium, attracting more followers; this preference for positivity is mitigated by alternative likeability cues (e.g., using sociable language). On search-driven platforms, communicators with mixed-sentiment benefit from a credibility premium, attracting most followers; this preference for mixed sentiment is mitigated by alternative credibility cues (e.g., Yelp's “Elite” badge). An online experiment attests to causality, demonstrating that people choose to follow more credible accounts on X (formerly Twitter) when instructed to search the platform for specific information (vs. to scroll it) and more likable accounts when instructed to scroll (vs. search) the platform.

SUSPICION AND COMMUNICATION

Friederike Fromme

In this paper, we study how communication influences suspicion. The experiment uses a sender-receiver setup with a low probability of misaligned incentives for senders and receivers. We focus on the impact of open communication on the receivers' suspicion as measured by the size of the deviation from the senders' recommendation before and after the communication. Overall, communication substantially reduces suspicion, but some receivers become more suspicious during the communication. We disentangle these effects using machine learning methods to analyze the chat logs. We find that the stronger both sender and receiver chats are classified as negative, the less they decrease or even possibly increase the level of suspicion from before the chat to after the chat.

AVERSION TO DISAGREEMENT: PSYCHOLOGICAL BARRIERS TO HARNESSING COGNITIVE DIVERSITY

Jack Soll

According to the “Wisdom of Crowds” phenomenon, average estimates from multiple individuals who use diverse sources of information are more accurate than relying on a single, chosen advisor. The crowd succeeds because individual estimates carry different insights and different biases. Some judgments may underestimate the truth and some may overestimate it; when averaged, the errors cancel out. However, crowd benefits are much weaker when judges use the same (redundant) information. In this case judges’ estimates are similar, leading to shared insights and shared biases. In five studies, we investigate people’s preferences for cognitive diversity among a set of advisors. When each advisor has unique but equally valid information, averaging opinions leads to substantially greater accuracy than relying on any individual advisor. However, non-overlapping information also implies that crowd members will often disagree. We show that people value cognitive diversity, but only when they do not see the crowd members’ individual judgments. When the advisors’ estimates are observed, our participants placed more trust in advisors that agreed with one another, even when they were aware that they shared a smaller amount of total information. A final study examines one approach to debiasing incorrect beliefs about the implications of both agreement and disagreement for the accuracy of an aggregate crowd judgment.

COMMUNICATION OF SYNERGISTIC HEALTH RISKS

Martina Barjaková

Many non-communicable diseases result from combinations of risk factors, which sometimes interact to produce risks going beyond their sum, called synergistic risks. For instance, smoking and alcohol consumption interact synergistically to increase the risk of head and neck cancers. Our previous studies show that only a minority of people judge synergistic risks for non-communicable diseases as such, which reveals the need of improving awareness and understanding of these risks through effective communication. Existing online communications usually inform about the existence of a synergistic relationship, explain briefly what it means and illustrate it with data on the increase in risk (e.g., state that the risk is “X-times higher”). Scientific evidence on how best to communicate synergistic risks is almost non-existent. There is only limited evidence that providing probability information (in natural frequency format) and explaining the biological mechanism behind the synergy improve judgements about synergistic health risks. The aim of our research is to help fill this gap in the literature by providing new empirical evidence on the ways of explaining synergistic health risks to people. In two studies, we test whether (a) explaining what a synergistic relationship means, (b) explaining the biological mechanism behind the synergy, (c) the combination of the two approaches, or (d) providing the commonly-used relative risk information, improve people’s judgements of synergistic risks. The results are of both theoretical and practical relevance, as they can shed light on the mechanism that best demonstrates the idea of a synergistic risk, and can inform the design of real-world communications on synergistic health risks for non-communicable diseases.

A NON-STRATEGIC SOLUTION TO THE ELECTRONIC MAIL GAME PARADOX

Alessandro Gioffré

By reconsidering the classical coordinated attack problem, Rubinstein (1989) introduces the electronic mail game (EMG, henceforth) and shows that strategic coordination, as determined by Nash equilibrium, cannot make up for the lack of epistemic coordination, which relies on common knowledge. Monderer and Samet (1989) use the notion of p-belief to demonstrate that a weaker form of strategic coordination can partially reconcile with the absence of common knowledge. Rubinstein's result comes along also with a paradox, since the players play contrary to the information they possess. In this paper, we focus on this aspect of Rubinstein's contribution. We argue that the EMG paradox is not resolved by reference to p-belief. We present a variant of p-beliefs, called epsilon -beliefs, along with a novel concept of grounding. We show that if the players' beliefs are "grounded", then the optimal equilibrium of the EMG is "commonly believed". In particular, we identify general conditions on grounding that, when met, make the optimal strategy profile of the EMG an iterated belief, and a common belief if one more additional condition also holds—the distinction between the two notions being made as in Morris (1999). This, we argue, resolves the EMG paradox. We qualify our solution as non-strategic because it is independent of the information about the payoff distribution of the EMG, as well as of any assumptions about the players being "maximizers" of any sort.

ON THE ROBUSTNESS OF COMPROMISE EFFECT IN DECISIONS FROM EXPERIENCE

Niyaz Mukhametzyanov

The compromise effect—where individuals prefer middle-ground options over extremes—has been widely observed in decisions from description. However, our research challenges its robustness by demonstrating a reversed compromise effect in certain conditions. We conducted three pre-registered studies to explore how individuals make choices when relying on both description and experience. Study 1 revealed a reversed compromise effect from the first trial, even before participants gained experience. The compromise option was chosen less frequently than expected, and this pattern persisted across 100 trials. Study 2 tested one-shot decisions under varying task complexities, showing that the compromise effect emerges only in complex settings, while simpler environments with clear trade-offs led to a reversed compromise effect. Study 3 examined the joint impact of description and experience, finding that even when an initial compromise effect appeared, experience quickly reversed it. Our findings suggest that the compromise effect is highly context-dependent. Experience often leads individuals to avoid compromise and instead prioritize heuristics such as regret minimization. These results challenge traditional assumptions in decision theory and have implications for marketing, consumer behavior, and policy design.

Decision from Experience 3

Guinigi SF

WHO'S ON FIRST, WHO'S ON SECOND? WHEN ENGAGING IN EXPERIENCES, PEOPLE PREFER TO ALTERNATE

Uri Barnea

Managers assign responsibilities to employees, households divide chores among their members, and parents allocate playtime to their children. Throughout work and daily life, people must decide the order in which they and others engage in experiences. We investigate how people prefer to order such experiences. In particular, this research explores whether people prefer alternating, in which individuals switch after each period, or batching, in which one individual completes multiple experiences before another individual does the same. Seven pre-registered experiments demonstrate a robust preference for alternating over batching that generalizes to variety of contexts (e.g., work assignments, games, house chores) and populations (e.g., managers, laypeople, students, non-WEIRD samples). We show that this preference is driven by the perception that alternating is more fair than batching. This fairness perception derives from people's tendency to think about the experiences sequentially, which leads them to evaluate equity intermediately rather than holistically. Moreover, this preference for alternating is consequential for well-being: a pre-registered survey of employees finds that alternating (vs. batching) a task shared by coworkers predicts higher satisfaction with the task itself and with the general division of labor among employees. These findings have practical implications for people making ordering and allocation decisions, and theoretical implications for understanding turn-taking, a common strategy used by people and animals alike.

WHAT PREDICTS THE NEXT CHOICE IN REPEATED BINARY CHOICE IN DYNAMIC ENVIRONMENTS WHEN FULL FEEDBACK IS AVAILABLE?

Tim Rakow

Three pre-registered experiments (total $N = 897$) examined repeated choice between a pair of binary-outcome options, with immediate feedback for obtained and forgone outcomes. Outcome-probabilities changed (unannounced) twice across 180 or 120 choice-rounds (Experiment 1 or 3), or thrice in 160 rounds (Experiment 2). Those changes either preserved or reversed which option was best. We compared the effects on subsequent choices of obtaining disappointment-inducing outcomes (receiving the lower outcome from an option) and regret-inducing outcomes (obtained outcome $<$ forgone outcome). We also generated predicted choice proportions from disappointment-based and regret-based variants of a simple win-stay-lose-shift model, testing both models against a positive-reinforcement model. In this comparison of simple parameter-less models, the regret-based model described behaviour best. First, the absence/presence of regret-inducing outcomes predicted staying or shifting more strongly than disappointment-inducing outcomes ($d > 0.9$). Second, observed choice proportions were typically closer to those predicted by the regret-based model,

as compared to both other models. Importantly, the regret-based model best predicted the direction and size of behaviour changes that followed changes in outcome-probabilities. We also examined whether adding complex components to our mere regret model improved its prediction of choice. It did. But probably less than one might expect based on the components often included in cognitive models of choice.

DISCRIMINATING BECAUSE OTHERS MIGHT: ANTICIPATING DISCRIMINATION BY OTHERS CAUSES DISCRIMINATION

Nicholas Owsley

Statistical discrimination is typically described as arising from perceived group differences in skills, such as differences in male and female math ability. However, when evaluating a candidate, decision makers might also anticipate whether other actors, such as clients or shareholders, will discriminate against them. I investigate whether these beliefs, about discrimination by others, cause decision makers to discriminate, holding beliefs and preferences about target groups fixed. I test this using a natural experiment, leveraging the 2024 US presidential election as a “belief shock” about others’ potential gender discrimination, and in a controlled online experiment. I find that hiring managers update their beliefs following the 2024 election, expecting clients to discriminate more against female workers in states where Donald Trump, rather than Kamala Harris, won the majority vote. These belief updates are greater for those who did not anticipate election outcomes. These shifts in beliefs cause hiring managers in Trump states to hire fewer female workers following the election, holding worker qualifications and beliefs about male-female productivity fixed. Manipulating beliefs about others’ discrimination in a controlled experiment generates similar changes in gender discrimination. Across both studies, hiring managers overestimate client discrimination, causing them to hire fewer female workers than they would with accurate beliefs.

INACTION INERTIA: A META-ANALYSIS SPANNING 30 YEARS OF RESEARCH, EXAMINING THE EFFECT’S ROBUSTNESS AND POTENTIAL MODERATORS

Vanessa Rettkowski

Consumers are less likely to accept an attractive discount when they have missed a more attractive discount – a phenomenon that is commonly referred to as inaction inertia (Tykocinski et al. 1995). This preregistered meta-analysis of the inaction inertia effect (<https://aspredicted.org/dqmh-9nh4.pdf>), the first of its kind, synthesizes research from 1995 up to and including 2024 to quantify the overall effect size of the effect and to examine moderators influencing its magnitude. A thorough systemic literature search following PRISMA guidelines, based on multiple databases and a wide-reaching public call for data, yielded a total of 34 manuscripts and datasets, including 70 studies, with 15645 participants, and 138 effect sizes. We provide robust quantifications of the inaction inertia effect and explore its critical moderating conditions – such as the size of the discrepancy between missed discounts, and how the phenomenon is attenuated in non-monetary contexts or when

monetary values are presented as absolute values (vs. relative values). In conclusion, this synthesized summary of 30 years of inaction inertia research shows that the inaction inertia phenomenon is robust and details moderating effects of various demographic as well as vignette design features. Future studies may profit from this meta-analysis by regarding this as a comprehensive overview as to how approach the effect, but also how to translate it into the applied context.

Misinformation & polarization 3

San Micheletto Affresco

HOW DISTINCTIVENESS DRIVES INFORMATION SELECTION IN COMMUNICATION

Anna Schulte

News media frequently overrepresent minority groups in negative contexts, thereby fostering biased perceptions. This research investigates whether this pattern stems from a cognitive bias rather than intentional discrimination, focusing on how conversational norms influence information-sharing decisions. Across six studies ($N = 805$), we found that individuals disproportionately communicated distinct attributes (i.e., minority features) rather than common attributes (i.e., majority features) when describing social targets in both fictional and real-world scenarios, even when minorities and majorities were equally represented. This effect emerged in both negative (e.g., crime reports) and positive (e.g., lottery wins) contexts, suggesting that the distinctiveness of minority attributes, rather than valence, drives this tendency. Moreover, large language models (LLMs) exhibited the same pattern, indicating that the effect operates beyond self-serving motivations. These findings reveal a “minority dilemma,” in which the distinctiveness of minority attributes makes them more likely to be mentioned in predominantly negative news contexts, thereby reinforcing stereotypes. More broadly, this research uncovers a fundamental bias in how distinctiveness influences information transmission, shaping public perceptions and societal attitudes. By highlighting the unintended consequences of conversational norms, this work contributes to a deeper understanding of systemic biases in communication and judgment.

THE ROLE OF WORLDVIEW CONGRUENCE IN MISINFORMATION CORRECTION: A BAYESIAN APPROACH TO BELIEF UPDATING

Greta Arancia Sanna

Misinformation poses a growing challenge in society, particularly as people seem to be reluctant to revise discredited information. However, there is increasing recognition that people’s reliance on misinformation is sometimes a rational process, with individuals applying their own assumptions in a consistent way. In this experimental study, we show that even in politically charged contexts, people can effectively correct misinformation and return their

beliefs to baseline. Our results also demonstrate that participants' belief updates generally align with Bayesian predictions, though with a more conservative approach. We also found that participants were more likely to downgrade the reliability of an accuser's claim when it conflicted with their political views but returned to their initial assessments after the correction. This suggests that while worldview can affect source evaluation at the individual level, this effect does not necessarily translate into a broader erosion of institutional credibility. This study enhances our understanding of how worldview influences belief revision and source evaluation, especially in politically sensitive contexts.

THE EFFECTS OF POST-NARRATIVE CORRECTION AND CREDIBILITY LABEL ON MITIGATING THE IMPACT OF MISINFORMATION

Jun Liu

Misinformation is a growing global issue, and interventions such as post-narrative correction (i.e., providing a statement or evidence against misinformation after initial reporting) and credibility label (i.e., giving a credibility rating on dubious information) are crucial in mitigating its harmful effects. Much of previous research was conducted on fake events, whereas misinformation in the real world is often embedded in a dynamic-changing narrative with conflicting evidence for its veracity. Therefore, the true effects of these interventions need further investigation. In three experiments (N = 1650), we examined the effects of post-narrative correction and credibility label in real-world events. We found that for nonpolitical events, a single post-narrative correction could reduce misinformation credibility, regardless of whether a causal explanation was provided or not, and multiple corrections could further enhance the effect. For political events (e.g., U.S. Capitol Riot), however, the effect of correction was mixed. With regard to credibility label, we found across three cultures that there was a positive, S-shaped relationship between label value and veracity rating of a narrative. Specifically, low-credibility labels (e.g., about 20%) led to veracity ratings of around 53%, and high-credibility labels (e.g., about 80%) to veracity ratings of only around 59%, indicating a generally weak response from participants to credibility labels. These findings show that post-narrative correction and credibility label do have positive effects on mitigating the impact of misinformation in real-world events; however, the effects are often not as large as one expects or hopes them to be.

SHADES OF UNCERTAINTY IN (MIS)INFORMATION: LINGUISTIC PATTERNS AND THEIR IMPACT ON READERS

Si-Qi Zhang

Given that academics and practitioners have advocated for transparency in journalism, how do media outlets communicate uncertainty, and what is its downstream influence on news consumers? Existing works have provided mixed evidence regarding the use of uncertainty expressions in reliable news and misinformation. We suggest that the mixed findings may be due to a crucial but often neglected characteristic: the varying levels of uncertainty that an

expression conveys. Through analysis of a large-scale news corpus (5,336,826 news articles) and behavioral experiments (total N = 602), this study found that reliable news and different types of misinformation (i.e., fake news, conspiracy theories, rumors, extreme bias news, junk science) differ substantially in the use of varying levels of uncertainty expressions. Furthermore, the inclusion of moderate- and weak-modal words significantly increased news consumers' perceived accuracy of the headline. Among headlines with strong modal words, participants are more likely to click through and share reliable headlines than false headlines. Our findings may provide new insights into the impact of linguistic uncertainty on news consumers and contribute to the understanding of how to better convey uncertainty in the post-truth era.

Nudge

San Francisco Church

THE LIMITS OF DEFAULT NUDGES

Aba Szollosi

We investigated the limits of default nudges in the context of setting temperature for indoor environments. In a hypothetical scenario, we offered participants the choice to set the temperature on a new thermostat where the default temperature setting was varied across 10 experimental groups ranging from 14C to 32C (in 2C increments); a control group received no default. While the general idea underlying default nudges would predict that when the default increases or decreases people's choices move in the same direction, other explanations would expect that at more extreme values such nudges might backfire. The results showed no support for either: We found no changes in people's temperature setting across experimental conditions, nor any differences between the control and experimental groups. Instead, LLM analysis of participants' verbal reports suggested that variability in temperature setting was related to more proximal considerations, such that people who set the temperature lower used cost-related concepts more often, while people who set the temperature higher primarily mentioned comfort-related ones. These results provide a window on why people may or may not rely on a default nudge, and together with our novel experimental and analytical techniques offer a blueprint for how to study and overcome the limits of default nudges.

THE IMPACT OF MORAL NUDGES ON PRO-ENVIRONMENTAL BEHAVIOR

Alina Panizza

The study aimed to test whether moral messages can improve pro-environmental behaviour. According to two theoretical frameworks, the Moral Foundations Theory (Haidt and Joseph, 2004) and the Theory of Morality as Cooperation (Curry, 2016), sixteen moral nudges were developed based on distinct moral foundations: Fairness, Authority, Loyalty, Bravery, Family, Reciprocity, Care and Purity. Each nudge was framed either positively (encouraging

moral actions) or negatively (discouraging immoral actions). Participants (N=2,713 Italians, representative with respect to age, gender, and region) read one moral message and then completed the Pro-Environmental Behaviour Scale (PEBS), which measures ecological attitudes and behaviours. Additionally, participants were invited to give their opinion regarding a hypothetical flyer aimed at raising public awareness on the climate crisis, providing an incentivized measure of pro-environmental behaviour. Results showed that out of the 16 moral nudges, “Authority” in its negative frame was found to positively impact pro-environmental behaviour, while “Loyalty” in its positive frame negatively impact PEBS mean score. Nudges showed significant interactions with demographic variables such as political orientation, age, and gender. In fact, some nudges were effective only for right-wing participants but had a backfire effect on left-wingers, and vice versa. Similar patterns emerged in age and gender comparisons, with certain nudges influencing in opposite ways men and women, as well as younger and older participants. These findings suggest that behavioural interventions using moral nudges should avoid a “one size fits all” approach and instead adopt more flexible and adaptive models that take individual differences into account

BOOSTING: EMPOWERING CITIZENS WITH BEHAVIORAL SCIENCE

Stefan Herzog

Behavioral public policy came to the fore with the introduction of nudging, which aims to steer behavior while maintaining freedom of choice. Responding to critiques of nudging (e.g., that it does not promote agency and relies on benevolent choice architects), other behavioral policy approaches focus on empowering citizens. One such approach is boosting, a behavioral policy approach that aims to foster people’s agency, self-control, and ability to make informed decisions. It is grounded in evidence from behavioral science showing that human decision making is not as notoriously flawed as the nudging approach assumes. In this talk I will present key insights from a recent review on boosting (Herzog and Hertwig, 2025 Annual Review of Psychology), including boosting’s key principles, and highlight boosting examples (e.g., boosts for online environments; for more examples, see also scienceofboosting.org). We argue that addressing the challenges of our time—such as climate change, pandemics, and the threats to liberal democracies and human autonomy posed by digital technologies and choice architectures—calls for fostering capable and engaged citizens as a first line of response to complement slower, systemic approaches.

September 3rd

FLASH TALKS

Flash talks	3 Sept h. 14.40
San Michele Convegni	Decision making
San Michele Affresco	Prosociality and emotions
Guinigi SF	Technologies & Information + Finance, Accounting, & Management
Aula 1 SF	Consumer Decision Making & Sustainability
San Francesco Church	Choice Modelling & Theory
Aula 2 SF	Heuristics & Biases

Flash talks					
San Micheleetto Convegni		Aula 1 SF		San Micheleetto Affresco	
Decision making		Consumer Decision Making & Sustainability		Prosociality and emotions	
Carlos Rey Romero	Mapping the Gap Between Research And Real-World Losses	Chenyi Zhu	Implicit Attitudes Toward Imperfect Produce: An IAT Study on the Role of Implied Motion in Automatic Association	Daniela Carmen Cristian	Intentional Hedonic Consumption Motivates Prosocial Behavior
Carmen Sainz Villalba	Delegation and Takeover of Decision Rights: Gains or Losses	Claire Heard	Understanding Scam Susceptibility: The Role of Affective Content in Persuasive Messages	Gabor Ruzsa	Exploration in non-stationary environments: An affect-based RL model for multi-armed bandit problems, applied to the Iowa Gambling Task
Ester Nosalova	To Plan or to Procrastinate? The Influence of Decision-Making Styles on Goal Progress	Dionysius Ang	Buy Now, Return Later? The Impact of Installment Payments on Product Returns	Jesse Fenneman	Social Exchange Theory and Decision Making: Interesting Opportunities for Interdisciplinary Collaborations
Eva-Marie Heißler	Attentional guidance during multi-attribute decisions from memory	Dóra Novák	Green nudges in practice: A systematic literature review	Jessica F. Helm	The influence of affect in information search and policy decision making about Carbon Dioxide Removal
Laura Caravona	Dissodiable effects of verbalization on solving insight and non-insight problems	Gloria Preece	Mindful Consumption and Behavioral Insights: Segmenting Consumers to Close the Green Gap in Fashion	Leon Houf	Between anthropology and behavioural economics - Interdisciplinary complexity, moral horizons and belonging in a Laos case study
Michael Roy	Self and Typicality as Anchors in Judgments of Height and Weight	Merav Weiss-Sidi	Hue Matters: How Color Shapes Women's Perceptions of STEM Advertising	Nils Christian Hoenow	Political Preferences and Prosociality
Vivien Lungwitz	Short and long-term effects of a 20 minutes intervention to improve the understanding of dynamic systems	Raz Henkin	Does a Digital Twin Imply a Win-Win? Exploring Consumer Responses to Physical Luxury Products with NFT-linked Digital Twins	Sayeh Yousefi	Examining the Influence of Prior Beliefs on Updating Attitudes Towards Immigrants
Zhiqin Chen	Influence of irrelevant and relevant context on ambiguity attitudes	Shane Timmons	Green flying or greenwashing? Effects of emissions labels on consumer choice of lower-emission flights	Stephen Nei	Preferences for Equality of Opportunities and Equality of Outcomes
Guinigi SF		Aula 2 SF		San Francesco Church	
Technologies & Information + Finance, Accounting, & Management		Heuristics & Biases		Choice Modelling & Theory	
Divya Aggarwal	Effect of construal level on personal accounting decisions in the presence of multifaceted ambiguity	Annika M. Svedholm-Häkkinen	Are people aware of their myside bias? Conflict detection in evaluating informal arguments	Anat Shechter	Rethinking Knowledge's Impact on the Illusory Truth Effect
Richard Szanto	Delineating the mediation role of external risk perceptions: differences in the link between top management traits and firm performance	Brian A. Polin	Is cognitive reflection really reflective?	Dan Schley	Comparing Apples and Oranges: Measurement Invariance Across Experimental Treatments
Žiga Puklavac	Unobscuring the Concept of Tax Morale: A Systematic Review of the Literature	Ge Ge	Hypothetical Bias in Patient-Regarding Preferences: Comparing Fully Incentivized and Conventional Stated Preference Experiments	Jozef Bavolar	Loss aversion – three ways of measurement and the role of intolerance of uncertainty and neuroticism
Petra Filkukova	Attitudes to AI use in academia	Johanna Woitzel	Diversity Heuristics in Decision-Making: How Individuals Overweight Categorical Representation and Underweight Distribution	Fergus Bolger	An experiment to test a new theory of opinion revision in groups
Wai Lam Leung	Effects of Simulated Acuity Loss on Data Extraction and Medical Decision-Making with Visualisations	Paula Andrea Nieto Hernandez	Hard Cases and Tragic Choices in Climate Adjudication	Gianpietro Sgaramella	Matrix completion for survey length reduction

SEPTEMBER 3RD, H 14:40

Decision Making

San Micheletto Convegno

MAPPING THE GAP BETWEEN RESEARCH AND REAL-WORLD LOSSES

Carlos Rey Romero

What do laypeople consider when they think of losses? This study investigates the alignment between laypeople's understanding of losses and the domains of losses studied in decision-making research. We argue that research on losses has been primarily focused on monetary gambles and might have overlooked critical aspects of how individuals interpret losses in other real-world situations. We asked participants to report their associations with the concept of "loss" and compared these responses to the domains explored in the scientific literature. Our findings reveal a broad overlap between laypeople's associations (including health, emotional well-being, financial matters, and missed opportunities) and the domains covered by scientific research. However, we also observed relevant discrepancies in the relative emphasis placed on different loss domains. Laypeople more frequently cited health-related losses as salient, while financial losses were overrepresented in the scientific literature. Emotional and opportunity-related losses were also more prominent in laypeople's responses. These results challenge the prevailing focus on financial losses in loss aversion research and highlight the need to expand the scope of the investigation to encompass the full spectrum of losses experienced in real-life contexts. Furthermore, our findings raise questions about the definition of "loss" itself, particularly within the financial domain, as laypeople did not spontaneously associate monetary exchanges with losses. We conclude by advocating for research that moves beyond the typical "small world" paradigms of judgment and decision-making to explore how losses in various domains, especially health, impact real-world decisions.

DELEGATION AND TAKEOVER OF DECISION RIGHTS: GAINS OR LOSSES

Carmen Sainz Villalba

This paper analyzes whether there is a higher willingness-to-pay when faced with uncertain gains or uncertain losses. In addition, we look at how the restriction on choice, established with different framings, impacts the WTP. We observe that there is no difference in the WTP between gains and losses, but there is a difference in the WTP between different framings of the restriction of choice. Specifically, we see that respondents who are faced with a delegation decision have a smaller WTP than those who only face a decision of choosing between a pair of lotteries. In addition, we find that the WTP is even smaller when the default of a third-party agent choosing is imposed.

TO PLAN OR TO PROCRASTINATE? THE INFLUENCE OF DECISION-MAKING STYLES ON GOAL PROGRESS

Ester Nosalova

Implementation intentions are effective in promoting goal-directed behavior, but little is known about individual differences predicting their formation. This study examines whether rational and avoidant decision-making styles influence the formation of implementation intentions and whether early planning predicts greater goal progress. A sample of 143 Slovak students (84 women; age 17–19) aiming for university admission participated. Decision-making styles and implementation intentions were assessed at baseline (June 2023), while goal progress was measured in March 2024. Data were analyzed using Structural Equation Modeling (SEM), and missing data were handled using random forest imputation. Results showed that rational decision-making positively predicted implementation intentions ($\beta = 0.420$, $p < .001$), while avoidant decision-making predicted implementation intentions negatively ($\beta = -0.357$, $p < .001$). Early implementation intentions significantly predicted goal progress ($\beta = 0.240$, $p = .003$). The model demonstrated adequate fit ($\chi^2(2) = 3.247$, $p = .197$, CFI = 0.986, RMSEA = 0.066, SRMR = 0.041). Findings suggest that decision-making styles influence structured goal planning, which, in turn, enhances goal progress. Several limitations include measuring progress subjectively, measuring planning with a single item and minor local fit discrepancies suggest additional influences on goal pursuit.

ATTENTIONAL GUIDANCE DURING MULTI-ATTRIBUTE DECISIONS FROM MEMORY

Eva-Marie Heißler

Internal attention has been shown to guide choice. However, research suggests different processes to explain the observed behavior: For one, a change in integration strategy (compensatory or non-compensatory) and alternatively, an increase in decision weights for attended information. In this study, attribute information for the decision has to be retrieved from memory and a retro-cue paradigm is used to guide attention to one of several attributes shared between alternatives. We find more fixations to the cued attribute and more choices of the alternative scoring higher on that cued attribute. This is in line with the hypothesis of increased decision weights. There is no evidence of a strategy change in the behavioral results. Explorative analyses revealed that fixations during encoding predict choice: fixations on negative attribute information reduced and fixations on positive information increased choice for the respective alternative. This is in line with an information integration account of choice. During the retention and choice-phase, however, the fixated alternative, rather than the specific attribute information mattered. That is, even if the attribute information is negative, the probability of choosing this alternative increased. This is in line with the gaze-cascade model. These results suggest that attention is indicative of different information processing, throughout the process. During encoding, attention might reflect information acquisition of individual attributes, while later on, attention might reflect consolidating preferences for the entire alternative. Studying eye movements during different phases of the choice process advances our theoretical understanding of the role of attention during decision making.

DISSOCIABLE EFFECTS OF VERBALIZATION ON SOLVING INSIGHT AND NON-INSIGHT PROBLEMS

Laura Caravona

Numerous studies have investigated verbalization effects with the aim of clarifying the processes responsible for solving insight and non-insight problems. However, there is no concordance in the literature among the various theories. While studies supporting the special process view have reported different effects of verbalization in insight and non-insight problems, highlighting an overshadowing effect in the former, studies accounting for the business-as-usual approach reported a lack of verbalization effect in insight problems and claimed that the solution processes of the two types of problems are more similar than different. The study reported in the present paper investigates, with the same procedure, the effect of verbalization on insight and non-insight problems, providing evidence supporting the role of unconscious processes for the resolution of the former, in contrast with the stepwise, conscious procedure for the resolution of the latter. These results will be discussed in the light of a third approach, Unconscious Analytic Thought (Macchi and Bagassi, 2012, 2015; Bagassi and Macchi, 2016), which claims that the insight problem-solving process is mainly unconscious and analytic.

SELF AND TYPICALITY AS ANCHORS IN JUDGMENTS OF HEIGHT AND WEIGHT

Michael Roy

Self-anchoring is the use of the self as an anchor when making judgments about others for variables such as height and weight. In Study 1, there was a self-anchoring effect for weight, but not for height. In Study 2-4, the self-anchoring-effect for weight appeared to be indirect, mediated by estimates for the typical other. Participants used themselves as an anchor when estimating the weight of a typical other, and the weight of a typical other when estimating the weight of the target. Uncertainty about the typical other is the likely cause for participants using themselves as an anchor in judgments of typical weight, but not of typical height.

SHORT AND LONG-TERM EFFECTS OF A 20 MINUTES INTERVENTION TO IMPROVE THE UNDERSTANDING OF DYNAMIC SYSTEMS

Vivien Lungwitz

Complex dynamic systems are part of our everyday lives. Deciding on how a certain stock develops over time depending on the in- and outflows is relevant for understanding climate change as well as managing our personal bank account. Nevertheless, even simple dynamic problems such as stock flow tasks have been shown to lack understanding even among highly educated individuals (Booth Sweeney and Sterman, 2000; Cronin, Gonzalez and Sterman, 2009). Attempts to increase the understanding of such dynamic problems have been manifold but so far missing a resounding success. Furthermore, no long-term effects have yet

been examined. The present online study wanted to fill in these gaps and combined different promising interventions for 241 participants with the goal of increasing stock flow performance. Participants either received no treatment, different stock flow specific assistance or in a third group, additionally to the specific interventions, some broader help by activating a higher level of analytical thinking and raising participants' motivation among other things. As expected, the control group showed the worst, the experimental group with specific and unspecific interventions the best results. Two follow up measurements (two month and two years later) were conducted without further intervention for any of the groups. The trend of the intervention effect between the three groups remained even after two years. In conclusion: even a relatively short intervention aiming at the improvement of the understanding of dynamic systems had long lasting effects. The influence of variables such as gender, mathematic score in school or field of study on the stock flow performance are discussed.

INFLUENCE OF IRRELEVANT AND RELEVANT CONTEXT ON AMBIGUITY ATTITUDES

Zhiqin Chen

This study explores how unavailable and available options influence ambiguity attitudes using a paradigm inspired by Ellsberg's two-color ball paradigm. Two experiments with college students (Study 1: N = 115, Study 2: N = 133) were conducted. Study 1 found that an unavailable option with intermediate ambiguity degree increased ambiguity aversion, while Study 2 showed that lower or higher ambiguity degree in the unavailable option relative to available options reduced ambiguity aversion. Specific revealed information from unavailable options did not affect ambiguity attitudes, but the influence of revealed information from available options depended on the ambiguity degree of unavailable options. These findings highlight the significant role of irrelevant context in decision-making under ambiguity. The controlled experimental setting, however, may limit generalizability to real-world scenarios. The study offers practical implications for finance, investment, and public policy, emphasizing how context shapes ambiguity preferences.

Prosociality and emotions

San Micheletto Affresco

INTENTIONAL HEDONIC CONSUMPTION MOTIVATES PROSOCIAL BEHAVIOR

Daniela Carmen Cristian

Consumers frequently engage in hedonic experiences either intentionally, driven by their own volition, or unintentionally, motivated by situational factors. This research investigates the effect of intentionality of hedonic consumption on subsequent prosocial behavior. We propose and find that consumers are more likely to exhibit prosocial behavior after enga-

ging in intentional, versus unintentional, hedonic consumption. This effect arises because intentional hedonic consumption leads consumers to infer that they cultivated self-compassion, which in turn motivates them to behave prosocially. Six experiments demonstrate convergent evidence for this effect, using monetary as well as non-monetary prosocial behavior, generalizing across several hedonic consumption domains, and ruling out alternative mechanisms. Importantly, the effect occurs specifically following intentional hedonic (vs. nonhedonic) consumption. These findings provide meaningful implications for consumer welfare, marketers of hedonic offerings, and nonprofit organizations.

EXPLORATION IN NON-STATIONARY ENVIRONMENTS: AN AFFECT-BASED RL MODEL FOR MULTI-ARMED BANDIT PROBLEMS, APPLIED TO THE IOWA GAMBLING TASK

Gabor Ruzsa

Established reinforcement learning (RL) models of decision-making in the Iowa Gambling Task (IGT) focus on how individuals learn and evaluate reward distributions, including their expected value, utility, and gain/loss frequency. While models like VPP and VSE incorporate valuation bonuses both for choice persistence and novelty, they do not explicitly model the role of unexpected outcomes in guiding exploration. This is a critical omission, particularly in non-stationary environments such as the progressive variant of IGT. To address this, I developed a novel RL model of IGT behavior incorporating an affect-driven exploration component. This component keeps account of an exploration bonus/penalty based on the cumulative discounted affect generated by recent unexpected outcomes. Instantaneous affect is calculated using an affect generating function (AGF) that quantifies the surprise associated with each outcome, based on the difference between realized and possible rewards. The AGF integrates this surprise over a normal distribution of potential outcomes, parameterized by option-specific means and standard deviations learned via delta-rule updates. Fitted to 1381 participants across six IGT datasets (original and progressive variants), my model, with four affect-related parameters alongside standard RL components, produced superior likelihood and AIC values and similar BIC values compared to state-of-the-art models (VPP, VSE, ORL). In addition, group-level Bayesian analysis revealed a lower affective response threshold in the progressive IGT variant, indicating increased sensitivity to unexpected outcomes in non-stationary environments. This supports the role of affect in guiding explore/exploit decisions, particularly when reward distributions change over time.

SOCIAL EXCHANGE THEORY AND DECISION MAKING: INTERESTING OPPORTUNITIES FOR INTERDISCIPLINARY COLLABORATIONS

Jesse Fenneman

Social exchange theory (SET) is widely used in organizational behavior and management sciences to explain how individuals engage in repeated, non-anonymous interactions within social networks. While SET has been applied to topics such as motivation, com-

mitment, and social norms, it currently faces substantial conceptual ambiguity regarding the exact meaning, scope, and connection of key concepts. In an ongoing project, I use formal theoretical modeling to reduce this conceptual ambiguity. Briefly, formal theoretical modeling is the practice of translating theories that are phrased in natural language – which can be ambiguous – into a set of unambiguous logical statements. Besides offering conceptual clarity, this model highlights several important gaps in SET, particularly: (i) how individuals form and update expectations, (ii) how individuals assign value to relationships and resources, and (iii) how preferences for time, risk, and information shape social behavior. These topics are widely studied in the decision sciences, which offer well-established theories on belief formation, utility and expectations, risk-taking, intertemporal discounting, and information search. Yet, despite their relevance, insights have rarely been integrated into SET. Using my formal model, I discuss how and where we can build academic bridges. Such bridges help strengthen SET's theoretical and empirical foundations. Reciprocally, such connections offer novel settings and large-scale organizational datasets where decision researchers can test hypotheses in real-world social environments.

THE INFLUENCE OF AFFECT IN INFORMATION SEARCH AND POLICY DECISION MAKING ABOUT CARBON DIOXIDE REMOVAL

Jessica F. Helm

In the face of the accelerating climate crisis, discussions surrounding solutions have intensified, particularly concerning technological interventions like Carbon Dioxide Removal technologies. However, public acceptance of these technologies remains an underexplored area, with limited understanding of the factors influencing it. In our study we examine how participants select and evaluate provided information about the risks and benefits of the technology, the role of affect and how information processing is impacted by individual differences. Further, we are interested how the information search process and resulting affect impacts policy decision making about Carbon Dioxide Removal. In this study with $N = 714$ participants, we introduced a novel information search paradigm followed by a policy choice experiment on Carbon Dioxide Removal technologies. In line with expectations, participants' initial affect significantly influenced their information search strategy, in that a more positive initial affect towards CDR was associated with a higher proportion of selected beneficial information (OR: 1.18, CI: 1.11-1.26, $p < .001$). We also observed a noteworthy shift in participants' affect, becoming more positive after selecting beneficial information compared to risky information ($b = 22.50$, $SE = 1.92$, $p < .001$). Additionally, we found that affect from the information search process significantly predicts policy choices in that more positive affect increases the likelihood of acceptance for policies (OR 2.79, CI: 2.41 – 3.23, $p < .001$). This effect remains when controlling for the initial affect before information acquisition. Our findings provide insight into the influence of information search on affect and highlight the importance of it in decision making.

BETWEEN ANTHROPOLOGY AND BEHAVIOURAL ECONOMICS INTERDISCIPLINARY COMPLEXITY, MORAL HORIZONS AND BELONGING IN A LAOS CASE STUDY

Leon Houf

In recent years, the increased collaboration between anthropologists and economists has questioned the universality of the results of behavioural experiments. These efforts have been complemented by calls from anthropologists to take economics more seriously. However, the collaboration between the two disciplines produces an increase in complexity that unfolds in the field. The present case study presents an experiment that was tailored for a resettlement village in rural Laos to measure participants' "belonging" to the units of household, former and new village. To conceptualise experiments within their social environment, we suggest the concept of a moral horizon, which encompasses the social relations that need to be enacted to conduct an experiment. With this concept, we review the methodology of an experiment in our case study and make suggestions on how ecological validity and external validity can be strengthened in experiments. This concerns foremost the use of anonymity, money as a means of exchange and the needed social and institutional relations to conduct the experiment in the first place.

POLITICAL PREFERENCES AND PROSOCIALITY

Nils Christian Hoenow

Commonly, left-leaning political orientations may be perceived to favor more social and benevolent policies that aim to achieve higher levels of equality as opposed to conservative or right-leaning policies. In a first of two studies, I investigate whether different measurements of prosocial behavior, including an incentivized donation experiment and a series of self-reported real-world behaviors – such as blood and money donations and voluntary work – correlate with political preferences. Data for this study were collected within a large-scale citizen survey comprising 13,499 observations from nine European countries. Participants were asked to rate their political preferences on a left-right scale. Mixed linear models reveal that higher scores for most prosocial behavior markers are, on average, associated with left- rather than right-leaning political orientations. With study 2, I investigate if voters' decisions in parliamentary elections are motivated by egoistic or social concerns, that is, whether and to what degree voters consider potential effects of their votes on other members of the society. I do so by asking a representative sample of 6,107 German citizens collected in May 2024 to assess their perception of how the work of existing, major political parties affect, firstly, their personal wellbeing and, secondly, the overall wellbeing of other people in their society. Results show that respondents see stark differences between parties, which strongly align with their general party preference. However, hardly any differences are seen between the same parties' effect on oneself vs. on all others, indicating that voting for the favored party is commonly perceived as both the individually and socially best option.

EXAMINING THE INFLUENCE OF PRIOR BELIEFS ON UPDATING ATTITUDES TOWARDS IMMIGRANTS

Sayeh Yousefi

Past studies show prior beliefs are associated with how individuals evaluate the strength of related arguments. The present study explores if people's prior attitudes influence how they evaluate the perceived strength of arguments in the context of immigration. We also test whether the style of argument, narrative or statistical, changes peoples' attitudes towards immigrants. We report a mixed design study (N = 349). We measured participants' attitudes towards immigrants using half of the Negative Attitudes Towards Immigrants Scale (NATIS) at the start of the study. Participants then rated the quality of a narrative and a statistical argument, before their attitudes towards immigrants were again elicited, using the second half of the NATIS scale (counter-balanced). Participants with high pre-existing negative attitudes towards immigrants rated pro-immigrant arguments poorly and anti-immigrant arguments strongly, and we see the opposite relationship for participants with pre-existing positive attitudes towards immigrants. However, we found mixed results as to whether people update their attitudes in the same direction as their prior attitudes based on whether they see arguments that are congruent or incongruent with their prior beliefs. Our findings demonstrate that people can evaluate the same arguments about immigrants very differently depending on their pre-existing attitudes.

PREFERENCES FOR EQUALITY OF OPPORTUNITIES AND EQUALITY OF OUTCOMES

Stephen Nei

Many important policy and managerial decisions involve uncertain outcomes that may affect people unequally. In this paper, we model decision makers' (leaders') preferences for equality of opportunities and equality of outcomes when making decisions for others (followers). We then design a novel, simple, yet powerful elicitation method to measure how decision makers trade-off between efficiency, equality of opportunities and equality of outcomes. We show that decision makers in our US sample have strong preferences for equality of outcomes when the decision has no uncertain outcomes. In line with existing literature, almost all decision makers would trade off efficiency to ensure that payoffs are equal across followers. When outcomes are uncertain, most decision makers would trade off efficiency for equal opportunities. However, most of our subjects would not trade off efficiency for equal outcomes if opportunities are equal but outcomes are unequal. This striking result has several important implications. First, existing inequality aversion models and results in the literature may fall short to explain behaviours when distributional outcomes are uncertain. Second, if policy decisions follow a strong preference for equal opportunities without a preference for equality of outcomes, while it can lead to better outcomes on average, it could also lead to widening inequalities.

Technologies & Information + Finance, Accounting, & Management

Room: Guinigi SF

EFFECT OF CONSTRUAL LEVEL ON PERSONAL ACCOUNTING DECISIONS IN THE PRESENCE OF MULTIFACETED AMBIGUITY

Divya Aggarwal

When making financial accounting decisions, this study attempts to investigate whether people with low-level or high-level construal's view confusing information differently. According to the study's hypothesis, people with low-level construal will be more susceptible to various ambiguity sources and probably show more aversion to ambiguity than people with high-level construal. The study also looks at whether gender and personality differences in ambiguity attitude affect decisions made when faced with unclear information on a low-level interpretation. In a similar vein, the study investigates whether gender and personality level variations in ambiguity attitude affect judgement in the face of ambiguity. The study included 265 first-year MBA students enrolled in a financial accounting course at an Indian business school. The online interface of Qualtrics was used to gather the data. The students' ages ranged from 19 to 36 years old, with an average age of 24 (SD = 2.2 years). Males made up 55% (N = 146) of the 265 pupils, while girls made up the remaining 45% (N = 119). Students had to choose amongst a series of paired selections for eight fictitious financial operation scenarios as part of the study's primary task. Theoretically, this study advances models of descriptive decision-making in the face of ambiguity.

DELINEATING THE MEDIATION ROLE OF EXTERNAL RISK PERCEPTIONS: DIFFERENCES IN THE LINK BETWEEN TOP MANAGEMENT TRAITS AND FIRM PERFORMANCE

Richard Szanto

When examining individual decisions, it seems quite straightforward that a link between personality traits and different types of success may exist. Our paper examines whether the same relationship holds for corporations, where top management character traits can influence firm performance. However, we not only explore this direct relationship, but also involve risk perceptions about three external risk sources as mediators in the analysis. Basically, we assume that top management character traits can, directly and indirectly, affect firm performance, with risk perceptions as possible mediators. The first challenge in measuring these effects is that there is no academic consensus about categorizing top management character traits. Therefore, the first contribution of our paper to the literature is to present a new structure for these traits. Our approach combines the concept of the Big Five Inventory and Zenger and Folkman's catalog of leadership competence. Based on data from Hungarian medium-sized and large firms (with at least 50 employees), we have found that the following top management character traits may be identified: Openness,

Performance focus, Responsibility, Adaptability, Relationship management ability, and Competence. As another contribution of our paper, the mediating role of three external risk perceptions (mundane external risk, fear of missing out, and distrust) is examined using structural equation modeling. The results provide interesting insights into the effects of risk perceptions on corporate decision-making.

UNOBSCURING THE CONCEPT OF TAX MORALE: A SYSTEMATIC REVIEW OF THE LITERATURE

Žiga Puklavec

Tax morale is considered to be a key instrument for increasing tax compliance, reducing tax evasion, and decreasing the shadow economy. Despite its clear importance within tax research and policy development, there is surprisingly little consensus about what tax morale actually is. With this systematic literature review, covering 323 articles, we summarize the many different definitions and operationalizations of tax morale, and reveal substantial heterogeneity in both. Definitions range from relatively narrow (e.g., intrinsic motivation) to extremely broad (e.g., umbrella term for nonpecuniary motivations). Furthermore, we identify 91 different operationalizations, 72 of which have been used only once. Importantly, the prevailing definition and operationalization of tax morale show a concerning misalignment, often even within the same article: The most common definition is the intrinsic motivation to pay taxes, while the most common operationalization is a single question about the justifiability of cheating on taxes. We point out the need for reaching consensus about what tax morale actually is, and lay out initial steps for developing an operationalization that aligns with the definition. As a short-term recommendation, although not a long-term solution, we encourage researchers to be more specific regarding what they talk about, when they talk about tax morale.

NAIVE FREQUENTISTS, THRESHOLDS, AND REDUNDANT INFORMATION

David Walker-Jones

This paper presents a novel experiment on “threshold” and redundant information, common features of real-world communications. In our setting, Bayesian updating is typically as easy as averaging two integers. Yet, pervasive use of updating heuristics can result in large errors and the majority of subjects failing to update in the correct direction. The heuristics create a bias towards displayed numbers and systematic responses to redundant information that should be ignored by a Bayesian. Displayed numbers being far from the Bayesian posterior is thus highly predictive of updating mistakes and this explains threshold information’s ability to distort mean and median beliefs.

ATTITUDES TO AI USE IN ACADEMIA

Petra Filkukova

In this study, we explored attitudes and use of AI among students ($n = 74$) and teachers ($N = 72$) in higher education in Norway. There was no significant difference in the frequency of use of AI between students and teachers and for both groups, ChatGPT was the most frequently used AI system at the time of data collection. Both students and teachers reported high interest in AI yet little education regarding how to use AI in academic context. For both groups, we observed a large variety in the adoption of the new technology: whereas some participants used AI frequently, others have only tried it and otherwise did not use it. AI use consisted not only of knowledge summaries, proofreading and literature search, but included also creative tasks such as generation of ideas. Students were more positive than teachers regarding the quality of AI outputs, trusted it more and more frequently believed that AI contributes to increased time efficiency. At the same time, students also called more for regulation of AI use in academia because they were concerned that AI can be a shortcut to diploma. Neither students nor teachers were confident about recognizing AI generated texts, however, students were more optimistic than teachers regarding their ability to recognize AI generated images. There was no difference between students and teachers in their level of fear that AI can harm people and both groups considered it to be a real possibility. Both for students and teachers, we found that high AI use was associated with higher perceived quality of AI, seeing more advantages of AI than disadvantages and belief that AI increases efficiency in higher education.

EFFECTS OF SIMULATED ACUITY LOSS ON DATA EXTRACTION AND MEDICAL DECISION-MAKING WITH VISUALISATIONS

Wai Lam Leung

Data visualisation has been shown to support improved decision quality, especially for low-numeracy individuals. However, dependence on visual perception of information poses challenges for individuals with vision impairments. As the global prevalence of vision impairment rises, these individuals may not benefit from data visualisations, potentially exacerbating the difficulties they face. By simulating impaired vision, we investigated how acuity loss could impact the extraction of verbatim and gist knowledge, as described by Fuzzy Trace Theory, and its influence on sequential decision-making outcomes. This within-subjects study ($n = 60$) used Gaussian blur applied to data visualisations to simulate acuity loss at WHO-classified levels for mild, moderate, and severe vision impairments. The study also compared bar charts, pie charts, and icon arrays in communicating data, plus tested for interaction between chart type and blur condition. Key measures included accuracy for gist and verbatim knowledge extracted from visualisations and decision quality (treatment selection). Results showed that performance declined significantly with increasing blur, with the sharpest decline occurring between mild and moderate blur conditions. Icon arrays consistently outperformed other formats in knowledge accuracy and decision quality. Participants using icon arrays were 19% more likely to make correct treatment decisions than bar charts and 14% compared to pie charts regardless of vision conditions, as no interaction was found with simulation conditions.

IMPLICIT ATTITUDES TOWARD IMPERFECT PRODUCE: AN IAT STUDY ON THE ROLE OF IMPLIED MOTION IN AUTOMATIC ASSOCIATION

Chenyi Zhu

Consumers prefer visually perfect fruits and vegetables in shopping, even though imperfect produce, which is also edible, fresh, and nutritious, is often overlooked. This bias against imperfect produce contributes to food waste, undermining efforts toward sustainable consumption. Consumer psychology research shows that many consumer decisions are frequently shaped by unconscious, implicit attitudes rather than rational evaluation. Therefore, we examined the degree to which people automatically associate imperfect fresh produce with negative and unpleasant characteristics. To mitigate this bias and foster sustainable shopping behaviour, we investigate whether implied motion as a visual cue can impact implicit attitudes, aiming to encourage consumers to accept imperfect produce. We conducted a two-dimensional Implicit Association Test (IAT) with 128 participants in a 2 (Conditions: implied motion vs. static) × 2 (IAT combinations: perfect produce + positive vs. imperfect produce + positive) mixed-model experimental design. The IAT measured Good-Bad and Pleasant-Unpleasant implicit associations with imperfect fresh produce, followed by an explicit attitude questionnaire. Preliminary results show that participants responded significantly faster to congruent pairings (ugly = bad/unpleasant), indicating strong negative implicit biases. Further analysis will assess whether implied motion can reduce these biases and improve perceptions of ugly produce. This study advances the understanding of implicit attitudes in consumer decision-making related to imperfect fresh produce.

UNDERSTANDING SCAM SUSCEPTIBILITY: THE ROLE OF AFFECTIVE CONTENT IN PERSUASIVE MESSAGES

Claire Heard

Abstract Scams are a significant societal issue, with 3.2 million offences annually, costing approximately £6.8 billion. Despite this, research on factors influencing scam susceptibility remains incomplete. Previous studies have shown mixed results regarding the role of demographics and personality traits (e.g., age, risk-taking) in scam susceptibility. The impact of specific scam design elements on victimisation likelihood is also underexplored. Initial research has examined persuasive elements like scarcity cues and authority indicators (Wood et al., 2018), but their impact remains inconclusive. Instead, studies identify the role of risk and benefit perceptions in response likelihood. Building on theoretical research highlighting the role of affect in risk and benefit perceptions, and heuristic processing in decision-making, this study investigates the influence of affective content in scam messages on response

intentions. In an online experiment with 280 participants, we assigned them to receive either low or high affect messages. Participants rated their response intentions, message perceptions, and associated risks and benefits. Each participant was exposed to both positive (lottery scenario) and negative (bank fraud scenario) valence messages. Results indicate that high-affect messages increase response intentions, but only in the positive emotion scenario. These findings suggest that affect level in scam messages plays a critical role in influencing susceptibility, though impacts may vary depending on the message type. This underscores the need for further research into affect's influence on scam susceptibility and calls for investigations across diverse message types to gain a nuanced understanding of how people react to different types of messages.

BUY NOW, RETURN LATER? THE IMPACT OF INSTALLMENT PAYMENTS ON PRODUCT RETURNS

Dionysius Ang

'Buy Now, Pay Later' (BNPL) installment payments are increasingly popular in online retail. Prior research has examined the impact of BNPL installments on consumer spending, but not on returns. This research combines consumer-level transaction data and experiments to investigate how BNPL installments (i.e., Pay in 4) influence returns. They find that adoption of BNPL installments is associated with a reduction in product return rates. Further experiments show that paying in BNPL installments (vs. lump sum) affects mental budgets to lower returns.

GREEN NUDGES IN PRACTICE: A SYSTEMATIC LITERATURE REVIEW

Dóra Novák

Green nudging is a behavioral intervention strategy that encourages individuals to make sustainable choices without restricting their freedom. It applies behavioral science principles to influence decision-making in environmentally friendly ways. This systematic literature review examines the theoretical foundations, applications, and effectiveness of green nudging interventions by reviewing peer-reviewed studies published between 2014 and 2024 across psychology, business, environmental science, and policy research. Findings indicate that green nudging is widely used in energy conservation, waste management, sustainable consumption, climate policy, sustainable food, tourism, and fashion. Key techniques include default settings, social norms, informational framing, and digital nudging, with AI-driven personalization becoming increasingly prevalent. While nudging strategies show promise in influencing pro-environmental behaviors, challenges persist in terms of long-term effectiveness, ethical concerns, and cultural adaptability. This review consolidates current research to provide insights for policymakers and practitioners aiming to enhance sustainability efforts. Future studies should explore the integration of green nudging with policy measures, digital advancements, and long-term behavioral impact assessment to optimize effectiveness.

MINDFUL CONSUMPTION AND BEHAVIORAL INSIGHTS: SEGMENTING CONSUMERS TO CLOSE THE GREEN GAP IN FASHION

Gloria Preece

The fast fashion industry has exacerbated environmental degradation and social inequities, creating a pressing need for sustainable consumption practices. This research explores the gap between consumer intentions and behaviors, often termed the “green gap,” within the context of the U.S. fashion industry. Building on Thaler’s nudging theory, which subtly influences decision-making without restricting choice, the study investigates how targeted nudging interventions can promote sustainable consumption, particularly second-hand fashion. By employing psychographic segmentation, the research identifies consumer groups based on environmental concern, attitudes toward fashion consumption, and perceptions of second-hand items. Using a comprehensive survey and cluster analysis, the findings provide actionable insights for policymakers, retailers, and marketers. The study’s practical contributions include tailored marketing strategies, educational campaigns, and interventions to shift consumer perceptions of second-hand fashion, aiming to mainstream sustainable consumption practices. Ultimately, this research advances behavioral economics applications in sustainability, bridging the gap between intention and action to foster environmental and economic resilience.

HUE MATTERS: HOW COLOR SHAPES WOMEN’S PERCEPTIONS OF STEM ADVERTISING

Merav Weiss-Sidi

Women remain underrepresented in STEM, impacting diversity and innovation. This study examines how color in advertising influences women’s engagement with STEM-related ads, using a mixed-methods approach to assess emotional responses and gendered perceptions of color. A pretest ($n=151$) evaluated colors, fonts, and slogans, measuring emotional responses via Affectiva software. Mann-Whitney U tests revealed gender-based differences, e.g., orange increased anger in females, and red was perceived as less joyful. A main experiment ($n=282$) used a 3 (ad color: gray, light purple, dark blue) $\times$ 2 (gender) design, where participants rated implicit attention, explicit attention, purchase intention, and ad attitudes. Qualitative feedback was analyzed with MAXQDA. A three-way interaction model (PROCESS, Model 3) found a significant effect of color, implicit attention, and gender on purchase intention, $F(9,272)=7.32$, $p<.001$, $R^2=.195$. Light purple increased implicit attention and purchase intention among women, while gray and dark blue had no effect. A parallel model for attitudes ($F(9,272)=9.32$, $p<.001$, $R^2=.236$) showed similar trends. Women preferred vibrant designs, while men favored simplicity. Light purple had mixed reactions, gray was seen as uninspiring, and dark blue as professional. Findings highlight color’s role in inclusive STEM advertising, suggesting gender-responsive color choices can foster engagement. Future research should explore the long-term impact of color-based ads on shifting norms and sustaining women’s interest in STEM careers.

DOES A DIGITAL TWIN IMPLY A WIN-WIN? EXPLORING CONSUMER RESPONSES TO PHYSICAL LUXURY PRODUCTS WITH NFT-LINKED DIGITAL TWINS

Raz Henkin

With the recent rise of the metaverse, blockchain, and non-fungible token (NFT) technologies, luxury brands have embraced these concepts to expand their portfolios. To boost NFT sales, marketers often link them to specific physical products, creating DTs (digital twins). While this strategy may enhance perceptions of NFTs, its impact on consumer responses to the associated physical products remains unclear. Across eight experiments (including one pre-registered), we explore how merely mentioning NFT versions of luxury products influences consumer responses to their physical counterparts. We find that the availability of an NFT version negatively influences consumer responses to the associated physical product, an effect mediated by reduced perceived luxuriousness. This effect is particularly pronounced in the luxury domain, most relevant when the NFT is associated with a specific product (DT) and is not inherently applicable to all new technologies.

GREEN FLYING OR GREENWASHING? EFFECTS OF EMISSIONS LABELS ON CONSUMER CHOICE OF LOWER-EMISSION FLIGHTS

Shane Timmons

Air travel generates disproportionate greenhouse gas emissions, with no viable supply-side mitigation options. Demand-side measures, such as emissions information at the point-of-sale, are thus gaining interest. In a pre-registered experiment with a nationally representative sample ($N = 1,000$), we tested whether current emissions labelling systems shift consumers towards lower-emission flights. Participants were randomised to see either (i) no emissions information, (ii) absolute emissions values, (iii) absolute values with a relative emissions label or (iv) absolute values with a relative label and a contextual marker on the lowest-emitting flight (the number of trees needed to absorb equivalent CO₂e reduction). In the first task, participants selected hypothetical holidays from an online booking site. The study's focus on environmental impact was concealed. Absolute emissions values had no effect, but relative and 'trees' labels modestly increased low-emission flights choices (4-6pp). In the second task, participants were instructed and incentivised to select the lowest-emission flight. Absolute emissions improved identification by over 40pp, with no further benefit of additional labels. Exploratory analyses showed that the relative labels caused some participants to choose higher-emitting flights (e.g., long-haul flights with large relative reductions). A final task measured comprehension of labels and showed widespread confusion: two-in-three misinterpreted the reference point for relative labels and few correctly identified the factors that are considered in label calculations. Overall, emissions labels, as currently implemented, are unlikely to meaningfully reduce aviation emissions or to effectively inform consumers on the impact of their travel choices.

RETHINKING KNOWLEDGE'S IMPACT ON THE ILLUSORY TRUTH EFFECT

Anat Shechter

The illusory truth effect (ITE) denotes a psychological phenomenon characterized by the enhanced acceptance of information following its repeated presentation. One of the staple assumptions in the early literature about the ITE was that the ITE happens when information is ambiguous about its truth status. This assumption was then brought to the forefront and empirically tested by Fazio and colleagues in 2015 who observed a consistent ITE pattern across both unknown and known items. Moreover, using Multinomial Processing Tree models, Fazio et al. found that a model that assumes that fluency processes take precedence (i.e., a fluency-conditional model) when judging the truth value of statements better explained that behavioral data than a model that assumes that knowledge retrieval processes take precedence (i.e., a knowledge-conditional model). The present research challenges the conclusions of Fazio et al. by proposing several refinements to the original models proposed by Fazio et al. (2015) and subsequently subjecting these modified models to rigorous evaluation across multiple available datasets. Subsequently, given that both process models demonstrated comparable explanatory efficacy with respect to existing empirical data, we proceeded to embark on the collection of new empirical data aimed at furnishing conditions conducive to adjudicating between these competing models. In two studies (N=224) we found that under conditions of low ambiguity, i.e., when knowledge is easily accessible, the knowledge-conditional model triumphs the fluency-conditional model. These results provide evidence in support of the notion that knowledge retrieval processes rather than more heuristic, fluency-based processes take priority when they compete for control over overt responses.

COMPARING APPLES AND ORANGES: MEASUREMENT INVARIANCE ACROSS EXPERIMENTAL TREATMENTS

Dan Schley

We document a tacit assumption in experimentation that is rarely tested and frequently violated. Measurement invariance is the assumption that a given measured variable means the same thing to one group as to another (e.g., Likert ratings between different cultures). For example, we show that happiness ratings from experiential consumption correspond to different latent "happiness" than ratings from material consumption (i.e., between conditions, responses correspond to different constructs rather than different levels of the same construct), invalidating experimental conclusions. We provide a statistical test for identifying and correcting for these invariance violations.

AN EXPERIMENT TO TEST A NEW THEORY OF OPINION REVISION IN GROUPS

Fergus Bolger

Various group-judgment protocols have been proposed to reap benefits from groups' increased knowledge, while minimizing biases. These protocols are being applied to important decision problems where hard data is scarce, but validation studies have been few - with weak or contradictory findings - possibly because features of tasks and experts have not been defined or controlled. Further, theoretical consideration of how judgments might improve in a group setting is rare. Where experts first make a judgment independently, then receive feedback from other experts and potentially revise their judgment (e.g., the Delphi technique) we propose that the degree of revision is dependent on individuals' confidence in their initial judgment and the strength of the 'pull' away from the initial judgment by the feedback. To test this 'Pull Theory' - and hypotheses about the relative pull of feedback - 135 online participants were trained by making 60 forecasts of GDP growth using 3 leading indicators of growth - outcome feedback was given after each forecast. Individual participant's judgment models and true levels of expertise were determined. Next, we asked participants to make forecasts individually and express confidence in them, after which they received either no - or one of 3 types of - feedback from 4 other forecasters: the median of the forecasts; each judge's confidence in their forecast; or a brief rationale for forecasts. Finally, the participants were invited to revise their initial forecasts and restate their confidence. To manipulate expertise in the final test phase, half the 16 stimulus trials were from the same environment as the training set, and half were from an environment with different relationships between variables. Results will be discussed.

MATRIX COMPLETION FOR SURVEY LENGTH REDUCTION

Gianpietro Sgaramella

Survey data often suffer from missing responses due to respondent fatigue, survey length, and selective nonresponse, leading to biased estimates and reduced statistical power. This study explores the use of matrix completion methods to impute missing data in behavioral and attitudinal surveys. Specifically, we investigate (i) whether matrix completion can accurately and unbiasedly recover missing responses, achieving lower RMSE than state-of-the-art imputation techniques, and (ii) the maximum proportion of missingness that can be randomly induced while still ensuring accurate reconstruction of the full matrix. Understanding this threshold would allow for a dynamic survey design where each participant answers only a random subset of questions, significantly reducing respondent burden without compromising data quality. We test various matrix completion algorithms under different levels of missingness and assess their performance in reconstructing survey responses. The findings could inform the design of adaptive, shorter surveys, enhancing data collection efficiency while maintaining high-quality insights for behavioral and policy research. This could be complemented to survey experiments and the mixture of different kind of surveys to reduce the study burden for participants while ensuring accurate hypothesis testing in many different kind of social sciences settings.

QUANTIFYING THE ECOLOGICAL CONTEXT OF AN EVENT BY RELATIVE IMPORTANCE

Joakim Sundh

Theories on decision-making typically fail to take the context of prospective events into account, primarily because context, per definition, is difficult to operationalize. One aspect of context that can be operationalized, however, is the relative likelihood of an event in comparison to other events that lead to the same outcome. We will call this the relative importance of the event. For any given set of possible outcomes, we can define an event E as the set of outcomes with which we are particularly concerned. We will call this the event of interest. In practice, the relative importance of an event A represents the likelihood that the event of interest E will come about due to event A rather than for any other reason. This can be formalized using the set-theoretic foundations of probability theory, and defined as the conditional probability of the event A given E. Of course, we will often not know the exact probability of either A or E, but the concept of relative importance can be useful also when probabilities are uncertain. For example, if we know the approximate magnitudes of the probabilities $P(A)$ and $P(E)$ we will also know the approximate relative importance of A. Obviously, the relative importance of an event as here defined is not the only relevant aspect of its context, neither is it a one-step solution for associated decisions. Nevertheless, it is typically indicative of how the event should be prioritized relative to other prospective events, which is a recurring problem in real-world decision making. Thus, the concept of relative importance can be used both to enrich current theories on decision making and as a real-world decision aid.

LOSS AVERSION – THREE WAYS OF MEASUREMENT AND THE ROLE OF INTOLERANCE OF UNCERTAINTY AND NEUROTICISM

Jozef Bavolar

Loss aversion describes the tendency to weigh losses more than gains and has been measured by artificial tasks and self-reported measures. The first aim of this study was to compare the results of two self-reported and one experimental measure of loss aversion to see their similarities and differences. Secondly, as the background of intolerance of uncertainty and loss aversion indicates a certain overlap, the second aim of this research was to investigate the effect of intolerance of uncertainty on loss aversion with the potential moderation effect of neuroticism. Four self-reported methods were used for intolerance of uncertainty, neuroticism, and loss aversion, when loss aversion was also measured by the lottery-choice task asking participants to choose between gains and losses of different values in two sets (Gächter, Johnson, and Herrmann, 2022). The sample included 127 participants aged 17-62 years (mean age 34,0). The methods for loss aversion were weakly interrelated in case of self-reported measures, but not with the score in experimental tasks. Similarly, intolerance of uncertainty and neuroticism were positively interrelated and associated mainly with the self-reported measures of loss aversion, not with the score in the lottery-choice task. The moderation effect of neuroticism was investigated separately for three indicators of loss aversion, but it has not been found in any case. The study shows that different instruments

overlap only weakly and taking into account their differences is crucial for interpreting the obtained results. In addition, while the intolerance of uncertainty and neuroticism are related to self-reported loss aversion, neuroticism does not have a position of moderator in the effect of intolerance of uncertainty on loss aversion.

PROBABILITY, CONFIRMATION, AND THE BASE-RATE FALLACY

Vincenzo Crupi

Base-rate neglect is the tendency to ignore or underweight base rates when updating one's credence in a certain hypothesis in light of new evidence. It has been observed experimentally in a variety of domains, ranging from social psychology to law and medicine, since the 1970s. However, despite extensive discussion, neither the normative question: "Is the neglect of base rates a real fallacy?", nor the descriptive question: "Why are base rates (mistakenly) neglected?" have been settled. In this paper, we will focus on the latter. In particular, we will present in some detail two possible determinants of this phenomenon: representativeness, as suggested by Kahneman and Tversky (1973), and linear integration, as suggested by Juslin, Nilsson, and Winman (2009). We will also put forward an alternative proposal, according to which humans' appreciation of confirmation relations would account for the base-rate fallacy, much as it can for the conjunction fallacy (as shown by Tentori, Crupi, and Russo 2013). Moreover, we will test this explanatory hypothesis against data collected by Pighin and Tentori (2021) and we will discuss the results of this analysis as well as its strengths and limitations, pointing to open issues for future research. Our results provide support to a confirmation-theoretic view of reasoning under uncertainty, including well-known tendencies to biased judgment of probability.

Heuristics & Biases

Aula 2 SF

ARE PEOPLE AWARE OF THEIR MYSIDE BIAS? CONFLICT DETECTION IN EVALUATING INFORMAL ARGUMENTS

Annika M. Svedholm-Häkkinen

Evaluating informal arguments is the central form of reasoning in which people routinely engage. The main challenge for evaluating arguments fairly is myside bias: the tendency to base judgments on prior beliefs about the claims involved rather than on more objective, generally accepted criteria of sound arguments. This study asks whether people are aware of their own bias. In the context of formal reasoning, it has been found that when beliefs and logic conflict, and when people base responses on beliefs rather than on logic, they have implicit awareness of their errors. This finding, which is known as the "conflict detection effect" is theoretically meaningful. It has been interpreted as evidence that in addition to belief-based intuitions, people have reason-based intuitions. These reason-based intuitions are thought

to reflect knowledge learned to the point of automaticity. The present experiment (N = 122) used self-reported response confidence to measure the conflict detection effect when people evaluated informal arguments on societal topics in a way that reflects myside bias. Responses were compared between conditions in which these responses contrasted or aligned with objective criteria of argument soundness. Results showed that when there was conflict, confidence was considerably lower than in the absence of conflict. The results are analogous to those found on formal reasoning tasks. These results are among the first to report a conflict detection effect on an informal reasoning task. The findings indicate that even though people show myside bias, they simultaneously have implicit knowledge about argument soundness. The unconfidence experienced reveals that people know when they are being biased.

IS COGNITIVE REFLECTION REALLY REFLECTIVE?

Brian A. Polin

Reflectivity is a tendency to override instinctive responses. Cognitive reflection tests (CRT) are intended to measure an individual's reflectivity by presenting a series of questions with seemingly obvious, but incorrect answers called lures. In an online survey with nearly 1000 student participants, we tracked performance on the CRT-2 and measured several aspects of response behavior, including initial response time, response changes and deliberation before the submission of a final answer. The notion of cognitive reflection suggests that correct answers should be associated with longer response times, and reconsideration of initial responses. Our findings were mixed and nuanced. Correct responses for some CRT-2 questions correlate significantly with longer times, while correct answer for the remaining questions correlate significantly with shorter response times. These findings highlight the complexity of the concept of reflectivity and indicate a need for its further clarification.

HYPOTHETICAL BIAS IN PATIENT-REGARDING PREFERENCES: COMPARING FULLY INCENTIVIZED AND CONVENTIONAL STATED PREFERENCE EXPERIMENTS

Ge Ge

Stated preference studies have faced scrutiny for the potential presence of hypothetical bias, a systematic divergence between valuations elicited under hypothetical and incentive-compatible settings. Despite efforts to mitigate this bias, its origins and mechanisms remain underexplored. This study investigates hypothetical bias in the context of patient-regarding preferences through two laboratory experiments involving medical students. Specifically, we analyze whether valuation of own profits and patients' benefits (measured as health outcomes and consumption opportunities) differs between incentivized and hypothetical settings. We also explore how hypothetical bias impacts degree of randomness in decision-making process. The experiments included a fully incentivized experiment with real monetary consequences and a hypothetical discrete choice experiment. Scaled multinomial logit models were used to estimate preference weights and randomness in decisions across the two settings, isolating the impact of hypothetical bias on valuation and consistency. As

expected, participants exhibited greater generosity towards patients in the hypothetical setting. However, relative valuations of patient health and consumption opportunities remained consistent across conditions. Notably, there was no significant difference in decision randomness, suggesting similar cognitive engagement in both settings. These findings provide new insights into the mechanisms of hypothetical bias and have important implications for designing preference elicitation studies in health economics. Future research could replicate these results across healthcare contexts and consider preregistration to enhance robustness and generalizability.

DIVERSITY HEURISTICS IN DECISION-MAKING: HOW INDIVIDUALS OVERWEIGHT CATEGORICAL REPRESENTATION AND UNDERWEIGHT DISTRIBUTION

Johanna Woitzel

Decision-makers in organizations and institutions often rely on intuitive judgments when assessing diversity, yet these judgments may systematically deviate from formal diversity metrics. Across seven preregistered studies, this research examines the cognitive processes underlying diversity evaluations, focusing on how individuals heuristically prioritize richness (i.e., the number of represented groups) over distribution (i.e., the evenness among groups). Study 1 tests whether common diversity indices predict lay perceptions, revealing that individuals use richness as a heuristic above and beyond distribution cues. Studies 2a-c employ experimental manipulations to demonstrate the robustness of this heuristic across non-social (geometric shapes), social-esque (alien species), and social (nationalities) stimuli. Study 3 extends these findings to judgments of sampled distributions, replicating the richness-driven perceptions of diversity. Finally, Studies 4a-b examine real-world implications of this heuristic in hiring decisions. Study 4a finds that participants in hiring managers' positions seeking to increase diversity tend to place applicants from underrepresented groups into teams low in richness but high in distribution evenness. Conversely, Study 4b shows that applicants from underrepresented groups prefer teams high in richness but low in distribution evenness, suggesting a divergence in diversity-related decision-making. Together, these findings highlight a systematic heuristic in diversity judgments, where individuals overweight categorical representation at the expense of distribution evenness, shaping both organizational decisions and individual preferences in ways that may have unintended consequences.

HARD CASES AND TRAGIC CHOICES IN CLIMATE ADJUDICATION

Paula Andrea Nieto Hernandez

Climate action is increasingly taking place before courts. This phenomenon has primarily been studied from the perspective of legal mobilization. While this line of research is valuable for socio-legal studies, the philosophical and normative question of how judges should decide climate cases remains unexplored. This paper is situated in this gap. Fundamental to theories of adjudication—theories about how should judges decide cases—is the inquiry into

what constitutes hard cases and why these require distinct judicial responses. In climate adjudication, I argue judges must first determine whether cases are hard to adjudicate and why before deciding which theory, doctrines, or norms to apply. For this reason, this paper addresses the question: Are climate cases “hard cases” for judicial adjudication, and if so, why? This paper defends that climate cases are hard cases because they involve normative uncertainties, where judges face partially defensible but incompatible options or courses of action. Moreover, some of these cases may be tragic because even assuming the judge identifies the right decision valuable goods are inevitably lost. To defend these claims, this paper argues that traditional definitions of hard cases fail to capture the normative dimensions inherent in the process of legal reasoning. I propose a redefinition of hard cases in the context of climate adjudication, framing them as a function of normative uncertainties. Additionally, I explored instances where climate cases become “tragic” due to value incommensurability and pluralism present in the available authoritative premises. These findings incentivize more systemic changes occurring ‘off court’ and highlight the limits of ‘one-size-fits-all’ theories in adjudicating climate cases.

September 4th

DAY OVERVIEW

Thursday 4 sept					
9: 00 - 10:00 Symposia					
Communicating Climate Change Risks and Uncertainties: Interdisciplinary Perspectives San Micheletto Convegna	Language and Decision-Making: Insights from behavioral economics, computational linguistics, and artificial intelligence San Micheletto Affresco	Contrasting approaches to the adoption of AI advice in decision-making teams. Guinigi SF	Advances in Assessment of Human Forecasting Aula 1 SF	Bayesian Inference and the Cognitive Revolution in Economics San Francesco Church	Judgment & Hybrid Decision-Making: Human-AI delegation, oversight, and punishment Aula 2 SF
10:00 - 11:00 Symposia					
Impact driven research for climate adaptation San Micheletto Convegna	Crowdsourcing Interventions in Behavioral Science Megastudies: Addressing Unethical Behavior and Redistributive Preferences San Micheletto Affresco	Large language models in judgment and decision-making research Guinigi SF	Sampling accounts of judgment and decision-making: The broad relevance of cognitive-ecological theories Aula 1 SF	Decision Science in the Wild San Francesco Church	
11:00 - 11:30 Coffee Break San Francesco Complex					
11:30 - 12:50 Keynote Speech Prof. M. Toplak York University San Francesco Church					
12:50 Farewell and concluding remarks San Francesco Church					

N. symposium	Symposium	Author	Title
Symposium 1	Advances in Assessment of Human Forecasting	Mark Hmmlstein	Developing a Test of Forecasting Proficiency
		Sophie Ma Zhu	The Psychometric Properties of Probability and Quantile Forecasts
		Jessica Heimer	The Utility of Intersubjective Methods in Forecasting
		Fabio Setti	Measuring Forecasting Proficiency: An Item Response Theory Approach
Symposium 2	Bayesian Inference and the Cognitive Revolution in Economics	Jilong Wu	Is prospect theory really a theory of choice?
		Ferdinand Vleider	Minding the Gap: On the origins of probability weighting, and the description-experience gap
		Jan Krause	Numerical magnitude and the Allais paradoxes
		Oliver L Heridon	Cognitive foundations of ambiguity attitudes
Symposium 3	Communicating Climate Change Risks and Uncertainties: Interdisciplinary Perspectives	Elke Weber	The Behavioral Foundations of Climate Risk Communication
		Antonia Krefeld-Schwalb	Climate Risk Labels in the Netherlands
		Cees Oerlemans	From Flood Risk to Water Labels: How Modeling Choices Impact Outcomes
		Tatiana Filatova	Assessing Individual Climate Risk Expectations over Long Time Horizons
Symposium 4	Contrasting approaches to the adoption of AI advice in decision-making teams.	Joshua Tenn	Using Performance Feedback to Facilitate Appropriate Adoption of AI Advice
		Maximilian Eck	Perception of decision makers who use an algorithmic decision support system
		Eoin Oremen	AI as a moderator of decision-makers' information search
		Juliane E. Kämmer	Exploiting the potential of a large language model for medical diagnostic decision-making
Symposium 5	Crowdsourcing Interventions in Behavioral Science Megastudies: Addressing Unethical Behavior and Redistributive Preferences	Christian T. Elbæk	A megastudy investigating interventions to increase support for economic redistribution in the United States
		Karolina Śoigala	Megastudy on workplace deviance
		Janis H. Zickfeld	Effectiveness of ex ante honesty oaths in reducing dishonesty depends on content
		Lukasz Walasek	Incommensurability and the Structure of Everyday Choices
Symposium 6	Decision Science in the Wild	Shahar Hechlinger	How People Make the Most Important Decisions in Their Lives
		Thorsten Pachur	Beyond Lotteries: An Affect-Based Computational Framework For Modeling Risky Choices with Nonmonetary Outcomes
		Naoyuki Okamoto	Blaming Luck, Claiming Skill: Self-Attribution Bias in Error Assignment is Caused by Distorted Perception of Ability
		Ben R. Newell	Data Needs: Climate Risk or Climate Uncertainty? Decision-useful information for individuals and organisations
Symposium 7	Impact driven research for climate adaptation	Sara Constantino	Improving the Representation of Human Behavior in Models of Coupled Human-Environment Systems Through Interdisciplinary Research
		Jonas Ludwig	Heuristics and Bias Explain Climate Policy Misperceptions
		Terence Daniel Dores Cruz	Human Bias in Oversight Increases Algorithmic Bias
		Margarita Leib	Punishment and Responsibility for Selfish and Prosocial Behavior After AI Advice
Symposium 8	Judgment & Hybrid Decision-Making: Human-AI delegation, oversight, and punishment	Neele Engelmann	The Moral Weight of Words: How Framing and Transparency Influence Cheating in Algorithmic Delegation
		Valerio Capraro	Introduction to the Symposium: An overview of research on the impacts of language on economic decisions
		Cristina Bicchieri	How language framing shapes the perception of social norms
		Ingela Alger	Do the right thing (or not) in a lemons-like situation: on the role of social preferences and Kantian moral concerns
Symposium 10	Large language models in judgment and decision-making research	Roberto Di Paolo	Economics and language: Estimating the impact of language using sentiment analysis
		Zak Hussain	Large language models accurately predict world risk
		Dirk U. Wulff	Using LLMs to predict the relatedness of measures in judgment and decision-making research
		Anna Thoma	Mapping the landscape of behavioral reinforcement learning research
Symposium 11	Sampling accounts of judgment and decision-making: The broad relevance of cognitive-ecological theories	Anne-Marie Nussberger	On the Effectiveness and Fragility of Artificial Apologies
		Zachary Niese	It's good and it's bad: Decision-framing effects via sampling processes
		Linda McCaughey	Adaptivity in the face of cost-benefit trade-offs in sampling-based decisions
		Thomas Karl Alfred Woiczek	Learning norms from repeated observations: Behavior of the majority or majority of behaviors?
		Mandy Hütter	The perks of introducing sampling to basic evaluative learning paradigms

SEPTEMBER 4TH, H 9:00

Communicating Climate Change Risks and Uncertainties: Interdisciplinary Perspectives

San Micheletto Convegni

Climate change is increasing the frequency and severity of extreme weather events such as floods and wildfires, resulting in large financial and other costs to individuals and society. Despite growing risks and costs facing communities globally, adoption of effective risk mitigation measures by households and governments is lacking.

At the household-level, this may be due to financial constraints but also limited knowledge, understanding, and concern about future climate risks and lack of perceived efficacy to mitigate those risks. Behavioral science, with its long and rich history of research on the intricacies of human decision-making under risk and uncertainty, is well-poised to inform effective climate risk communication strategies. Research in behavioral science has shown that how information is framed (e.g. as losses or gains), the reference point against which outcomes are compared, the behavioral domain (e.g. financial or health), or how far in the future risks are likely to occur all impact risk preferences.

This research has also shown that individuals have difficulty understanding probabilities and come to different conclusions depending on whether they learn about them through experience or description or whether they are communicated by figures or numbers, among other factors. While the risks in these studies are often static and immediate, the risks posed by climate change bring additional challenges: they are delayed in time, often small with large consequences, involve uncertainty and ambiguity, and are dynamic.

The presentations in this session bridge insights from behavioral science with different disciplinary perspectives to inform climate risk assessments, communications, and perceptions with the aim of increasing individual and collective climate action.

TALKS

Elke Weber

The Behavioral Foundations of Climate Risk Communication

Antonia Krefeld-Schwalb

Climate Risk Labels in the Netherlands

Cees Oerlemans

From Flood Risk to Water Labels: How Modeling Choices Impact Outcomes

Tatiana Filatova

Assessing Individual Climate Risk Expectations over Long Time Horizons

Session Organizer: Sara Constantino; Session Discussant: Ben R. Newell

Language and Decision-Making: Insights from behavioral economics, computational linguistics, and artificial intelligence

San Micheletto Affresco

Over the past two decades, a growing body of research has shown that people's decisions are significantly influenced by the linguistic framing of available actions. This evidence raises crucial questions: How does language shape decision-making? Can the impact of language on economic decisions be quantified and integrated into a utility function?

The symposium will bring together leading experts to share the latest insights on these questions. We will explore how linguistic descriptions affect norm formation, emotional responses, and ultimately, decision-making processes. Additionally, we will discuss recent efforts to formalize these effects through novel utility functions that incorporate language alongside traditional outcome-based measures.

The symposium will also explore the role of artificial intelligence, specifically large language models, on the shift towards language-based utility functions. In particular, sentiment analysis using large language models is emerging as a useful technique for estimating the sentiment of text, providing more precise explanations of human economic decisions than traditional outcome-based utility functions.

Our aim is to foster a multidisciplinary conversation that has the potential to play a pivotal role in future research at the intersection of behavioral economics, computational linguistics, and artificial intelligence.

TALKS

Valerio Capraro

Introduction to the Symposium: An overview of research on the impacts of language on economic decisions

Cristina Bicchieri

How language framing shapes the perception of social norms

Ingela Alger

Do the right thing (or not) in a lemons-like situation: on the role of social preferences and Kantian moral concerns

Roberto Di Paolo

Economics and language: Estimating the impact of language using sentiment analysis

Session Organizers: Valerio Capraro, Roberto Di Paolo, Veronica Pizziol

Contrasting approaches to the adoption of AI advice in decision-making teams

Guinigi SF

AI is having an increasingly influential contribution to human decision-making. This includes consequential decisions, such as medical diagnoses. AI is educating and advising decision-makers and guiding our thinking. Perceptions of AI and each other influence our adoption of advice. Our response is also dependent on the nature and delivery of advice. We discuss new findings from research into human-AI interaction for decision-making in this symposium.

Joshua Tenn presents results from two studies demonstrating the role of performance feedback on AI advice adoption, and how misconceptions of performance affect human-AI collaboration. This research suggests possible interventions to improve the understanding of AI advice and ensure AI advice is used responsibly.

Maximillian Eck discusses findings of how changes in perceptions of decision-makers depending on their response to AI advice. We view each other differently depending on whether we reject, adopt, or have a balanced response to advice. This research highlights particular human-centric considerations for the future of human-AI teamwork.

Eoin Cremen presents results from experiments on the influence of moderating AI advice on decision strategies. The decision-makers modified their information search when AI encouraged the use of different strategies. The work provides novel evidence for AI as a moderator of decision processes.

Julianne Kämmer presents new results from a new study of educational discourse between diagnosticians and ChatGPT/human advisors. The research examines how LLMs perform as an interactive diagnostic aide in comparison to humans in this role. This will provide insights into the benefits and risks of AI as a diagnostic support tool.

TALKS

Joshua Tenn

Using Performance Feedback to Facilitate Appropriate Adoption of AI Advice

Maximilian Eck

Perception of decision makers who use an algorithmic decision support system

Eoin Cremen

AI as a moderator of decision-makers' information search

Juliane E. Kämmer

Exploring the potential of a large language model for medical diagnostic decision-making

Advances in Assessment of Human Forecasting

Aula 1 SF

Results from several large scale forecasting tournaments have consistently indicated that some forecasters are more reliably accurate than others. However, the process of identifying these top performers remains a challenging and resource intensive process. In this symposium, we discuss several new insights involving the psychometric measurement and psychological theory of judgmental forecasting. These results emerge from a series of new experiments specifically designed to help us understand what makes a good forecaster and how forecasting skill can be measured. We present a new test of forecasting proficiency, which can be administered within one hour, and is more predictive of accuracy than results collected from these months-long forecasting tournaments. We then dig into the details of how and why different information can be used to assess forecasters. We explore how different elicitation formats of forecasters' uncertainty provide different information about their forecasting skill. We compare a variety of standalone measures of cognitive ability, and discuss which reasoning skills are more closely related to forecasting skill than others. We describe how metapredictions, or predictions about the forecasts made by others, are a uniquely informative tool that can be used for several purposes, such as to assess forecasters in real-time, identify elite crowds of forecasts to aggregate over, and even help individuals improve their own forecasts. Finally, we propose cutting edge psychometric models of forecasting proficiency, which provide easily interpretable measures of latent forecasting skill as well as information about which types of items are more diagnostic about forecasting ability than others.

TALKS

Mark Himmelstein

Developing a Test of Forecasting Proficiency

Sophie Ma Zhu

The Psychometric Properties of Probability and Quantile Forecasts

Jessica Helmer

The Utility of Intersubjective Methods in Forecasting

Fabio Setti

Measuring Forecasting Proficiency: An Item Response Theory Approach

Bayesian Inference and the Cognitive Revolution in Economics

San Francisco Church

For nearly a century, psychologists and economists have built models of decision-making based on the assumption that choice behaviour reveals preferences. The last five years, however, have seen a radical departure from this way of thinking about behaviour in economics. A recent groundswell of papers has started modelling and testing the same type of behaviour as a result of cognitive frictions, and (often optimal) ways in which the mind deals with such frictions. The decision process is thereby generally described as an inference process: given noisy signals about choice primitives, how can the mind optimally leverage information learned from the choice environment to make the best possible inferences about the choice primitives triggering the signals? The departure from standard assumptions in economics is radical: behaviour does not necessarily reveal preferences, but may purely be an expression of cognitive noise. It is thus important to model decision processes, which may well be identical but applied differently across even superficially different contexts, and which are typically derived from and disciplined by their grounding in neuroscientific insights into the inner workings of the brain. This promises to narrow or even close the gap with process models that have long been used in psychology, opening exciting opportunities for testing families of process models against each other. In this symposium, we will revisit the literature on decision-making under risk under the lens of noisy cognition. Across four different papers, we will provide some examples of how the new paradigm can inform our approach to the investigation of decision-making under risk and uncertainty.

TALKS

Jilong Wu

Is prospect theory really a theory of choice?

Ferdinand Vieider

Minding the Gap: On the origins of probability weighting, and the description-experience gap

Jan Krause

Numerical magnitude and the Allais paradoxes

Olivier L'Haridon

Cognitive foundations of ambiguity attitudes

Judgment & Hybrid Decision-Making: Human-AI delegation, oversight, and punishment

Aula 2 SF

Artificial intelligence (AI) has radically changed the decisions that humans make and experience. Understanding human judgement and decision-making when faced with hybrid decision involving AI is therefore crucial. This symposium explores the dynamics of oversight, delegation, and accountability in hybrid decisions through three presentations and a discussion. First, Terence Dores Cruz examines how human oversight interacts with algorithmic bias, revealing that incorporating humans in the loop can exacerbate errors, with political biases influencing outcomes. This underscores the limitations of relying on human intervention to mitigate algorithmic bias. Second, Neele Engelmann examines the role of framing and transparency in ethical AI deployment. Findings indicate that moral framing—explicitly linking user actions to ethical implications—effectively reduces dishonesty, whereas transparency alone fails to deter unethical decisions in delegation. Third, Margarita Leib examines punishment and responsibility in hybrid decisions, focusing on how evaluators assign blame and mete out punishment for selfish behavior following AI advice. Results demonstrate that selfish behavior is punished more leniently when it aligns with AI’s advice, yet evaluators perceive decision-makers as less responsible when AI, rather than humans, provide guidance. Finally, Nils Köbis leads a discussion on the interplay of oversight, delegation, and punishment in hybrid decision-making to provide a research agenda for judgement and decision research on human-AI interactions. Taken together, this symposium aims to highlight critical challenges in human-AI interactions and provide insights that can help behavioral science to pave the way for responsible AI governance and ethical hybrid decision-making.

TALKS

Terence Daniel Dores Cruz

Human Bias in Oversight Increases Algorithmic Bias

Margarita Leib

Punishment and Responsibility for Selfish and Prosocial Behavior After AI Advice

Neele Engelmann

The Moral Weight of Words: How Framing and Transparency Influence Cheating in Algorithmic Delegation

Session Organizer: Terence Daniel Dores Cruz; Session Discussant: Nils Köbis

SEPTEMBER 4TH, H 10:00

Impact driven research for climate adaptation

San Michele Convegni

Impact-driven judgment and decision-making research can facilitate addressing the consequences of accelerating climate change and contribute to decelerating it. Yet, impact-driven research has a different timeline, risk, and costs than traditional academic research projects and thus requires additional capacity, resources, and skills. Current incentive schemes in academic research discourage involvement in impact-driven research despite the associated scientific and societal benefits.

This symposium aims to provide directions for an impact-driven climate research agenda. We discuss data needs, the particular contribution of the cognitive sciences, the importance of interdisciplinary research, and provide guidance on how to start impact-driven research.

Ben Newell (UNSW Sydney) will discuss the importance of generating data useful for application. As an example, he studies communicating the large uncertainty of climate model predictions, one of the greatest challenges in climate research. Sara Constantino (Stanford University) will emphasize the crucial role of interdisciplinary research in understanding complex human-environment systems. Jonas Ludwig highlights the importance of using cognitive science in interdisciplinary collaborations (Technische Universität Berlin). He will present research from four countries (Germany, France, UK, U.S.) illustrating how citizens' cognitive biases and heuristics influence their understanding of climate change policies. As the discussant of this symposium Eric Johnson (Columbia University) will conclude the symposium by highlighting some of the major open research questions and discuss how impact-driven research can be embedded in the current academic career trajectories.

TALKS

Ben R. Newell

Data Needs: Climate Risk or Climate Uncertainty? Decision-useful information for individuals and organisations

Sara Constantino

Improving the Representation of Human Behavior in Models of Coupled Human-Environment Systems Through Interdisciplinary Research

Jonas Ludwig

Heuristics and Bias Explain Climate Policy Misperceptions

Session Organizer: Antonia Krefeld-Schwalb; Session Discussant: Eric J. Johnson

Crowdsourcing Interventions in Behavioral Science Megastudies: Addressing Unethical Behavior and Redistributive Preferences

San Micheletto Affresco

This symposium presents three megastudies testing multiple crowdsourced interventions on (1) economic inequality, (2) workplace rule-breaking, and (3) tax evasion. By comparing many interventions in three large experimental studies, we identify the most effective solutions for practical implementation.

The first talk focuses on economic inequality. We tested 20 interventions aimed at influencing redistributive preferences within a large nationally representative U.S. sample ($N = 35,000$). Our outcomes focus on attitudes toward both general wealth redistribution and a specific policy, in the form of a progressive wealth tax. Data collection will begin a week after the submission deadline for SPUDM 2025 and results will be presented at the conference.

The second talk focuses on rule breaking. We tested 35 interventions aimed at reducing rule breaking among online workers ($N = 37,200$). The 35 interventions are categorized into monetary incentives, monitoring, attention checks, ethical justifications, curiosity prompts, rule reminders, and task significance reminders. To assess rule breaking, we used a podcast task, similar to gig work quality rating tasks. We found that monetary incentives, monitoring, attention checks, curiosity prompts and rule reminders significantly reduced rule breaking.

The third talk focuses on tax evasion. Honesty oaths—commitments to honesty before action—have been proposed as useful interventions to counteract dishonest behavior. We tested 21 honesty oaths in a megastudy in which 21,506 UK and US participants played an incentivized tax evasion game. Of the 21 interventions, 10 significantly improved tax compliance, with the most successful nearly halving tax evasion. These findings can help design impactful interventions to curb dishonesty.

TALKS

Christian T. Elbæk

A megastudy investigating interventions to increase support for economic redistribution in the United States

Karolina Ścigala

Megastudy on workplace deviance

Janis H. Zickfeld

Effectiveness of ex ante honesty oaths in reducing dishonesty depends on content

Session Organizer: Janis H. Zickfeld; Session Discussant: Valerio Capraro

Large language models in judgment and decision-making research

Guinigi SF

This symposium explores the large potential of large language models (LLMs) in judgment and decision-making research. Being trained on massive amounts of digitized text, these models interpret and generate text at a human level, rendering them powerful research tools and desirable interaction partners. This symposium features four talks on distinct applications of LLMs. The first talk examines how LLMs can predict the economic, financial, and political risk of countries around the world, offering an accurate and generalizable tool for anticipating world risk. The second talk investigates the use of LLMs as analytic tools, demonstrating their capability to assess the relatedness of measures and concepts within judgment and decision-making toward clarifying its conceptual landscape. The third talk explores LLMs as a means to scientometrically map the field of behavioral reinforcement learning research toward increasing crosstalk and integration between its many research strands. Finally, the fourth talk addresses social and ethical considerations in the public use of LLMs by investigating their role in shaping social narratives, in particular through the generation of artificial apologies. With these contributions, the symposium aims to inspire researchers in judgment and decision-making to integrate LLMs into their work while fostering a critical perspective on their utility and ethical implications. By highlighting practical applications and challenges, we hope to contribute to a deeper understanding of how LLMs can extend and advance the study of human judgment and decision-making.

TALKS

Zak Hussain

Large language models accurately predict world risk

Dirk U. Wulff

Using LLMs to predict the relatedness of measures in judgment and decision-making research

Anna Thoma

Mapping the landscape of behavioral reinforcement learning research

Anne-Marie Nussberger

On the Effectiveness and Fragility of Artificial Apologies

Sampling accounts of judgment and decision-making: The broad relevance of cognitive-ecological theories

Aula 1 SF

Judgment and decision-making biases are often attributed to individual cognitive or motivational processes. However, the distribution of information in the environment—and the way people gather that information—plays a crucial role. This symposium highlights this key, yet oft-overlooked, tenet. The first talk demonstrates this point by providing evidence for an alternative contributing mechanism for Prospect Theory's utility curve. Specifically, this work demonstrates that decision framing effects can result from imbalances in available information, and are not necessarily indicative of an inherent negativity bias, as is commonly assumed. The second talk reports results from a sampling-based decision task demonstrating the adaptivity of information search in decision tasks requiring cost-benefit trade-offs. The third talk demonstrates the real-world implications of these phenomena, showing how biases in the information ecology can shape behavior by creating misperceptions of what the majority behavior is, shedding new light on social influence theories and misinformation spread on social media. Finally, the last talk shows that sampling accounts can also inform theorizing on attitude formation based on stimulus-behavior contingencies such as evaluative conditioning and approach-avoidance learning, demonstrating that sampling decisions not only influence available information, but can also serve as a direct input to evaluative judgments. In sum, this symposium collects various innovative empirical approaches based on cognitive-ecological theories and demonstrates their potential for integration across various judgment and decision-making domains.

TALKS

Zachary Niese

It's good and it's bad: Decision-framing effects via sampling processes

Linda McCaughey

Adaptivity in the face of cost-benefit trade-offs in sampling-based decisions

Thomas Karl Alfred Woiczuk

Learning norms from repeated observations: Behavior of the majority or majority of behaviors?

Mandy Hütter

The perks of introducing sampling to basic evaluative learning paradigms

Decision Science in the Wild

San Francisco Church

For many decades, the dominant approach to study decision making has been to present people with relatively simple and abstract choice tasks (e.g., choices between lottery gambles, products from the same category). These tasks involve relatively clearly defined options, where people receive informative feedback, and where the decisions have little impact on their actual lives. This approach has several advantages and has led to important insights. Making decisions in the real world, however, often occurs in much more complex and fuzzier situations than what is typically studied in decision research. The goal of the symposium is to highlight current research programs that face the typically neglected complexities that characterize much of real-world decision making. For instance, how do people make decisions when decision attributes are incommensurable, and how does incommensurability give rise to apparent inconsistencies in preference? How do affective signals guide and modulate the evaluation of options whose consequences do not consist of monetary outcomes and thus cannot be precisely quantified—and how can this process be formulated in computational models? How to conceptualize the decisions that critically shape people's life trajectories and often have irreversible consequences—and what strategies do people use for making these transformative decisions? How do people perceive and learn from the outcome of their decisions when the outcome confounds one's own decision skill and random noise? In addition to laying bare blind spots and misconceptions that can arise with the dominant methodological approach in decision research, the contributions sketch avenues for future research that does justice to the complexities of decision making in the real world.

TALKS

Lukasz Walasek

Incommensurability and the Structure of Everyday Choices

Shahar Hechtlinger

How People Make the Most Important Decisions in Their Lives

Thorsten Pachur

Beyond Lotteries: An Affect-Based Computational Framework For Modeling Risky Choices with Nonmonetary Outcomes

Naoyuki Okamoto

Blaming Luck, Claiming Skill: Self-Attribution Bias in Error Assignment is Caused by Distorted Perception of Ability

CONFERENCE PRESENTERS

Last Name	Name	Institution/University	Country
Adler	Nine	UCL	France
Aggarwal	Divya	Management Development Institute Gurgaon	India
Agnelli	Riccardo	IMT School for Advanced Studies Lucca	Italy
Ajmal	Irsa	University of Warwick	United Kingdom
Alger	Ingela	Toulouse School of Economics CNRS	France
Alves	Hans	Ruhr University Bochum	Germany
Amasino	Dianna	Tilburg University	the Netherlands
Andraszewicz	Sandra	ETH Zurich	Switzerland
Ang	Dionysius	University of Leeds	United Kingdom
Antonides	Gerrit	Wageningen University	the Netherlands
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Avieli	Lior	Ben Gurion University	Israel
Ayal	Shahar	Reichman University (IDC Herzliya)	Israel
Ayton	Peter	University of Leeds	United Kingdom
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Banki	Daniel	ESADE	Spain
Banks	Adrian	University of Surrey	United Kingdom
Bantle	Lukas	Universitat Pompeu Fabra	Spain
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Barnea	Uri	Bocconi University	Italy
Barneron	Meir	Hebrew University of Jerusalem	Israel
Basu	Shankha	University of Leeds	United Kingdom
Bauer	Oscar	Linköping University	Sweden
Bavolar	Jozef	Pavol Jozef Safarik University in Kosice	Slovakia
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Białaszek	Wojciech	SWPS University	Poland
Białek	Michał	University of Wrocław	Poland
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Bruine De Bruin	Wandi	University of Southern California	USA
Buratto	Arianna	University of Leeds	United Kingdom
Busch	Nuno	Technical University of Munich	Germany
Cacek	Jakub	Jagiellonian University	Poland
Camara	Andrew	University of Warwick	Australia
Capraro	Valerio	University of Milan Bicocca	Italy
Caravona	Laura	University of Milano-Bicocca	Italy
Carella	Alessandra	Università degli Studi di Padova	Italy
Caserotti	Marta	Università degli Studi di Padova	Italy
Celadin	Tatiana	University Ca'Foscari of Venice	Italy
Chapkovskii	Filipp	University of Duisburg	Germany
Chen	Zhiqin	Zhejiang University	China
Ciulli	Rachele	University of Pennsylvania	Italy
Civai	Claudia	City St George's, University of London	United Kingdom
Clemens	Vanessa	University of Cologne	Germany
Cohen	Doron	Carnegie Mellon University	USA
Cojuharencu	Irina	University of Surrey	United Kingdom
Congiu	Luca	Tor Vergata University of Rome	Italy
Constantino	Sara	Stanford University	USA

Cremen	Eoin	University of Bath	United Kingdom
Deans-Browne	Calvin	University College London	United Kingdom
Del Mastio	Ginevra	IMT School for Advanced Studies, Lucca	Italy
Del Missier	Fabio	University of Trieste	Italy
Dev	Avantika	Indian Institute of Technology Delhi	India
Dewitt	Stephen	University College London	United Kingdom
Dhami	Mandeep	Middlesex University London	United Kingdom
Di Carlo	Angelo	Scuola Superiore Sant'Anna	Italy
Di Paolo	Roberto	University of Parma	Italy
Dickinson	Scott	University of Exeter	United Kingdom
Diecidue	Enrico	INSEAD	france
Dominici	Alice	IMT School for Advanced Studies Lucca	Italy
Drath	Or	Tel Aviv university	Israel
Echterbeck	Carolin	University College London	United Kingdom
Eck	Maximilian	Georg-August-Universität Göttingen	Germany
Ein-Gar	Danit	Tel-Aviv University	Israel
Elbaek	Christian	Aarhus University	Denmark
Engel	Lukas	University of Basel	Germany
Engelmann	Jan	University of Amsterdam	the Netherlands
Engelmann	Neele	MPI for Human Development	Germany
Erceg	Nikola	University of Zagreb, Faculty of Humanities and Social Sciences	Croatia
Erev	Ido	Technion	Israel
Ert	Eyal	The Hebrew University of Jerusalem	Israel
Etgar	Shir	Tel Aviv University	Israel
Faipò	Davide	Radboud University	Italy
Fasolo	Barbara	London School of Economics	United Kingdom
Feddeck	Eric	Radboud University	the Netherlands
Fenneman	Jesse	Toulouse School of Economics	France
Fenneman	Achiel	University of Vienna	Austria
Fiedler	Klaus	Heidelberg University	Germany
Figner	Bernd	Radboud University	the Netherlands

Filatova	Tatiana	Delft University of Technology	the Netherlands
Filkukova	Petra	University of Inland Norway	Norway
Finegold	Maayan	Ben-Gurion University of the Negev	Israel
Fischer	Olivia	University of Zurich	Switzerland
Fleming	Piers	University of East Anglia	United Kingdom
Forst	Sarah Helene	University of Mannheim	Germany
Frey	Renato	University of Zurich	Switzerland
Fridberg	Moral	Ben-Gurion University	Israel
Friedmann	Enav	Ben Gurion university	Israel
Fromme	Friedericke	Universität Potsdam	Germany
Fu	Ruobing	East China Normal University	China
Fujii	Yoichiro	Meiji University	Japan
Gagliardi	Lorenzo	University of Padua	Italy
Gaissmaier	Wolfgang	University of Konstanz	Germany
Galante	Mattia	University of Trento	Italy
Gamliel	Eyal	Ruppin Academic Center	Israel
Ganish	Yarden	Bar Ilan University	Israel
Ge	Ge	University of Southern Denmark	Denmark
Gioffré	Alessandro	University of Florence	Italy
Glöckner	Andreas	University of Cologne	Germany
Gordon Hacker	Tom	Ben-Gurion University of the Negev	Israel
Gradwohl	Nico	Karlsruhe Institute of Technology	Germany
Gronchi	Giorgio	University of Florence	Italy
Gross	Rian	University of Vienna	Austria
Gubernath	John	Freie Universität Berlin	Germany
Günther	Anne	University of Basel	Switzerland
Guo	Fenqi	University of Warwick	Germany
Guo	Xiaomu	University of Warwick	United Kingdom
Gutman	Gal	Haifa University	Israel
Hafenbrädl	Sebastian	IESE Business School	Spain
Häffner	Carolin	University of Cologne	Germany

Hagmann	David	The Hong Kong University of Science and Technology	Hong Kong SAR
Halvor Teigen	Karl	University of Oslo	Norway
Hangel	Nora	Leibniz University Hannover	Germany
Haran	Uriel	Ben-Gurion University	Israel
Harris	Adam	UCL	United Kingdom
Harvey	Nigel	University College London	United Kingdom
Hashidate	Yosuke	Sophia University	Japan
Hausfeld	Jan	University of Amsterdam	the Netherlands
Heard	Claire	King's College London	United Kingdom
Hedegaard Tønnesen	Mathilde	Aarhus BSS, Aarhus University	Denmark
Heilprin	Eden	Technion	Israel
Heimbach	Irina	WHU - Otto Beisheim School of Management	Germany
Heinke	Steve	University of Fribourg	Schweiz
Heißler	Eva-Marie	Leibniz University Hannover	Germany
Hechtlinger	Shahar	Max Planck Institute for Human Development	Germany
Hellmann	Sebastian	TU Munich	Germany
Helm	Jessica	University of Basel	Germany
Helmer	Jessica	Georgia Tech	USA
Henkin	Raz	Bar-Ilan University	Israel
Herberz	Mario	University of geneva	Switzerland
Hermanns	Benedicta	Hamburg University of Technology	Germany
Herzog	Stefan	Max Planck Institute for Human Development	Germany
Himmelstein	Mark	Georgia Institute of Technology	USA
Hochman	Guy	Reichman University	Israel
Hoenow	Nils Christian	RWI - Leibniz Institute for Economic Research	Germany
Hof	Linus	Technical University of Munich	Germany
Hoffmann	Janina	University of Bath	United Kingdom
Höhs	Johanna M.	University of Tübingen	Germany
Holford	Dawn	University of Bristol	United Kingdom
Horn	Sebastian	University of Zurich	Switzerland
Houf	Leon	Karlsruhe Institute of Technology (KIT)	Germany

Hu	Jing	University of Macau	China
Hussain	Zak	University of Basel	Switzerland
Hütter	Mandy	University of Tübingen	Germany
Ideno	Takashi	Tokyo University of Science	Japan
Idzikowska	Katarzyna	Kozminski University	Poland
Ingendahl	Moritz	Ruhr University Bochum	Germany
Ingendahl	Franziska	Technical University of Darmstadt	Germany
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