

## IMPRS BeSmart Topics Workshop. November 2023, Barcelona

### Program

Time	Wednesday 1 <sup>st</sup> of November	Thursday 2 <sup>nd</sup> of November	Friday 3 <sup>rd</sup> of November
09:30		09:30-10:10 IMPRS – Arian Henning	09:30-10:10 UPF – Rosemarie Nagel
10:10		10:10-10:50 IMPRS – Alexander Egberts	10:20-10:50 UPF – Mirela Artigot/ John Palmer
10:50		Coffee break	
11:10		11:10-11:50 UPF – Andrea Salvanti	11:10-11:50 IMPRS – Tom Brinker
11:50		11:50-12:30 UPF – Raquel Lorenzo	11:50-12:30 IMPRD – Mahdi Khesali
12:30		Lunch	
01:30		01:30-02:10 IMPRS – Yuqi Wang	01:30-02:10 UPF – Christoph Semken
02:10		02:10-02:50 IMPRS – Johannes Rottmann	02:10-02:50 IMPRS – Thomas Holzhausen
02:50		Coffee break	02:50-03:30 IMPRS – Christoph Engel
03:10		03:10-03:50 UPF – Evangelia Spantidaki Kyriazi	
03:50		03:50-04:30 UPF – Amil Camilo Moore	
04:30		Coffee break	
04:40		04:40-05:20 IMPRS – Sebastian Riedmiller	

05:20		05:20-06:00	
		IMPRS – Matthew Trail	
06:00	06:00-06:30	06:00-07:00	
	Meeting for Dinner (not covered by Organizers)	Dinner (covered by Organizers)	
07:00		07:00-07:30	
		Discussion	
07:30		07:30-08:00	
		Wrap Up	

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### Presentations

Date	Time	Presenter	Title
Thu, 02.11.2023	09:30 AM	Arian Henning	Explainability of Automated Decision-Making in Public Administration
	10:10 AM	Alexander Egberts	manipulative design elements of digital decision architectures
	11:10 AM	Andrea Salvanti	The importance of being even: new insights on the repeated prisoner's dilemma"
	11:50 AM	Raquel Lorenzo	A theory of social preferences and norms
	01:30 PM	Yuqi Wang	Investor Selective Memory
	02:10 PM	Johannes Rottmann	The Law and Economics of Competitor-Based-Pricing - Can German & European Competition Law deal with unilateral collusion?
	03:10 PM	Evangelia Spantidaki Kyriazi	Narcissism and competition: an ego threat or an opportunity to excel?
	03:50 PM	Amil Camilo Moore	The origins of inequality: an experiment in Minecraft
	04:40 PM	Sebastian Rledmiller	'I Won't Get it Anyway' - A Field Study on Misperceptions About Financial Student Aid and Reasons for Non-take-up
	05:20 PM	Matthew Trail	How algorithmic predictive risk models affect attorney and judge legal decision-making regarding child removal in the foster care system
Fri, 03.11.2023	09:30 AM	Rosemarie Nagel	The Keynesian Beauty Contest as a Generative Game Structure
	10:10 AM	Mireia Artigot/John Palmer	Experiments on price personalization
	11:10 AM	Tom Brinker	Prices vs. Quantities: On the (Im-)Possibility of Learning
	11:50 AM	Mahdi Khesali	Effect of indecisive voting on behavior: experimental evidence
	1.30 PM	Christoph Semken	The Marginal Impact of Emission Reductions: Estimates, Beliefs and Mitigation Responses
	2:10 PM	Thomas Holzhausen (with co-authors)	The legislator speaks, and nobody listens" – How does legislative change translate into a change in behavior if legal rules are followed by routine?
	2:50	Prof. Christoph Engel	The German Constitutional Court – Political, but not Partisan?

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### Participants

Title	Name	First Name	Institution	E-Mail
PhD Student	Brinker	Tom	IMPRS	brinker@coll.mpg.de
PhD Student	Egberts	Alexander	IMPRS	egberts@coll.mpg.de
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PhD Student	Khesali	Mahdi	IMPRS	khesali@coll.mpg.de
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PhD Student	Moore	Amil Camilo	UPF	amilcar.camilo@upf.edu
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Prof.	Palmer/Artigot	John/Mireia	UPF	john.palmer@upf.edu / mireia.artigot@upf.edu
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PhD Student	Spantidaki Kyriazi	Evangelia	UPF	evangelia.spantidaki@upf.edu
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PhD Student	Wang	Yuqi	IMPRS	wang@coll.mpg.de

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### Abstracts

Name	First Name	Abstract
Brinker	Tom	<p><u><i>Prices vs. Quantities: On the (Im-)Possibility of Learning</i></u>  Policies that internalize external effects have the fundamental problem that there is an information asymmetry regarding the private abatement costs incurred by regulated firms/agents and the governmental agency that sets the policy (Weitzmann 1974). It has been shown that the government can infer the true abatement costs of firms over time by observing the outcomes of its regulation.</p> <p>We analyze the possibility of inference about abatement costs, if variation can be due to fundamental endogenous (i.e., firm investments) and exogeneous (demand shocks, business cycles, etc.) reasons. We interpret the regulation as signaling game in which the government only receives information from the firm via the implemented policy (revenue of price policy, banking of set quantity).</p>
Egberts	Alexander	<p><u><i>Manipulative design elements of digital decision architectures</i></u>  My research focuses on the legality and impact of so-called "dark patterns" - manipulative, aggressive or deceptive design elements in digital decision architectures. To this end, I am currently pursuing several empirical projects: one in relation to cookie banners, one in relation to decisions in the e-commerce context and another in which I am observing the development of the use of such practices in the digital context over a longer period of time.</p> <p>I can't send you a topic and an abstract at the moment, as I don't know exactly what I will present yet. It depends on how well I make progress in the next few weeks and what I can best use feedback on in November.</p> <p>In any case, for further planning, I can already tell you that my topic will be related to manipulative design elements of digital decision architectures - most likely I will use online experiments as a method.</p>
Engel	Christoph	<p><u><i>The German Constitutional Court – Political, but not Partisan?</i></u>  The German Constitutional Court has powers that are no weaker than the powers of the US Supreme Court. Justices are openly selected by the political parties. Nonetheless, public and professional perception are strikingly different. Justices at the German court are not believed to be guided by the policy preferences of the nominating party. This paper uses the complete publicly available data to investigate whether this perception is well-founded. It exploits three independent sources of quasi-random variation to generate causal evidence. There is no smoking gun of ideological influence. Some specifications show, however, that justices nominated by the left-wing parties (SPD and the Greens) are more activist, even in domains where activism likely runs counter the ideological preferences of these parties.</p>
Henning	Arian	<p><u><i>Explainability of Automated Decision-Making in Public Administration</i></u>  I am investigating different reasoning models, especially Counterfactual Explanations, in terms of their perceived fairness in high stakes decision scenarios. By November, I should also have the data from my vignette study and can hopefully present it. Methodologically, I am using concepts from social and organisational psychology. Thematically, I am working on the interface between administrative law and Explainable AI. In parallel, I am also working on the construction of a field experiment. In another project, I am working on rational decision-making in law and the individual decision-making modes. I am</p>

		<p>particularly interested in the points at which technologies such as machine learning can improve legal decision-making. For this, it is important to understand on the one hand how machine learning works and on the other hand at which points information processing becomes relevant in law. The work is at the interface of legal theory and explainable AI.</p>
Holzhausen	Thomas	<p><u><i>How does gradual implementation of regulation decrease public opposition depending on the legislative adjustment leveraged?</i></u></p> <p>While the classical approach in Law &amp; Economics carries out a holistic analysis of the various options for action, from which the efficient one is ultimately chosen, the incrementalism of political science provides for a "muddling through". Instead of the above, regulation is always adjusted piecemeal and in small steps in order to achieve the optimal status, since a holistic analysis is not realistically possible in advance. I want to combine both, i.e. a small-step adjustment of regulation in order to achieve a predefined goal, since this way the limiting factor of the first-mentioned approach, the resistance of the sovereign, i.e. the people, can be reduced. The various channels through which resistance is reduced will be discussed. Engel, Holzhausen, Mischkowski: "The legislator speaks, and nobody listens" – How does legislative change translate into a change in behavior if legal rules are followed by routine? We follow the approach that following rules is routine. But what happens when the rule changes and the behavioural routine consequently no longer matches the behaviour indexed by the rule? Do people adapt at all? If so, what are the information channels that promote adaptation? Besides these questions, we also try to find out to what extent adaptation behaviour is influenced by what behaviour the underlying rule wants to promote, i.e. whether it is individually or socially desirable.</p>
Khesali	Mahdi	<p><u><i>Effect of indecisive voting on behavior: experimental evidence</i></u></p> <p>A successful referendum is expensive. Some requirements should be met for a proposal to be eligible for referendum and at last its success partly depends on an investment of many resources in campaigns. A winning is, however, not guaranteed (56% for state-level referenda initiated by citizens in US whose results are available and 40% in Switzerland). Nevertheless, the number of referenda has steadily increased in the past years. Why do citizens spend resources on holding a referendum, although the probability of winning is low? Is the behaviour irrational? In this study, we argue that expressive voting alters the behaviour of voters. Using an experiment setting, our study explores the causal effect of voting on individual behaviour when the outcome is unknown or not enforced. We call these types of voting procedure expressive voting. The experiment is designed to induce a normative conflict for participants and test whether expressive voting can change adherence to a norm. Using a modified version of the stealing game, we study changes in the probability and magnitude of stealing under three treatments. The no voting treatment (NVT) treatment provides a baseline for behavioral responses to the normative conflict with no interventions. In the unknown outcome treatment (UOT), participants vote on a norm for stealing what they deserve from the other participant without knowing about the outcome of voting process. Participants in the not enforced outcome treatment (NEOT) are informed about the outcome of the vote after the voting process. We find that expressive voting changes the behaviour of participants when its outcome is revealed. The effect is negative indicating that participants steal less when they see the outcome.</p>
Lorenzo	Raquel	<p><u><i>A theory of social preferences and norms</i></u></p> <p>This paper offers a unifying approach to study how different forms of social preferences, which naturally correspond to different real-life scenarios, might generate different social outcomes. By analyzing the equilibria of a game of social interaction, I study to what extent social beliefs (beliefs about others' actions and what others think should be done) can affect collective behavior through a psychological cost of not conforming to others. There is an informative distinction between cases where a society may sustain diverse collective behaviors and cases where the social norm that may arise in a society is unique: multiplicity of social norms and belief-driven behavior can only arise when agents</p>

		care about what others think should be done (others' morals). Additionally, the framework can accommodate situations of pluralistic ignorance.
<b>Moore</b>	Amil Camilo	<p><u><i>The origins of inequality: an experiment in Minecraft</i></u></p> <p>Prior to the formation of society, what environmental factors propagated (or led) to the creation of equitable (or inequitable) institutions? What is the origin of structural inequality? I develop methods for measuring the gathering and exchanging of resources in Minecraft between players and conduct several pilot experiments to examine the origins of inequality; initial experiments are intended to test not only whether these methods are feasible, but also whether scarcity of resources for survival induces greater cooperation and thus greater redistribution (and lower inequality). The preliminary results from small pilots show that two-player experiments may be ineffective to test the hypothesis but three-player experiments may provide enough diversity in the income generating process to encourage cooperation</p>
<b>Nagel</b>	Rosemarie	
<b>Palmer/Artigot</b>	John/Mireia	
<b>Riedmiller</b>	Sebastian	<p><u><i>Won't Get it Anyway' - A Field Study on Misperceptions About Financial Student Aid and Reasons for Non-take-up</i></u></p> <p>I propose an online survey experiment that aims to investigate the relationship between misperceptions about social benefit program criteria, their correction, and take-up. The study will focus on the German federal financial student aid (BAföG) and will elicit students' misperceptions about the program criteria through hypothetical scenarios. Half of the participants will receive bundled information designed to resolve possible misperceptions at the end of the survey. In a follow-up survey six months later, students are asked about their application status for financial aid to determine the impact of the correction of misperceptions on take-up, and misperceptions will be elicited again.</p>
<b>Rottmann</b>	Johannes	<p><u><i>Competition Law and Economics / Competition Policy</i></u></p> <p>A large-scale field study is currently being conducted with legal trainees on the legal labour market and the self-selection of newcomers and the self-selection of new entrants to the profession. In the process, we are not least surveying some of the social preferences of the preferences (for example, by means of the Fischbacher/Heusi-Lying Game). Methodologically, this is a lab-in-the-field/survey experiment, which is designed as a panel. An English-language title could be: "Who wants to become a judge? or "Law careers in the public and private sector".</p>
<b>Salvanti</b>	Andrea	<p><u><i>The importance of being even: new insights on the repeated prisoner's dilemma</i></u></p> <p>Cooperation can be fragile and easily disrupted. In situations where trust has been breached, whether intentionally or unintentionally, rebuilding mutual confidence is essential. Here we focus on strategies for restoring cooperation after a defection and argue that restitution can be a particularly effective approach when communication is absent. Restitution involves "proposing" a return to cooperation by restoring gains lost from the breach. This gesture, which is materially costly for the offender and rewarding for the offended party, works as a credible message. Furthermore, restitution can be seen as fair in repeated social dilemmas, as it closes the payoff gap created by the deviation and makes subjects even. We discuss the theoretical properties and empirical validity of restitution strategies in experiments on repeated social dilemmas with both perfect and imperfect monitoring. Our results indicate that theoretically restitution strategies are different from the memory-one strategies on which the experimental literature has mainly focused, and empirically they find robust support in the data.</p>
<b>Semken</b>	Christoph	<p><u><i>The Marginal Impact of Emission Reductions: Estimates, Beliefs and Mitigation Responses</i></u></p> <p>Many people think they cannot have any tangible impact on climate change through their own actions, limiting the demand for individual emission reductions. Cur-</p>

		<p>rently available statistics are not suited to systematically assess this belief. In this paper, I derive the marginal impact of emission reductions – the effect of reducing emissions by 1tCO<sub>2</sub> – for tangible climate change outcomes, document important misperceptions and show how they affect behaviour. Using climate models, I estimate the marginal impact for glacier ice melting (3 kL/tCO<sub>2</sub>), life expectancy (3 h/tCO<sub>2</sub>) and vegetation change (4 m<sup>2</sup>/tCO<sub>2</sub>). Subjects' beliefs are inconsistent with the climate model findings in several ways. First, they substantially underestimate the marginal impact. Second, they think the marginal impact increases when others reduce their emissions (strategic complementarity). By contrast, for most outcomes, climate models predict strategic substitutability. Third, they falsely believe there are discontinuities at known temperature thresholds, after which the marginal impact significantly decreases. Providing subjects with the climate model findings causally increases perceived self-efficacy, intentions to reduce emissions and real donations to mitigate them. The findings are consistent with a model of threshold thinking, which predicts positive overall emission reductions of information provision in equilibrium.</p>
Spantidaki	Evangelia	<p><u><i>Narcissism and competition: an ego threat or an opportunity to excel / How narcissists match and play in games</i></u></p> <p>My work is experimental on matching personality traits and economic games. The two papers that could potentially be relevant for this group are "Narcissism and competition: an ego threat or an opportunity to excel?" (this project is related to incentives and self selection in competition) and the other one is "How narcissists match and play in games". In the second project, I investigate experimentally participants' choices about whom they want to be matched with endogenous group formation- and I want to find out whether whom they choose and how they play depends on the characteristics of their partner.</p>
Trail	Matthew	<p><u><i>How algorithmic predictive risk models affect attorney and judge legal decision-making regarding child removal in the foster care system</i></u></p> <p>I am researching how algorithmic predictive risk models might affect attorney and judge legal decision-making regarding child removal in the foster care system, through the use of a randomized vignette survey. The survey presents participants with a vignette regarding a removal decision and asks them to choose between removal options and their confidence in each choice. They are then presented with a randomized predictive model score for the same case and asked to make the same removal decision and their confidence. Participants are then asked to answer 8 forced binary choice questions taken from the Dalglish Scale to measure their risk tolerance. The results will be analyzed as panel data.</p>
Wang	Yuqi	<p><u><i>Investor Selective Memory</i></u></p> <p>Previous economic research has separately examined motivated and non-motivated memory, with limited overlap. In this paper, I aim to bridge this gap by investigating both mechanisms simultaneously in a financial market experiment. Investors can experience two types of selective memory: motivated memory, which leads to a biased recollection of investment outcomes in a self-serving manner, and associative memory, which enhances the recollection of past signals similar to the current one. I extend Enke et al.'s (2022) model by introducing a "motivated boost" that increases the probability of recalling a past positive signal when an investor actively invests in the stock. The generalized model generates two additional predictions: For an actively invested stock, (i) people tend to exhibit a greater overreaction to a current negative signal compared to a positive one; (ii) a positive signal has a more persistent effect on beliefs than a negative one. The theory-driven experiment builds upon Enke et al.'s (2022) framework with one modification: participants make an initial investment decision by choosing between a stock with risky outcomes or a bond with known safe outcomes. This modification facilitates the manifestation of motivated memory. Furthermore, regardless of their initial choice, all participants observe signals generated from the stock and update their beliefs about it accordingly. Overall,</p>



		the paper highlights the importance of selective memory for the explanation of several stylized facts in finance, including overreaction to news, the repurchase effect, and the high trading volume.
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