

## IMPRS BeSmart and UPF 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 UPF – Rosemarie Nagel	09:30-10:10 UPF – Mireia Artigot/ John Palmer
10:10		10:10-10:50 IMPRS – Alexander Egberts	10:20-10:50 IMPRS – Arian Henning
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 IMPRS – Mahdi Khesali
		12:30-13:10 IMPRS – Yuqi Wang	12:30-13:10 UPF – Christoph Semken
01:10		Lunch	
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	06:00-06:30	
	Get Together at the Hotel Lobby		Discussion/Wrap Up
06:30		06:30	
			Dinner at Restaurant Semproniana (not covered by the Organizers)

*This workshop counts with the support of Protecting consumers in digital platforms PID2021-127258NA-I00/AEI/10.13039/501100011033, UE, financiado por el Ministerio de Ciencia e Innovación, la Agencia Estatal de Investigación y el Fondo Europeo de Desarrollo Regional and of AlgorithmLaw - TED2021-131472A-I00/Unión Europea/"NextGeneration EU"/PRTR financed by the Spanish Ministry of Science and Innovation, Spanish state research agency and the European Union "NextGenerationEU"/PRTR.*

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## Presentations

Date	Time	Presenter	Title
<b>Thu, 02.11.2023</b>	09.30 AM	Rosemarie Nagel	The Keynesian Beauty Contest as a Generative Game Structure
	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
	12:30 PM	Yuqi Wang	Investor Selective Memory
	02:10 PM	Johannes Rottmann	Lawyer careers in the public and private sector – A longitudinal survey experiment
	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 Riedmiller	'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
<b>Fri, 03.11.2023</b>	09.30 AM	Mireia Artigot/John Palmer	Unfolding consumer contract personalization
	10:10 AM	Arian Henning	Explainability of Automated Decision-Making in Administrative Law
	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
	12.30 PM	Christoph Semken	The Marginal Impact of Emission Reductions: Estimates, Beliefs and Behaviour
	2:10 PM	Thomas Holzhausen	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

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PhD Student	Brinker	Tom	IMPRS	brinker@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></p> <p>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. We analyze the possibility of inference about abatement costs, if variation can be due to fundamental endogenous (i.e., firm investments) and exogenous (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></p> <p>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. My topic will be related to manipulative design elements of digital decision architectures.</p>
Engel	Christoph	<p><u><i>The German Constitutional Court – Political, but not Partisan?</i></u></p> <p>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 Administrative Law</i></u> (with Pascal Langenbach)</p> <p>Although the psychological research fundamentally suggests a positive effect of explanations on individual acceptance and perceived fairness of a decision, empirical evidence for a comparable correlation in legal automated decision scenarios is rare and in the state-citizen relationship nearly unobserved. Consequently, there is a need for a more nuanced view of which explainability models can be used for algorithmic decision making: Which explainability models are imaginable from a technical point of view to counteract the black-box character of the respective decisions? Which algorithms have which degree of opacity that is questionable under the rule of law? And what kinds of explanation models lead to an increased understanding and legal empowerment of the decision subject? For gaining behavioral insights for the implementation of automated decision making in public administration, we are testing different reasoning models in administrative decision scenarios for perceived fairness with</p>

		a vignette study in a 5x2x3 design. The sample consists of a total of 4400 participants, the data collection was completed beginning of October.
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</p>

		norms and belief-driven behavior can only arise when agents care about what others think should be done (others' morals). Additionally, the framework can accommodate situations of pluralistic ignorance.
Moore	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>
Nagel	Rosemarie	<p><u><i>The Keynesian Beauty Contest Game as a Generative Game Structure</i></u></p> <p>The first lab-experiments on the Beauty Contest game (Nagel, 1995) with its best-reply function, "your choice from the interval 0 to 100 has to be closest to 2/3 of the average of all participants' choices," established a bounded rational model on limited cognition (called level-k). It is about the reasoning of the reasoning of others, originally and famously expressed in Keynes' Beauty Contest metaphor. Since then, there have been many variations of the game parameters and exogenous variations as subject pools ranging from students to professionals. With these variations, one can show the sensitivity of behavior, especially due to the perception of naïve behavior, the reference point of the level-k model. Furthermore, a generalization of the original best-reply function has encompassed many economic two-person and aggregated games (i.e., games in which other players' choices are given as a sum or average). Examples include the Rock-Paper-Scissors game, the first-order conditions of the Cournot model, the Neo-Keynesian model, price forecasting games, and a simplified general equilibrium model. We will give an overview of this historical account.</p>
Palmer/Artigot	John/Mireia	<p><u><i>Unfolding consumer contract personalization</i></u></p> <p><i>Our presentation will describe the initial stages of a large research project on the relationship - if any - between data collection/sharing - and price personalization in consumer contracts. The project is taking several approaches to illuminate the ways in which personalization is being implemented in practice by online platforms, focusing on whether and how social and spatial characteristics in the physical world generate differences in treatment in the online world. The research employs two approaches to audit price personalization algorithms that otherwise remain hidden from public view or oversight. First, we will create synthetic consumer-bots to test how personalization algorithms produce different price offers depending on their perception of the consumer's geographic location. Second, we will recruit volunteers to share their socio-demographic characteristics along with their physical locations and movement trajectories over time, while reporting on price offers that they receive through commercial apps on their mobile phones. In both cases, we will focus on prices offered by shopping and travel platforms.</i></p>
Riedmiller	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</p>

		application status for financial aid to determine the impact of the correction of misperceptions on take-up, and misperceptions will be elicited again.
<b>Rottmann</b>	Johannes	<p><u><i>Lawyer careers in the public and private sector – A longitudinal survey experiment</i></u></p> <p>Highly qualified lawyers are a scarce commodity for which both, the private and the public sector (notably the judiciary) compete. While the private sector can increase wages in order to attract job market entrants, the public sector has been hesitant to join in on this upward spiral. However, ahead of upcoming waves of retirement, the public sector might have to increase its effort to attract young lawyers as well. It remains unclear, what other (if not monetary) job specific dimensions the public sector can leverage.</p> <p>We therefore examine the self-selection of young professionals into legal occupations. For this purpose, we are currently running an incentivized panel survey with legal trainees in NRW, Germany (n = 1653). The subjects participate in a two year practical training, mandatory to pass the German equivalent of a bar exam in order to become fully qualified lawyers and be allowed to practice as a judge, prosecutor, attorney, etc. We measure social and economic preferences as well as job specific preferences at the beginning of their practical training, at the end of their practical training and right after their job market entry. While the second survey is currently in the field, we can already present early evidence from the first survey on sorting mechanisms, monetary and non-monetary trade-offs as well as social preferences of lawyers, such as honesty.</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 Behaviour</i></u></p> <p>An important driver for climate change inaction is the belief that individuals cannot have any tangible impact on climate change through their own actions. Currently 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 1 tonne of CO<sub>2</sub> (tCO<sub>2</sub>) – on physical climate change outcomes, document important misperceptions and show how they affect behaviour. Using climate models, I find that impact of reducing emissions by 1 tCO<sub>2</sub> is 4.000 litres less glacier ice melting, 6 additional hours of aggregate life expectancy and 5 m<sup>2</sup> less vegetation undergoing ecosystem change. Subjects underestimate these figures by 5 orders of magnitude on average. Moreover, their mental models are inconsistent with climate models. First, they assume that the marginal impact increases when others reduce their emissions (strategic complementarity). Second, they think emission reductions are a threshold public goods game. Providing subjects with the climate scientific 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 Dalgleish 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, 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.</p>

### Further information:

Hotel: Hotel H10 Marina Barcelona

Conference Room: Auditorium of Mercè Rodoreda [Here](#)

Restaurant (2<sup>nd</sup> of November 2023): Restaurant Semproniana, not covered by the Organizers, Costs: 35 EUR per person, Website: [Semproniana](#)