



Max Planck Institute  
for Innovation and Competition



RATIONALITY  
& COMPETITION  
CRC TRR 190

# Workshop on Entrepreneurship and Innovation

**12 – 13 December 2019**

Max Planck Institute for Innovation and Competition  
Marstallplatz 1, 80539 Munich

## **Program**

(as of 5 December 2019)

The Workshop on Entrepreneurship and Innovation is supported by the Collaborative Research Center Transregio “Rationality and Competition” (CRC), the Ludwig Maximilian University (LMU Munich) and the Max Planck Institute for Innovation and Competition.

Organizers are Marina Chugunova, Marco Kleine and Simeon Schudy.

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# Scientific Program

## Pre-Conference, Wednesday, 11 December 2019

Speakers' Dinner		
19:00	<b>Speakers' Dinner</b>	Peony Lounge Hörwarthstraße 4, 80804 Munich
19:30 – 20:15	<b>Kick-off Discussion</b>	

## Day 1, Thursday, 12 December 2019

9:00	Welcome and Coffee	3 <sup>rd</sup> floor
Hierarchies and Team Performance		
9:30 – 10:15	<b>Self-organized Teamwork</b> Anja Schöttner (HU Berlin)	Room 313
10:15 – 11:00	<b>What We (Do Not) Know About Team Performance in Non-routine Analytical Tasks</b> Simeon Schudy (LMU Munich)	Room 313
11:00 – 11:30	Coffee Break	3 <sup>rd</sup> floor
Team Organization		
11:30 – 12:15	<b>Do Worker Rents Lead to Unfriendly Leadership?</b> Anastasia Danilov (HU Berlin)	Room 313
12:15 – 13:00	<b>No Face, No Name, No Shame? Overcoming Barriers to Intra-Organizational Public Knowledge-Seeking</b> Marco Kleine (MPI for Innovation & Competition)	Room 313
13:00 – 14:00	Lunch	Room E10
14:00 – 14:30	City walk	
Entrepreneurship and Creativity		
14:30 – 15:15	<b>Quality Through Quantity – The Effects of Piece-Rate Incentives on Creative Performance</b> Marina Schroeder (University of Hanover)	Room E10
15:15 – 16:00	<b>Jumping to Conclusions? Entrepreneurship as Experimentation</b> Holger Herz (Université de Fribourg)	Room E10
16:00 – 16:30	Coffee Break	Room E10
Incentives and Selection		
16:30 – 17:15	<b>Lone Stars or Constellations? The Impact of Performance Pay on Matching Assortativeness in Academia</b> Erina Ytsma (Carnegie Mellon University)	Room E10
17:15 – 18:00	<b>Equity Contracts and Incentive Design in Startup Teams</b> Stephen Leider (University of Michigan)	Room E10
19:00	Dinner	Kaisergarten Kaiserstraße 34, 80801 Munich
19:30 – 20:30	Brainstorming Session	

## Day 2, Friday, 13 December 2019

9:15 – 9:30	Coffee	Room E10
<b>Decision Environments and Gender Bias</b>		
9:30 – 10:15	<b>Leaning In or Not Leaning Out? Opt-out Choice Framing Attenuates Gender Differences in the Decision to Compete</b> Nicola Lacetera (University of Toronto)	Room E10
10:15 – 11:00	<b>Shine A Light (on the Bright): The Effect of Awards on Confidence to Speak Up in Gender-typed Knowledge Work</b> Jana Gallus (UCLA)	Room E10
11:00 – 11:30	Coffee Break	Room 313/Bridge
<b>Algorithmic Decision Making</b>		
11:30 – 12:15	<b>Should A Robot Be King? On Acceptance of Algorithmic Decisions</b> Marina Chugunova (MPI for Innovation & Competition)	Room E10
12:15 – 13:15	Lunch	Room E10
13:15 – 13:45	Open Discussion	Room E10
<b>Preferences and Values</b>		
13:45 – 14:30	<b>Macroeconomic Conditions When Young Shape Job Preferences for Life</b> Robert Dur (Erasmus University Rotterdam)	Room E10
14:30 – 15:15	<b>What Money Can Buy: How Markets Promote and Transmit Values</b> Roberto Weber (University of Zurich)	Room E10
15:15 – 15:20	Final Remarks	

## Abstracts

### **Self-organized Teamwork**

*Anja Schöttner (Humboldt University Berlin)*

We explore the structure of an organization empowering their teams. When solving problems and organizing knowledge transfer is essential, we derive conditions for the optimal implementation of self-organized teams. Under imperfect knowledge spillovers, a team's structure can feature elements of a hierarchical order or self-organization, depending on the degree of uncertainty regarding the type of problem that will arise.

### **What We (Do Not) Know About Team Performance in Non-Routine Analytical Tasks**

*Simeon Schudy (LMU Munich)*

Despite the prevalence of non-routine analytical team tasks in modern economies, little is known about how performance is shaped in these tasks. We gathered evidence from three field experiments to study the role of bonuses, tournament incentives and endogenous leadership, highlighting important drivers of team performance. In a next step we seek to understand what the most important margins of the team production function are, and study micro aspects of team organization and leadership. This talk aims at highlighting novel areas for future research in the context of non-routine analytical team tasks and discussing what aspects of team performance and organization are most likely shaped by incentives as well as endogenously chosen or exogenously assigned leaders.

### **Do Worker Rents Lead to Unfriendly Leadership?**

*Anastasia Danilov (Humboldt University Berlin)*

The aim of this study is to test empirically how friendly and unfriendly leadership (defined as ex-post messages of leader to workers) emerge. It has been argued in the literature, that unfriendly leadership is socially inefficient and harmful. However, Dur et al. (2019) show in a model theoretical analysis that leaders may benefit from adopting an unfriendly leadership style to motivate workers in a labor market with non-competitive wage-setting where workers earn rents. By contrast, on a competitive labor market leaders will never implement an unfriendly leadership style. The aim of this presentation is to outline an experimental design to test this mechanism, discuss design details and concerns.

### **No Face, No Name, No Shame? Overcoming Barriers to Intra-Organizational Public Knowledge-Seeking**

*Marco Kleine (Max Planck Institute for Innovation and Competition)*

While organizational platforms are becoming more prevalent for the integration and exchange of organizational knowledge, employee engagement remains a barrier for the success of these platforms. Extending socio-technical systems (STS) research, we focus on individual knowledge seeking in an organizational platform context. We follow a cost-benefit approach and argue that individual knowledge seeking is influenced by (a) economic cost concerns and (b) psychological cost considerations. To test our theoretical arguments, we run a lab experiment altering the costs associated with individuals' decision to seek knowledge on the platform. While knowledge seeking is lowest in settings with both economic and psychological costs, we observe significant increases by (a) eliminating economic consequences, and (b) removing social psychological cost considerations by inducing anonymity on the platform. In addition, our results suggest the presence of gender-related differences in knowledge-seeking behavior on organizational platforms: Male participants are chiefly discouraged by economic considerations, while females place more emphasis on social considerations. Our results highlight the facilitating role of platform anonymity on employee engagement and have implications for the efficient design of these platforms.

## **Quality Through Quantity – The Effects of Piece-Rate Incentives on Creative Performance**

*Marina Schröder (University of Hanover)*

Using a novel experimental design, we study the effect of piece-rate incentives on idea generation. In a creative task in which participants are asked to illustrate words with the help of a given set of materials, we find that piece-rate incentives result in an increase in the number of high quality ideas. This positive effect of incentives is due to an increase in the overall number of ideas and an increase in the variance of the quality of ideas. However, adding a quality dimension to the incentive scheme can lead to inefficient distortions of effort provision, which reduces the positive effects of piece-rate incentives. The results suggest that it can be efficient for organizations to only contract the quantity dimension even though they desire that employees pay attention to multiple dimensions of creative performance.

## **Jumping to Conclusions? Entrepreneurship as Experimentation**

*Holger Herz (Université de Fribourg)*

Entrepreneurship is rarely an all or nothing bet. Instead, entrepreneurs often can sequentially commit additional funds into a startup, for example by launching minimum viable products, to learn about the chances of success. Consequently, experimentation is an essential part of entrepreneurship. We propose a model of entrepreneurship in which an entrepreneur repeatedly faces the decision to (i) implement a business idea, (ii) terminate the business or (iii) continue to experimentally evaluate the business idea. Entrepreneurship then becomes an optimal stopping problem in which additional information should be acquired through experimentation until the entrepreneur is sufficiently confident that implementation or termination is optimal. We then introduce several well documented behavioral biases in information processing, study how these biases affect entrepreneurial decision making, and derive testable predictions.

## **Lone Stars or Constellations? The Impact of Performance Pay on Matching Assortativeness in Academia**

*Erina Ytsma (Carnegie Mellon University)*

In this paper I study the effect of performance-related pay on the distribution of academics across universities and provide empirical evidence that performance pay increases the clustering of similarly productive academics, giving rise to a less homogeneous distribution of academic stars across universities. If positive spillovers exist in academia, so that academics become more productive when their colleagues are more productive, a pay scheme that rewards academic productivity (performance pay) should then drive academics to seek out more productive colleagues, leading to clusters of superstars. I make this precise in a matching model, where I frame the academic job market as a hedonic coalition formation model and show that performance pay should have a greater effect on matching assortativeness when complementarities are stronger. I then study the effect of performance pay on the distribution of academics empirically using the introduction of performance pay in German academia as a natural experiment. To this end I constructed a new data set that encompasses the affiliations and productivity of the universe of academics in the country to analyse changes in faculty composition over time. I test whether the introduction of performance-related pay increases clustering of similarly productive academics (positive matching assortativeness) in a difference-in-differences framework, where I use the strength of complementarities in academic fields as a measure of treatment intensity. Using the average number of co-authors in a field as a proxy for complementarity strength, I find that performance pay increases positive matching assortativeness two- to three-fold: a department whose faculty publishes on average almost one more AER every three years is able to attract junior hires who on average publish almost one more AER every five years post-reform compared to every ten years pre-reform. This result is robust to controlling for alternative explanations; most notably pre-existing trends and differential hiring budget.

## **Equity Contracts and Incentive Design in Startup Teams**

*Stephen Leider (University of Michigan)*

Entrepreneurial teams assign equity positions in their startups using a term sheet that details equity splits and the conditions for being granted those splits. The design of equity split agreements has attracted considerable attention in the entrepreneurial community, with nonconvergence on a single preferred contract form. This paper experimentally examines the effectiveness of different contractual arrangements, focusing in particular on the effects of contract form and contracting timing on founder effort and on the value of the venture. Our results suggest that performance improves with the incentive strength of the contract, but question the conventional logic that this effect is causal. Instead we suggest a novel causal sequence. Rather than the contract form being the primitive and the behavior the derived consequence, our results suggest the reverse. The differences in contract performance are driven primarily by the sorting of high contributors into non-equal contracts and of low contributors into equal contracts. That is, equal contracts are bad for team performance, not because of their incentive strength but because of the founder types that adopt them. Taken together, these results suggest that both investors and founders should pay as much (or more) attention to personality type as they do to contract form.

## **Leaning In or Not Leaning Out? Opt-out Choice Framing Attenuates Gender Differences in the Decision to Compete**

*Nicola Lacetera (University of Toronto)*

In most institutions and organizations, promotions often requires self-nomination and competition among applicants. Examples include leadership ascension in companies, tenure in academia, or VC financings and start-up funding events. However, research on gender differences in preferences for competition suggests that this process might result in fewer women choosing to participate. We study whether changing promotion schemes from a default where applicants must opt in (i.e., self-nominate) to a default where applicants must opt out (i.e., they are automatically considered for promotion, but can choose not to be considered) attenuates gender differences. In our first experiment, although women are less likely than men to choose competitive environments under the traditional opt-in framing, in the opt-out system both women and men have the same participation rate as men in the opt-in system. The increase in participation of women into competition is not associated with negative consequences on performance or well-being. In our second experiment, we show that opt-out framing does not entail penalties from evaluators making decisions about whom to hire. These results support the promise of choice architecture to reduce disparities in organizations and markets. More generally, our findings suggest that gender differences in attitudes toward completion may be context-dependent.

## **Shine A Light (on the Bright): The Effect of Awards on Confidence to Speak Up in Gender-typed Knowledge Work**

*Jana Gallus (University of California)*

Collaborative knowledge work may suffer if high-ability individuals do not feel confident to speak up and advance their ideas (e.g., due to self-stereotyping). We test whether recognition through awards increases high-ability group members' confidence to speak up when working on male-typed knowledge tasks. We use a lab experiment to study performance-based recognition with different degrees of publicness: private recognition, semi-public award, ceremony. We thus focus on managerial policies that are widely used in practice but have received limited scholarly attention. First, we show that self-stereotyping affects women's contribution of ideas in mathematics. Second, awards significantly increase recipients' and hence high-ability subjects' confidence to speak up. Third, the awards' visibility does not matter much, except when interacted with gender. The gender gap in confidence to speak up disappears among high-ability participants when awards are celebrated in a ceremony with face-to-face recognition. Losers remain unaffected.

### **Should A Robot Be King? On Acceptance of Algorithmic Decisions**

*Marina Chugunova (Max Planck Institute for Innovation and Competition)*

While AI-assisted decision-making is getting more widespread, it is important to understand how it affects the acceptance of the proposed decisions by those affected. In this paper, we use a laboratory experiment to study if the use of AI for decision-making can improve the outcomes not through better decisions as such but through wider acceptance of these decisions and improved procedural fairness. On the one hand, a non-human agent has no stakes in allocation decisions as it would be in the case if a decision is made by an involved party and is free of biases that may affect a third-party decision maker. On the other hand, non-human decision maker may be perceived as inherently less moral, since a human agent is the key to any system of morality and ethics. We propose an experimental design to examine the acceptance of decisions based on various decision parameters in differing contexts.

### **Macroeconomic Conditions When Young Shape Job Preferences for Life**

*Robert Dur (Erasmus University Rotterdam)*

Preferences for monetary and non-monetary job attributes are important for understanding the motivation of workers and the organization of work. But little is known about how those job preferences are shaped and how they change over time. We investigate how macroeconomic conditions shape job preferences using variation in income per capita across US regions and over time since the 1920s. We find that job preferences vary in systematic ways with macroeconomic conditions, with job meaning gaining much more priority in good times and income in bad times, and that this holds particularly for young people. Most importantly, we show that macroeconomic conditions during the impressionable years (18-25 years old) have permanent effects on job preferences. Deep recessions thus create cohorts of workers who give higher priority to income for the rest of their career, whereas booms make cohorts permanently care more about job meaning.

### **What Money Can Buy: How Markets Promote and Transmit Values**

*Roberto Weber (University of Zurich)*

We study whether market exchange can promote and transmit the values held by market participants. Specifically, we investigate the conjecture that consumers prefer to exchange with sellers whose behavior reflects consumers' values and that this, in turn, promotes the adoption of costly actions in support of those values. Using a survey and a laboratory experiment, we document that consumers prefer exchanging with counterparts who express support for their values, even when the impacts of exchange are orthogonal to the values. Second, our laboratory experiment demonstrates that sellers anticipate such concern and take costly actions in support for consumers' values, but only when there are potential mutual benefits from market exchange.

## Directions

### From Munich Airport to Fleming's Hotel

From the airport, you can take the S1 or the S8 train into the city and get off at "Marienplatz". From there, you take the subway U3 and U6 in the directions "Moosach" (U3), "Garching Forschungszentrum" or "Fröttmaning" (U6) and get off at "Münchner Freiheit". Now it is a 8 to 10 minute walk up Leopoldstraße to get to the hotel.

### From Munich Central Station to Fleming's Hotel

From the central station, you can take any S-Bahn in the direction of "Ostbahnhof" and get off at "Marienplatz". From there, you take the subway U3 and U6 in the directions "Moosach" (U3), "Garching Forschungszentrum" or "Fröttmaning" (U6) and get off at "Münchner Freiheit". Now it is a 8 to 10 minute walk up Leopoldstraße to get to the hotel.

### From Fleming's Hotel to the Peony Lounge (Hörwarthstraße 4, 80804 Munich)

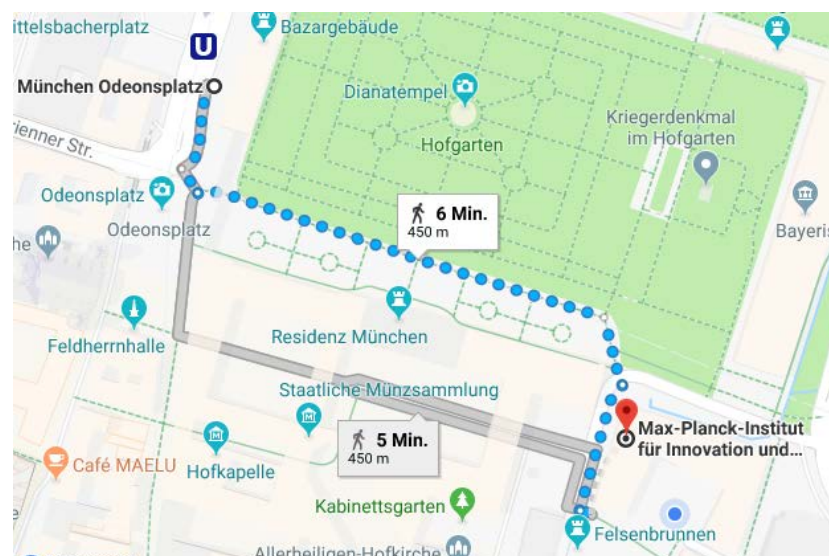
From the hotel, you cross the "Leopoldstraße" and turn right. After 150 meters, turn left into "Hörwarthstraße" and you'll find the Peony Lounge on the right-hand side of the road. The walk will take you approximately 3 to 5 minutes.

### Getting to the venue

The Workshop on Entrepreneurship and Innovation takes places in the Max Planck Institute for Innovation and Competition, Marstallplatz 1, 80539 Munich.

You can get to the venue in various ways, but as Munich has an excellent public transportation system that consists of trains, subways, trams, and buses, we would recommend to make use of public transports. Most locations within the inner city can be conveniently reached within less than 30 minutes.

- The underground station "Odeonsplatz" is located directly next to the venue and is frequented by underground lines U3, U4, U5 and U6.
- Tickets can be bought at automatic vending machines at underground and train stations or inside buses and trams.
- For specific information on public transportation schedules, please check at Munich's public transportation company [MVV](https://www.mvv-muenchen.de/), Google Maps or download the mobile journey planner of MVV.



The walk from the subway station "Odeonsplatz" to the Max Planck Institute for Innovation and Competition.



**From Fleming's Hotel (Leopoldstraße 130-132, 85356 Munich) to the venue**

From the hotel, it is a 8 to 10 minute walk down "Leopoldstraße" to the subway station "Münchner Freiheit". There you can take the U3 or the U6 in the direction "Fürstenried West" (U3) or "Klinikum Großhadern" (U6) and get off at "Odeonsplatz". From there, it's a 5 minute walk (see above). The total trip will take you about 20 minutes.

**From Fleming's Hotel to the Kaisergarten (Kaiserstraße 34, 80801 Munich)**

From the hotel, you can easily walk to Kaisergarten in about 15 minutes. Leaving the hotel, you cross and walk down "Leopoldstraße" towards the Münchner Freiheit. After about 500 meters, turn right into "Kaiserstraße". Now walk down "Kaiserstraße" for about 200 meters and you will find the Kaisergarten on your right-hand side.

## List of Participants

Chugunova	Marina	Max Planck Institute for Innovation & Competition
Danilov	Anastasia	Humboldt University Berlin
Deversi	Marvin	LMU Munich
Dur	Robert	Erasmus University Rotterdam
Englmaier	Florian	LMU Munich
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