



Workshop on team dynamics and peer effects 2018

Institute for Labour Law and Industrial Relations in the European Union | Trier University

# Workshop on team dynamics and peer effects 2018

9<sup>th</sup> – 10<sup>th</sup> November 2018

## Venue:

Institute for Labour Law and Industrial Relations in the European Union (IAAEU) Trier University, Campus II Behringstraße 21 54296 Trier

We are grateful for the financial support by Trier University and the IAAEU.

# Welcome to the Institute for Labour Law and Industrial Relations in the European Union

The Institute for Labour Law and Industrial Relations in the European Union (IAAEU) was established as a public foundation in 1983 and is funded by the state government of Rhineland-Palatinate. While being a public foundation, the IAAEU is also a research institute of Trier University and is situated in the heart of the Petrisberg Technology Park on Campus II. The IAAEU comprises two working groups of which one engages in research in the area of European labour law (Legal Team) and one engages in the theoretical and empirical analysis of personnel and labour economic issues (Economic Team). Depending on the research questions and the available data the economists rely on experimental data drawn from the experiments conducted in the institute's laboratory or on survey and corporate data. Since January 2012 Laszlo Goerke is one of the directors of the IAAEU and head of the Chair of Personnel Economics at Trier University. He is also a research fellow of the Institute of Labor Economics (IZA) and the CESifo Group Munich.

For detailed information have a look at our website: http://www.iaaeu.de/en

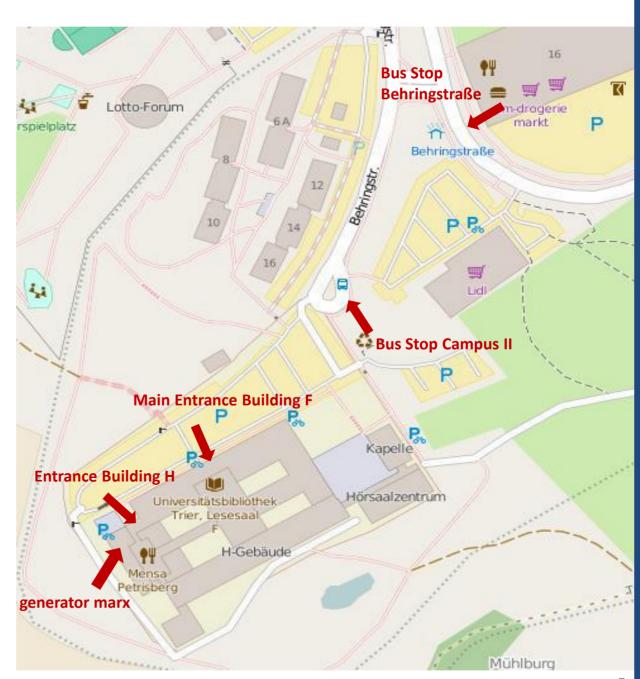
## November 9th and 10th 2018

Venue:

IAAEU
Trier University, Campus II (Building H)
Behringstraße 21
54296 Trier

## **Meeting Room:**

H 714 (Building H, 7th Floor)



# November 9<sup>th</sup> 2018 20:15 Conference Dinner

## Venue:

Jahreszeiten Behringstraße 2 54296 Trier

Tel.: 0651 - 99 8888 1

www.jahreszeiten-trier.de



# Schedule – Workshop on team dynamics and peer effects 2018

## Friday, November 9th 2018

13:00 – 13:30 13:30 – 13:45	Registration Welcome and Opening
13:45 - 15:05 15:05 - 15:20	Session I Coffee Break
15:20 - 16:40 16:40 - 16:55	Session II Coffee Break
16:55 - 18:15 18:15 - 18:30	Session III Coffee Break
18:30 - 19:10	Session IV
19:15 – 20:15	Art Exhibition "generator marx – kapital   digital"
20:15	Conference Dinner at Jahreszeiten (Behringstraße 2, 54296 Trier)

All sessions will take place at IAAEU, Trier University, Campus II, Building H, 7th floor, in room H714.

# Schedule – Workshop on team dynamics and peer effects 2018

## Saturday, November 10th 2018

09:20 - 10:40	Session V
10:40 - 10:55	Coffee Break
10:55 - 12:15	Session VI
12:15 - 12:30	Coffee Break
12:30 - 13:10 13:10	Session VII Farewell Lunch

All sessions will take place at IAAEU, Trier University, Campus II, Building H, 7<sup>th</sup> floor, in room H714.

# Programme – Friday, November 09<sup>th</sup>

13:45 – 15:05	Session I
	Adrian Chadi: "Team size and task performance."  Christian Grund: "Competing on the Holodeck. The effect of virtual peers and heterogeneity in dynamic tournaments."
15:05 – 15:20	Coffee break
15:20 – 16:40	Session II
	Konstantin Homolka: "Others' attractiveness, task-performance and gender."  Kethering Lime de Miranda: "Can gender guetas provent evenesive risk taking? The effect of gender."
	<b>Katharina Lima de Miranda</b> : "Can gender quotas prevent excessive risk taking? The effect of gender composition on group decisions under risk."
16:40 – 16:55	Coffee Break
16:55 – 18:15	Session III
	Manuel Staab: "The formation of social groups under status concern."  Niklas Scheuer: "Stress in teams – An economic approach."
18:15 – 18:30	Coffee Break
18:30 – 19:10	Session IV
	Julia Müller: "Eigenvalue productivity: Measurement of individual contributions in teams."
19:15 – 20:15	Art Exhibition <i>"generator marx – kapital   digital"</i>

# Programme – Saturday, November 10<sup>th</sup>

09:20 - 10:40	Session V
	Florian Kerzenmacher: "Lying to a liar: The effect of within-group reputation on moral behavior." Sven Simon: "Compliance in teams: Implications of joint decisions and shared consequences."
10:40 – 10:55	Coffee Break
10:55 – 12:15	Session VI
	Valentin Wagner: "Effects of timing and reference frame of feedback: Evidence from a field experiment."  Stephan Huber: "Ostracism in alliances of teams and individuals: voting, exclusion, contribution, and earning."
12:15 – 12:30	Coffee Break
12:30 – 13:10	Session VII
	Sven Christens: "Identification of individuals and groups in a public goods experiment."
13:10	Farewell Lunch

## **Organisational Information**

#### **Internet Access:**

#### via the eduroam network:

- Please make sure your WLAN function is enabled.
- Select "eduroam" and click "Connect".
- Log in with your own university account.

#### with guest account:

• Follow instructions from the organisers.

## **Directions from downtown Trier to the workshop venue:**

On Friday: **Bus 4** towards "Irsch Hockweiler Str." or **Bus 14** towards "Universität Campus II" to the "Universität

Campus II", travel time from the Porta Nigra: about 20 min., from the main station: about 15 min.

Recommended hus:

**Bus 14:** Departure at Porta Nigra on November 09<sup>th</sup>: 12:43am (Arrival: 13:03am)

Bus 14: Departure at main station on November 09th: 12:46am (Arrival: 13:03am)

On Saturday: **Bus 85** towards "Pluwig, Ruwerstraße" to "Behringstraße".

Recommended bus:

Departure at main station on November 10<sup>th</sup>: 08:45am (Arrival: 09:00am at station "Behringstraße")

(Please note that there is no direct connection from Porta Nigra to Campus II on Saturdays!)

#### **Session I:**

Adrian Chadi, Konstantin Homolka: "Team size and task performance."

We experimentally analyze behavior in a workplace environment in which either two or three individuals perform a real-effort task. Earnings are determined by a team-piece rate, which implies that the economic incentive to provide effort declines in a larger team. Contrary to expectations, we do not find that the increase in team size is harmful for task performance on average. This non-finding is robust over time and robust to the introduction of inequality in team payoffs between two work periods. In our discussion of potential mechanisms, we take additional data from surveys into account and provide evidence on peer effects. It appears that peers are able to alleviate the potential free-rider problem emerging out of working in a larger team. Interestingly, task performance does not increase with peer ability in smaller teams, despia significant increase in self-reported pressure to perform well. We observe that peer pressure can lead to adverse effects, as peer ability seems to induce individuals in smaller teams to make more mistakes when performing the task and, in consequence, to produce work output in lower quality. Our survey evidence complements these findings and reveals that members of smaller teams report less positive emotions, appear to be less satisfied with the team size and express preferences for working in larger teams in the future.

**Christian Grund, Frederik Graff & Christine Harbring:** "Competing on the Holodeck. The effect of virtual peers and heterogeneity in dynamic tournaments."

We propose a new approach to examining heterogeneity in dynamic tournaments. We simulate a realistic working situation in a highly immersive environment. Implementing a tournament in virtual reality (VR) allows us to ceteris paribus control for the performance of the virtual peer (humanoid avatar), and thus to get an understanding of the reaction of the subject to the avatar in a really dynamic setting, as the subject is constantly able to observe the avatar's performance. Moreover, we are able to mitigate the reflection problem, which usually undermines research on dynamic interaction. Based on a first experimental phase, we are able to match our subjects with an avatar yielding a specific output. We observe that the subjects' performance is highest in a homogeneous tournament, i.e., when they compete against an avatar achieving the same output as they did in the preceding phase. Interestingly, these results are particularly driven by peer effects rather than by tournament incentives. We extensively track the behavior of subjects and the particular situation and, e.g., examine the role of intermediate score differences and the degree of the subjects' movements.

#### **Session II:**

Konstantin Homolka, Adrian Chadi: "Others' attractiveness, task-performance and gender."

Perceived attractiveness of co-workers could affect behavior in a workplace context. However, little is known about the potential role of others' attractiveness in economic outcomes, such as task performance. We exploit a dataset on more than one hundred work groups performing a task and being paid based on team-piece rates. As a special feature of the data, self-reported ratings of others' attractiveness are available. Our results show a negative link between perceived attractiveness of peers and own performance, but only for individuals of different sexes. It seems that males respond particularly strong to perceived others' attractiveness.

Katharina Lima de Miranda, Lena Detlefsen & Ulrich Schmidt: "Can gender quotas prevent excessive risk taking? The effect of gender composition on group decisions under risk."

This study contributes to the public debate on gender quotas and the literature on gender and risk taking by analysing how the level of risk taking within a group is influenced by its gender composition. In particular we look at the shift of risk taking between group and individual decisions and analyse to which extent this shift depends on the gender composition. We derive a gender-specific polarization hypothesis which states that, compared to individual preferences, male dominated groups will shift towards higher risk taking than female dominated ones. Our experimental tests reveal a systematic impact of gender composition on group shifts which supports our hypothesis and points into the direction that a higher share of females may prevent excessive risk taking.

#### **Session III:**

Manuel Staab: "The formation of social groups under status concern."

I study the interaction of two forces in the formation of social groups: the preference for high quality peers and the desire for status among one's peers. I present a characterization of fundamental properties of equilibrium group structures in a perfect information, simultaneous move game when group membership is priced uniformly and cannot directly depend on type. While equilibrium groups generally exhibit some form of assortative matching between individual type and peer quality, the presence of status concern reduces the potential degree of sorting and acts as a force for greater homogeneity across groups. I analyse the effect of status concern for the provision of groups under different market structures and particularly focus on the implications for segregation and social exclusion. I find that status concern reduces the potential for and benefit from segregation - both for a social planner and a monopolist - but the interaction of preference for rank and status can make the exclusion of some agents a second-best outcome.

#### **Session III:**

Niklas Scheuer, Klaus Wälde: "Stress in teams - An economic approach."

Stress receives more and more attention these days which warrants a detailed economic analysis of its origins and economic consequences. This paper provides such a conceptual framework and translates the widely-accepted transactional model of stress into an economic framework. It captures the implications of stressors, appraisal, subjective stress and coping on individual utility. We analyze different types of stressors and find that too much stress leads to emotional outbursts. These reflect an uncontrolled form of coping. The analysis starts by distinguishing two types of individuals. On the one hand, we have a good stabilizer, whose behavior is characterized by a steady state value of stress. They always experience a negative stress evolution over time, i.e. stress falls over time. On the other hand, we identify bad stabilizers, who are described by rising stress levels over time, permanently displaying emotional outbursts. The main part looks at an extension of the model to a professional work-based relationship consisting of two individuals A and B. Depending on the composition of the team in terms of individual types, different team dynamics emerge. They will be analyzed qualitatively as well as numerically. We can inter alia prove analytically the existence of fluctuating equilibria. In terms of economics, our theoretical framework works out the existence of a tragedy 'of the commons' as coping behavior and emotional outbursts create negative externalities. From a more positive perspective, the model explains how different team combinations yields different joint output, labor income and profits of the firm. From a normative perspective, this allows us to formulate recommendations for HR Departments regarding the optimal composition of teams.

#### **Session IV:**

Julia Müller, Thorsten Upmann: "Eigenvalue productivity: Measurement of individual contributions in teams."

While the output of a team is evident, the productivity of each team member is typically not readily identifiable. In this paper we consider the problem of measuring the productivity of team members. We propose a new concept of coworker productivity, which we refer to as eigenvalue productivity (EVP). We demonstrate the existence and uniqueness of our concept and show that it possesses several desirable properties. Also, we suggest a procedure for specifying the required productivity matrix of a team, and illustrate the operational practicability of EVP by means of three examples representing different types of the available data.

#### **Session V:**

Florian Kerzenmacher: "Lying to a liar: The effect of within-group reputation on moral behavior."

Individual lying behavior is best explained by theories combining (intrinsic) lying costs and (external) reputation concerns. We argue that the impact of reputational concerns not only depends on the assessment of an individual's honesty but also on the individual's belief about the assessor's honesty. In particular, this will be the case when the individual and the assessor form a team. In a first step, we propose a theoretical framework where an individual's reputation costs are higher towards an honest team member compared to a dishonest team member. Then, we test the theoretical predictions experimentally in a sequential game. We find that lying among second movers decreases significantly when the first mover is assumed to be an honest person compared to the case when the first mover has lied with a positive probability.

Sven Simon, Tim Lohse: "Compliance in teams – Implications of joint decisions and shared consequences."

This paper investigates the compliance behavior of teams. We address two questions: First, are teams more or less compliant than individuals? Second, are differences in compliance behavior due to team decision-making per se or due to the shared economic consequences among team members? Our experimental setting consists of a repeated income reporting task. Subjects with a high income have an incentive to non-comply and evade taxation. This comes at the cost of a fine if they are caught lying during the course of an audit. Treatments separate the decision-making dimension from the liability dimension. We find evidence that teams are substantially less compliant than individuals. This drop in compliance is driven by the joint (rather than individual) liability of team members. In contrast, whether subjects make their decisions alone or as team does not impact the compliance behavior. Team decision-making is characterized by a high rate of mutual agreement among team members. Interestingly, when deciding together and being liable jointly, team members' individual declarations are highly correlated. Evaluating the chat protocols shows that the risk dimension of the compliance task, the monetary consequences of the report and the concept of being honest are important motivation for (non-)compliance. Our findings have implications for the design of both governance rules and enforcement policies.

#### **Session VI:**

Valentin Wagner, Mira Fischer: "Effects of timing and reference frame of feedback: Evidence from a field experiment."

Information about past performance has been found to sometimes improve and sometimes worsen subsequent performance. Two factors may help to explain this puzzle: which aspect of one's past performance the information refers to and when it is revealed. In a field experiment, students received information about their absolute rank in the last maths exam (level feedback), their change in ranks between the second last and the last maths exam (change feedback), or no feedback. Feedback was given either 1-3 days (early) or immediately (late) before the final maths exam of the semester. Both level feedback and change feedback significantly improve students' grades in the final exam when given early and tend to worsen them when given late. The largest effects are found for negative change feedback and are concentrated on male students, who adjust their ability beliefs downwards in response to feedback.

**Stephan Huber, Jochen Model & Silvio Städter:** "Ostracism in Alliances of Teams and Individuals: Voting, Exclusion, Contribution, and Earning."

Alliances often provide a collective good among their allies. One mechanism to assure the supply of the collective good is ostracism, i.e., the possibility to vote for the exclusion of non-cooperating allies. This paper evaluates the power of ostracism to diminish free riding behavior and investigates whether ostracism is used differently by individuals and teams. Our laboratory experiments employ a public good game with or without ostracism played either with individuals or teams. Our treatments allow to analyze implications for voting, exclusion, contribution, and earnings. Compared to individuals, we find teams to vote and hence exclude less in early periods but more in later periods of the game. Albeit we see no significant difference in the average contributions, the excluding patterns result in significantly more earnings for teams but not for individuals. Thus, ostracism in alliances is welfare improving for teams, but not statistically significant for individuals.

#### **Session VII:**

Sven Christens, Astrid Dannenberg & Florian Sachs: "Identification of individuals and groups in a public goods experiment."

People often behave more pro-socially when their actions are observable by others. In this paper, we experimentally show that this finding cannot be readily transferred to settings in which groups make decisions. Unlike for individuals, identification only has a relatively small and temporary effect on cooperation among groups, regardless of whether members communicate face-to-face or in written form. Many people are sensitive to others' opinions but, while this sensitivity plays an important role for individual decisions, it is much less influential in group decisions. In addition, when people are identified within a unitary group, they expect others to pay less attention than when they are identified as an individual decision maker. Our findings suggest that, while increasing transparency can be an effective way to increase cooperation among individuals, group interactions appear to require stronger regulations.

# **Participants**

Last Name	First Name	Affiliation
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Burmann	Kathrin	Trier University
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Fallucchi	Francesco	LISER (Luxembourg Institute for Socio-Economic Research)
Feld	Jonas	IAAEU, Trier University
Goerke	Laszlo	IAAEU, Trier University
Grund	Christian	RWTH Aachen University
Hartmann	Sven	IAAEU, Trier University
Hausdorf	Michaela	Trier University, University of Applied Sciences Mainz
Homolka	Konstantin	IAAEU, Trier University
Huber	Stephan	University of Regensburg
Kanwal	Narmeen	Trier University

# **Participants**

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Last Name	First Name	Affiliation
Kerzenmacher	Florian	University of Innsbruck
Lima de Miranda	Katharina	Institute for the World Economy at the University of Kiel
Loderer	Anja	Trier University
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Palermo	Alberto	IAAEU
Sadowski	Dieter	IAAEU, Trier University
Scheuer	Niklas	University of Mainz
Schultze	Gabriel	IAAEU, Trier University
Semrau	Thorsten	Trier University
Simon	Sven	Max Planck Institute for Tax Law and Public Finance
Staab	Manuel	London School of Economics
Tyrowicz	Joanna	IAAEU
Wagner	Valentin	University of Mainz

# Notes

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