

COOPERATION: INTERDISCIPLINARY METHODS WORKSHOP



PROGRAM



30 & 31
October
2018



Organizers:

Dimitri Dubois
Rustam Romaniuc
Arnaud Tognetti
Uyanga Turmunkh



IESEG School of
Management

3 rue de la Digue
59000 Lille, France

TUESDAY 30 OCTOBER, 2018

- 09:00-10:00** **Welcome Coffee and Opening**
- 10:00-11:00** **Daniel Balliet** (*VU Amsterdam*)
Advancing Evolutionary and Cultural Perspectives on Interdependence and Cooperation
- 11:00-12:00** **Matteo Galizzi** (*London School of Economics*)
On the External Validity of Social Preference Games: A Systematic Lab-Field Study
- 12:00-12:40** **PhD students session (15min + 5min Q&A)**
- Andrea Guido** (*Catholic University of Lille*)
Group Formation and Cooperation in Social Dilemmas : A Survey and Meta-Analytic Evidence
- Simon Columbus** (*VU Amsterdam*)
The Methodology of Behavioural Experiments: A Meta-Analytic Approach
- 12:40-14:00** **Lunch**
- 14:00-15:00** **Eleanor Power** (*London School of Economics*)
The Complexity of Cooperation on Networks
- 15:00-16:00** **Dennie van Dolder** (*VU Amsterdam*)
Malleable Lies: Communication and Cooperation in a High Stakes TV Game Show
- 16:00-16:30** **Coffee Break**
- 16:30-17:30** **Rebecca Koomen** (*Max Planck Institute for Evolutionary Anthropology*)
Unlikely Cooperation: Studying the Behaviour of Children and Chimpanzees in Resource Dilemmas
- 17:30-18:30** **Alicia P. Melis** (*Warwick Business School*)
The Evolutionary Roots of Human Collaboration
- 19:30** **Dinner**

WEDNESDAY 31 OCTOBER, 2018

- 08:30-09:30** **Astrid Hopfensitz** (*Institute for Advanced Study in Toulouse / TSE*)
Strategic Display of Emotions
- 09:30-10:30** **Carolyn Declerck** (*University of Antwerp*)
Neuroeconomics of Trust and Cooperation: The Role of Hormones, Incentives, and Social Information
- 10:30-11:30** **Nichola Raihani** (*University College London*)
How Paranoia Affects Social Cognition and Behaviour
- 11:30-11:50** **PhD students session (15min + 5min Q&A)**
Terence Daniel das Dores Cruz (*VU Amsterdam*)
Gossip in Daily Life
- 12:00-13:30** **Lunch**
- 13:30-14:30** **Boris van Leeuwen** (*Tilburg University*)
Hormonal Origins of Economic Preferences
- 14:30-15:30** **Uyanga Turmunkh** (*IESEG School of Management*)
Trust as a Decision under Ambiguity
- 15:30-16:00** **Closing remarks**

ABSTRACTS TALKS

Daniel Balliet

Advancing Evolutionary and Cultural Perspectives on Interdependence and Cooperation

Humans have lived intensely social lives for thousands of generations, just as they do now. All social interactions are characterized by various degrees of interdependence, and even though variation in interdependence is key to understanding variation in human behavior, little is known about how people detect and respond to the nature of interdependence in a given interaction. I will briefly discuss Functional Interdependence Theory (FIT) perspective on how people make interdependent inferences and its relevance to understanding cooperation (Balliet, Tybur, & Van Lange, 2017). I will discuss an instrument we developed to measure how people think about their interdependence in social interactions (Gerpott, Balliet, Columbus, Molho, & de Vries, 2018), and how we applied this measure in combination with experience sampling to understand the common forms of interdependence humans face in daily life and how this relates to cooperation (Molho, Columbus, Righetti, & Molho, 2018). I will end by forwarding a program of research that leverages this theory, measure and method to advance our understanding about (a) how cross-societal variation in institutions can be understood by historical differences across social ecologies in human interdependence (e.g., different methods of subsistence farming; rice vs. wheat vs. herding) and (b) the implications this has for cross-societal variation in cooperation.

Matteo Galizzi

On the External Validity of Social Preference Games: A Systematic Lab-Field Study

We present a lab-field experiment designed to systematically assess the external validity of social preferences elicited in a variety of experimental games. We do this by comparing behavior in the different games with several behaviors elicited in the field and with self-reported behaviors exhibited in the past, using the same sample of participants. Our results show that the experimental social preference games do a poor job explaining both social behaviors in the field and social behaviors from the past. We also include a systematic review and meta-analysis of previous literature on the external validity of social preference games.

Andrea Guido

Group Formation and Cooperation in Social Dilemmas : A Survey and Meta-Analytic Evidence

We survey the growing literature on group formation in the context of three types of social dilemma games: public goods games, common pool resources, and the prisoner's dilemma. The 62 surveyed papers study the effect of different sorting mechanisms - endogenous, endogenous with the option to play the game, and exogenous - on cooperation rates. Our survey shows that cooperators are highly sensitive to the presence of free-riders, independently of the sorting mechanism. The reviewed literature as well as the empirical results from the meta-study confirm that the type-composition of groups and the levels of cooperation are closely interlinked. In experiments with exogenous sorting, efficiency is lower because matching is fixed, precluding conditional cooperators from leaving mixed groups. Our findings underscore the adaptive nature of cooperation and the importance of free-movement as a feature that is necessary for cooperation to evolve.

Simon Columbus

The Methodology of Behavioural Experiments: A Meta-Analytic Approach

Incentivisation and deception have been two core distinctions by which experimental economists have delineated their field from social psychology. Performance-based incentives make experiments about “real” outcomes and are thought to thereby increase external validity. Further, payment versus hypothetical outcomes may alter the cognitive and motivational processes that produce behaviour, affecting experimental tests of theory. There have also been concerns that deception distorts responses, and may have contributed to irreproducibility in psychology. Yet, there is only limited evidence on the effects of incentives and deception on experimental outcomes. Previous studies provide inconsistent results on whether such practices affect outcomes such as cooperation rates. Another, largely overlooked question is whether incentivisation and deception may differentially affect different effects. We will draw on a large database of studies on cooperation in social dilemmas, the Cooperation Databank (CoDa), to meta-analytically test predictions about differential effects of incentives and deception under different institutions (e.g., punishment, reward), parameters (e.g., endowment heterogeneity), and player characteristics (e.g., social value orientation, personality). In this talk, I will describe the data contained in CoDa and initial hypotheses. I will also outline a data analytic strategy that allows for causal inference from meta-analytic tests.

Eleanor Power

The Complexity of Cooperation on Networks

In recent years, there has been growing recognition of the potential of network structure to facilitate cooperation. "Network reciprocity," for example, has been put forth as a mechanism that can favour cooperation. However, the full implications of network dynamics for cooperation are as yet not fully explored. In this talk, I will outline some of the ways in which the nature of interpersonal interactions may add important complexity to our models and understanding of cooperation. Social relationships often entail repeated interactions of various behavioural types between individuals who are themselves indirectly connected. All of these features (repeated interactions, multiplex relationships, clustering) have the potential to impact the efficacy of the various mechanisms for the evolution cooperation. The consequences of network structure are particularly profound for humans, given our reliance on communication and the dynamics of information spread through networks. I will illustrate these dynamics with some ethnographic case studies from my fieldwork in rural South India, and I will discuss potential theoretical and empirical ways forward.

Dennie van Dolder

Malleable Lies: Communication and Cooperation in a High Stakes TV Game Show

We investigate the credibility of non-binding pre-play statements about cooperative behavior, using data from a high-stakes TV game show in which contestants play a variant of the classic Prisoner's Dilemma. We depart from the conventional binary approach of classifying statements as promises or not, and propose a more fine-grained two-by-two typology inspired by the idea that lying aversion leads defectors to prefer statements that are malleable to ex-post interpretation as truths. Our empirical analysis shows that statements that carry an element of conditionality or implicitness are associated with a lower likelihood of cooperation, and confirms that malleability is a good criterion for judging the credibility of cheap talk.

Rebecca Koomen

Unlikely Cooperation: Studying the Behaviour of Children and Chimpanzees in Resource Dilemmas

When cooperating over shared resources - for example, environmental resources that renew or grow - individuals must forgo an immediate (selfish) reward in lieu of a larger, delayed reward, in order to maximise resource consumption, and in some cases avoid resource collapse. Individuals involved in such dilemmas are interdependent upon one another. Both must decide not to take the immediate individual reward, and both must maintain this decision over time, until the larger reward is available. Rational choice theory predicts that cooperation will not be sustained in social dilemmas with this structure. I will present a series of studies using different experimental paradigms to explore cooperation between pairs of children and chimpanzees in social dilemmas that involve a temporal gap between a joint investment (inhibiting resource consumption) and a reward (resource consumption). Our results show that chimpanzees and children across different cultures are indeed capable of collectively inhibiting from consuming the immediate reward to maximise resource intake over time together. These paradigms highlight the roles of interdependence and fairness for our species' capacity to sustain resources collectively.

Alicia P. Melis

The Evolutionary Roots of Human Collaboration

Humans' ability to collaborate may be one main reason of our success as a species. For mutually beneficial collaboration, individuals need (1) cognitive mechanisms to coordinate actions with partners, and (2) mechanisms to distribute the acquired resources in a way that incentivizes partners to continue collaborating. I will review evidence suggesting that we share with chimpanzees many of the cognitive mechanisms required for successful coordination. However, in contrast to very young children, chimpanzees do not seem well equipped to share resources obtained through joint effort. This suggests that higher inter-individual tolerance and mechanisms to counteract bullying behaviour and share the spoils after a collaborative effort were probably crucial in the evolution of human cooperation.

Astrid Hopfensitz

Strategic Display of Emotions

The emotion that someone expresses has consequences for how that person is treated. We study whether people strategically adjust their expressed emotions. We will discuss results from two papers. The first studies emotion expression by professional soccer players and links emotions to outcomes from subsequent games. The second presents a laboratory experiment, in which participants play a task- delegation game in which managers assign a task to one of two workers. We vary whether getting the task is desirable or not. Workers are instructed to take pictures expressing happiness and anger, and choose which picture to show to the manager. We find that workers can avoid getting the task by showing the picture on which they express anger and are more likely to show anger when the task is not desirable.

Carolyn Declerck

Neuroeconomics of Trust and Cooperation: the role of hormones, incentives, and social information.

Trust and cooperation are hallmarks of our species, yet they challenge the economic canons of rationality and self-interest, especially in situations where it is possible to free-ride on the efforts of others. How do people solve the recurring dilemma of having to choose between personal gain versus mutually beneficial, but risky acts? Much research in Economics and

Psychology has addressed the role of incentives that increase the willingness to cooperate, social cues that allow a person to construe expectations of others, and, from a biological perspective, hormones that affect the decision making process by altering physiology. The neuropeptide oxytocin in particular is increasingly studied in this respect because of its stress reduction functions by which it could remove social apprehension and facilitate social approach behaviors like trust and cooperation. In this colloquium I will present the results of three experiments that illustrate how oxytocin affects social judgments and moderates decision making in contexts with different types of incentives and social cues. This interactive approach corroborates that the effect of oxytocin on prosocial behavior is context-dependent. Moreover, neuroimaging data indicates that oxytocin may play a role in the integration of incentives and social cues, thereby facilitating ecologically sound decisions without compromising safety.

Nichola Raihani

How paranoia affects social cognition and behaviour

Humans are arguably unique in the animal kingdom in being able to understand that other individuals have intentions and also to some extent, to predict what these might be. Nevertheless, because inferences about the beliefs and goals of others are often made in highly ambiguous scenarios, there is much scope for variation and error in intention attribution. One way in which variation in intention attribution might manifest is as paranoid thinking. Paranoia is the most common presenting symptom of psychosis but is also distributed throughout the general population to varying degrees of intensity, including among people without any clear psychiatric or neurological difficulties. Paranoia can be defined as an exaggerated tendency to believe that others intend to cause the person harm. I will suggest that paranoid thinking might be understood as the adaptive output of a psychological system geared towards detecting coalitional threat. I outline our conceptual framework for thinking about paranoia in evolutionary terms, as well as selected experiments that show that paranoid attributions about the intentions of others are labile and increase in response to experimentally-induced social threat. As well as affecting how we perceive others, I will show that paranoia also affects social behaviour, biasing people towards reduced cooperation and increased punishment in social interactions.

Terence Daniel das Dores Cruz

Gossip in Daily Life

Gossip, sharing information about the behavior and attributes of another person who has no knowledge of the communicated information, is key in systems of indirect reciprocity that are thought to enable large scale human cooperation. Despite being a key pillar of human societies, empirical knowledge of the phenomenon of gossip in daily life is scarce. Most data pertaining to gossip's role in cooperation are obtained through experimental games in laboratory settings, which often operationalize gossip as anonymous note passing between individuals without future interaction. While this allows for controlled observations of gossip and causal inferences, it lacks key features of real-world gossip such as future social exchange. We designed and implemented a (pre-registered) large scale experience sampling study to gain a unique insight into all aspects of gossip in daily life. Experience sampling can overcome shortcomings of previous gossip research through eliminating recall bias and providing high ecological validity (Hofmann, 2015).

Boris van Leeuwen

Hormonal Origins of Economic Preferences

Why do some people take risk, while others avoid risk? Why are some people prosocial, whereas others are selfish? Previous studies suggest that economic preferences have a hormonal basis and are influenced by pre-natal testosterone exposure. These studies rely on 2D-4D digit ratios, a suggested proxy for pre-natal testosterone exposure. Yet, 2D-4D digit ratios have recently been questioned for their validity. In contrast to previous studies, we link direct measures of testosterone at birth to later-life economic preferences in a large sample of young adults ($n = 212$). While we replicate commonly found gender differences in economic preferences, we find no significant relationship between neo-natal testosterone levels and economic preferences within gender. Moreover, for an even larger sample ($n = 595$), we estimate precise null effects for the relationship between 2D-4D digit ratios and economic preferences.

Uyanga Turmunkh

Trust as a Decision under Ambiguity

Decisions to trust in strategic situations involve ambiguity (unknown probabilities). Despite many theoretical studies on ambiguity in game theory, empirical studies have lagged behind due to a lack of measurement methods, where separating ambiguity attitudes from beliefs is crucial. Baillon et al. (2018, *Econometrica*, forthcoming) introduced a method that allows for such a separation for individual choice. We extend this method to strategic situations and apply it to the trust game, providing new insights. People's ambiguity attitudes and beliefs both matter for their trust decisions. People who are more ambiguity averse decide to trust less, and people with more optimistic beliefs about others' trustworthiness decide to trust more. However, people who are more a-insensitive (insufficient discrimination between different likelihood levels) are less likely to act upon their beliefs. Our measurement of beliefs, free from contamination by ambiguity attitudes, shows that traditional introspective trust survey measures capture trust in the commonly accepted sense of belief in trustworthiness of others. Further, trustworthy people also decide to trust more due to their beliefs that others are similar to themselves. This paper shows that applications of ambiguity theories to game theory can bring useful new empirical insights.