

International Workshop on The Cognitive Foundations of Group Attitudes and Social Interaction

Abstracts

**Giuseppe Attanasi (Dept. of Economy, University of Paris I Panthéon-Sorbonne);
joint work with Pierpaolo Battigalli (Bocconi University, Milan), Elena Manzoni (University of
Milan-Bicocca, Milan)**

“Incomplete Information Models of Guilt Aversion in the Trust Game”

We analyze models of the Trust Game whereby players have incomplete information about the guilt sensitivity of the co-player, because s/he is selected at random from a heterogeneous population. We seek to obtain qualitative predictions about the impact of making the trustee's (belief-dependent) preferences public information among the co-players, assuming that one can at least approximate such a condition in the lab. The most tractable models have a guilt neutral individual in the role of player A, the "truster". But, in experiments, subjects are typically drawn from the same population. Thus, the assumption that individuals playing in different roles have different sensitivities to guilt feelings is somewhat problematic. Simple models where it is common knowledge that the "truster" is selfish are consistent with a theory whereby the possibility of guilt feelings is triggered by the game role, and only player B, the "trustee", can feel guilt. We also analyze models with role-independent guilt sensitivity. We favor models with heterogeneous beliefs in (Bayesian) equilibrium because they accord better with experimental evidence. Yet, when we couple such feature with role-independent guilt sensitivity, we obtain less tractable models. The best compromise between tractability and the need to organize experimental data under the assumption of guilt aversion seems to be a model with a selfish "truster" (role-dependent guilt sensitivity) who does not know the objective distribution of the guilt-aversion parameter, and a guilt-averse "trustee" who does not know the distribution of epistemic types of the "truster"s.

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**Jean-François Bonnefon (CLLE, Toulouse);
joint work with Astrid Hopfensitz (TSE, Toulouse) and Wim De Neys (CNRS, Paris)**

“Trusting gut feelings about trust”

The capacity to trust wisely is a critical facilitator of success and prosperity, and it has been conjectured that people of higher intelligence were better able to detect signs of untrustworthiness from potential partners. In contrast, we report five Trust Game studies suggesting that reading trustworthiness off the faces of strangers is a modular process. Trustworthiness detection from faces is independent of general intelligence and effortless, and pictures that include non-facial features such as hair and clothing impair trustworthiness detection by increasing reliance on conscious judgments. However, people largely prefer to make decisions from this sort of pictures. In sum, trustworthiness detection in an economic interaction is a genuine and effortless ability, possessed in equal amount by people of all cognitive capacities, but whose impenetrability leads to inaccurate conscious judgments and inappropriate informational preferences.

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Rosaria Conte (LABSS group, ISTC-CNR, Rome)

“Retaliation, punishment and sanction. Cognitive modelling and experimental data”

A cognitive model of the similarities and differences between different reactions to damages inflicted by others, - with special reference to retaliation, punishment and sanction - will be presented. These will be shown to vary on cognitive properties, including anticipation and influencing. In particular, the difference between punishment and sanctions will be analyzed at some length, and the analysis will be tested via the results of cross-methodological experiments.

[Slides](#)

Robert Demolombe (IRIT, Toulouse)

“An analytical decomposition of trust in terms of mental attitudes”

Trust is defined as a truster's belief in the fact that if he has some given goal, then this goal will be achieved. This belief may be supported either by empirical observations or by trust in the fact that there is some trustee who has the ability to achieve the goal and that will attempt to achieve it. This trust may also be supported by the fact that if the trustee has adopted the intention to attempt to achieve the goal, then he does attempt to achieve this goal. Trust in the trustee's intention adoption may be supported either by trust in norms fulfilment, or by trust in fulfilment of a contract between the truster and the trustee, or by trust in trustee's altruism.

This analytical decomposition of trust in terms of the different kinds of the trustee's attitudes is analyzed in the framework of modal logic. However, we focus on the relationships between these attitudes and we leave open a detailed formalization of the mental attitudes themselves like beliefs or intentions.

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Edith Elkind (Computer Science Dept., University of Singapore)

“An introduction to cooperative game theory”

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Astrid Hopfensitz (TSE, Toulouse);

joint work with Pepita Miquel (TSE, Toulouse)

“Public good contributions among coffee farmers in Costa Rica: co-operativists and private dealers”

In this paper we present an experimental study on coffee farmers in Costa Rica that aims at investigating how experience with real world institutions (cooperatives or free market traders) shapes decisions in an unrelated anonymous decision situation. Coffee farmers participated in experimental public good games with partners drawn either from their own or different from their own background (members of a cooperative or free market participants). We observe that while free market participants are largely uninfluenced in their decisions by the identity of their partners, cooperativists strongly react to it. We further predict behavior of cooperativists in the experimental game through real world behavior, experience and motivations for cooperative membership. We specifically observe that labels that create specific institutional constraints ('fair trade', rainforest alliance) have a strong effect on behavior.

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Andrew I.J. Jones (Dept. of Computer Science, King's College, London)

“On the attitude of trust”

The talk will explore the application of modal logics of belief, knowledge and desire to the formal representation of such attitudes as trust, hope, fear and distrust. It will be argued that the proposed analyses raise some questions about the appropriateness of using modal system KD45 for the logic of belief.

[Slides](#)

Jérôme Lang (Computer Science Dept., University Paris Dauphine)

“An introduction to computational social choice”

[Slides](#)

Emiliano Lorini and Frédéric Moisan (IRIT);

joint work avec Astrid Hopfensitz (TSE) et Giuseppe Attanasi (Dept. of Economy, University of Paris I Panthéon-Sorbonne)

“The Effects of Social Ties on Coordination: Conceptual Foundations for an Empirical Analysis”

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Stacy Marsella (ICT, University of Southern California)

“Hot Blooded Virtual Automatons”

A growing body of work in psychology has documented the functional role of emotions in human social and cognitive behavior. This has led to a significant growth in research on computational models of human emotional processes, driven by several concerns. First, there is increasing demand to use computational methods to simulate, and study, human emotional and social processes. Second, findings on the role that emotions play in human behavior have motivated artificial intelligence and robotics research to explore whether modeling emotion processes can lead to more intelligent, flexible and capable systems. Further, as research has revealed the deep role that emotion and its expression play in human social interaction, researchers have proposed that more effective human computer interaction can be realized if the interaction is mediated both by a model of the user’s emotional state as well as by the expression of emotions.

In this talk, I will discuss the computational modeling of emotions and its relation to cognitive and behavioral processes. The discussion will be cast in the context of a particular application area, virtual humans. Virtual humans are autonomous virtual characters that are designed to act like humans and socially interact with them in shared virtual environments, much as humans interact face-to-face with other humans. The simulation of emotions has emerged as a central challenge of virtual human architectures, as researchers have sought to endow virtual characters with emotion to facilitate their social interaction with human users.

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Andrew Ortony (Northwestern University)

“From Cognition to Emotion: An Overview of OCC”

For better or for worse, the OCC (Ortony, Clore & Collins, 1988) model of the Cognitive Structure of Emotions has become the most widely-used model in computational systems that involve emotion modeling. In this talk, I will give a general overview of the model and then discuss important aspects of emotion modeling that it does not (and was not designed to) address. In addition I will briefly raise a few issues relating to the affect-personality connection that I think need to be taken into account when designing "emotionally intelligent" computer systems.

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Rainer Reisenzein (Institute of Psychology, University of Greifswald, Germany)

“Social Emotions from the Perspective of the Computational Belief-Desire Theory of Emotion”

CBDTE is a (sketch of) a computational model of the Belief-Desire Theory of emotion. Its central assumption is that a core subset of emotions are products of hardwired mechanisms whose primary function is to subserve the monitoring and updating of the central representational system of humans, the belief-desire system. According to CBDTE, emotional mechanisms are analogous to

sense organs; however, instead of sensing the world, they sense the state of the belief-desire system and signal important changes in this system, in particular the fulfilment and frustration of desires and the confirmation and disconfirmation of beliefs. In this contribution I discuss how CBDTE explains social emotions, using the examples of pity and guilt. The basic idea is that social emotions are feelings of pleasure and displeasure that differ from other pleasure and displeasure feelings in having a special cognitive and motivational background (Reisenzein, 2010). On the basis of this explication, I then re-examine the question of the evolutionary function of social emotions (see also, Reisenzein & Junge, 2012).

References:

- Reisenzein, R. (2010). *Moralische Gefühle aus der Sicht der kognitiv-motivationalen Theorie der Emotion [Moral emotions from the perspective of the cognitive-motivational theory of emotion]*. In M. Iorio & R. Reisenzein (Hrsg.). *Regel, Norm, Gesetz. Eine interdisziplinäre Bestandsaufnahme* (S. 257-283). Frankfurt am Main: Peter Lang Verlag.
- Reisenzein, R., & Junge, M. (2012). *Language and emotion from the perspective of the computational belief-desire theory of emotion*. *Lodz Studies in Language* (in press).

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Giovanni Sartor (Law Dept., Eur. University Institute, Florence)

“Responsibilities and liabilities”

The paper will provide a logical analysis of different notions of responsibility in social, moral and legal frameworks. It will also examine the connection between responsibility and liability, meant as the subjection to a sanction. Finally, the way in which liabilities can influence actions will be considered.

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Hans Bernhard Schmid (Dept. Of Philosophy, Vienna University)

“Plural Self-Awareness: The Cognitive Foundation of Shared Intentional Attitudes”

What kind of knowledge about himself and the relevant others must an agent have in order to share with them an intentional attitude, such as joint intention or shared belief? Different received accounts of shared intentional attitudes have come up with different answers to this question, most of them involving some kind of common knowledge or mutual belief about each participant's attitude. In my paper, I will argue that the relevant attitude is a disposition of the group members to be consciously aware of the attitude in question as theirs, collectively, and that this involves plural self-awareness of the pre-reflective and non-thematic kind in the exact same way as individual intentionality involves the disposition to be self-aware of one's individual intentional states as one's own. I will argue that plural self-awareness cannot be analyzed any further, and that it is the fundamental fact constitutive of human commonality.

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Christophe Sibertin-Blanc (IRIT)

“Group cohesion and regulation”

According to the methodological individualism paradigm, the gathering of individuals does not produce the emergence of a new entity inside this gathering. To constitute a group is rather a property of a set of individuals and resources, which depends on the way the individuals use the resources, especially interaction resources. For a given set of individuals and resources, this property is more or less fulfilled, what is called its degree of cohesion. As the individuals perceive this cohesion, the regulation of their cognitive and emotional attitudes, and thus their behaviors, takes place.

Nicolas Troquard (LOA group, ISTC-CNR, Trento)

“Coalitional agency and evidence-based ability”

The logics of “bringing it about” have been part of a prominent tradition for the formalization of individual and institutional agency. Our objective here is to extend Elgesem’s logic of individual agency and ability to coalitions.

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Luca Tummolini (GOAL group, ISTC-CNR, Rome); joint work with Giulia Andrighetto and Daniela Grieco

“Guilt-aversion: a servant of two master”

Guilt-aversion has been proposed as a belief-dependent preference that can motivate pro-social behaviour like promise-keeping. If a promisor is guilt-averse, he will be averse to let down others' payoff expectations. Indeed, if this were true, guilt-aversion might also provide a micro-foundation of social norms in general. However, empirical evidence is inconclusive in supporting guilt-aversion theory. As far as promise-keeping is concerned, it has been suggested that existing empirical evidence is better explained by a preference for keeping one's word. In this talk, I will argue that the theory of guilt-aversion (1) has a too broad domain of application, (2) should focus on entitled (and not empirical) expectations, and (3) is unfit to explain norm-compliance. Finally, I will suggest that if one discriminates between two related but distinct senses of guilt, guilt-aversion theory might improve its explanatory value with respect to empirical evidence. Promise-keeping is a complex phenomenon that requires a more articulated theoretical framework than guilt-aversion theory.

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Raimo Tuomela (Dept. of Philosophy, University of Helsinki and University of Munich)

“Collective intentions”

The paper regards the notion collective intention as ambiguously referring to an intention ascribed to a group or to an intention ascribed to group members in a collectively. This paper focuses on (functional) group agents' intentions, joint intentions ascribed to several individuals collectively and we-intentions understood as intentions of individuals to participate in joint action as group members. The paper concentrates on collective intentions that are conceptually based on the notion of the group and on having such an intention in the “we-mode”. Joint intentions are central in that we-intentions conceptually depend on them. Ontologically, joint intentions exist as relational properties between two or more individuals collectively viewed, individual agents being the only causal motors involved.

The we-mode requires we-thinking as a group member and the fulfillment of the criteria of the presence of a group reason, the satisfaction of a collectivity condition, and of the existence of the participants' collective commitment to the intention. The we-mode contrasts with the weaker individualistic, I-mode way of holding an attitude. There are functional differences (concerning e.g. action-guidance) between we-mode and I-mode intentions.

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