Deliberation, Belief Aggregation, and Epistemic Democracy
May 30 - June 1, 2018

Paris

Program

Wednesday, May 30

Morning session (Chair: Christina Pawlowitsch)
  9h00-9h10 Welcome coffee
  9h10-9h15 Opening remarks
  9h15-10h15 Scott E. Page: *Re-Interpreting Condorcet: Foundations and Incentives for Collective Accuracy*
  10h15-10h30 Discussion
  10h30-10h45 Coffee Break
  10h45-11h45 Rajiv Sethi: *Culture and Communication*
  11h45-12h00 Discussion

12h00-13h30 Lunch and Coffee (at Jardin de Luxemburg, weather permitting)

Afternoon session (Chair: Xiangyu Qu)
  13h30-14h30 Hélène Landemore: *When Democratic Theory Meets Political Epistemology: Epistemic Democracy as a Research Program*
  14h30-14h45 Discussion
  14h45-15h45 Kai Spiekermann: *Truth in Politics: Finding Your Epistemic Peers*
  15h45-16h00 Discussion
  16h00-16h15 Coffee Break

  16h15-17h15 Open panel discussion, led by Antoine Billot and Jérôme Lang

Afternoon session continued (Chair: Xiangyu Qu)
  17h15-18h15 Erik J. Olsson: *The Epistemology of Social Networks: A Bayesian Account*
  18h15-18h30 Discussion

Thursday, May 31

Morning session (Chair: Stéphane Zuber)
  9h00-9h15 Welcome coffee
  9h15-10h15 Stephan Hartmann: *Modeling Collective Decision Making*
  10h15-10h30 Discussion
  10h30-10h45 Coffee Break
  10h45-11h45 Umberto Grandi: *Opinion diffusion as aggregation*
  11h45-12h00 Discussion

12h00-13h30 Lunch and Coffee (at Arènes de Lutèce, weather permitting)

  13h30-14h30 Open panel discussion, led by Brian Hill and Philippe Mongin

Afternoon session (Chair: Jean-Marc Tallon)
  14h30-15h30 Dimitri Landa: *Deliberation as Self-Discovery*
  15h30-15h45 Discussion

15h45-16h00 Coffee Break
16h00-17h00 Catherine Hafer: *Cognition, Argumentation, and Informed Choice*
17h00-17h15 Discussion
17h15-18h15 Richard Bradley: *Learning from Others*
18h15-18h30 Discussion

19h30 Banquet dinner at **Tintilou** (37 bis Rue de Montreuil, 75011 Paris; closest metro is **Faidherbe-Chaligny** on Metro **Line 8**.)

Friday, June 1

Morning session (Chair: Jean-François Laslier)
  9h00-9h15 Welcome coffee
  9h15-10h15 Bernard Chazelle: *Opinion Dynamics Out of Equilibrium*
  10h15-10h30 Discussion
  10h30-10h45 Coffee Break
  10h45-11h45 Fabio Fagnani: *Centrality, consensus, wisdom of crowds in network models*
  11h45-12h00 Discussion

12h00-13h30 Lunch and Coffee (at Jardin des Plantes, weather permitting)

  13h30-14h30 Open panel discussion, led by Mikaël Cozic and Juliette Roussin

Afternoon session (Chair: Eric Danan)
  14h30-15h30 Franz Dietrich: *Pooling opinions and their informational basis*
  15h30-15h45 Discussion
  15h45-16h00 Coffee Break
  16h00-17h00 Mark Thordal Le Quement: *Disliking to disagree*
  17h00-17h15 Discussion
  17h15-17h30 Closing remarks

Presentation abstracts

Wednesday morning

Scott E. Page (Complex Systems, Political Science & Economics, U. Michigan – Ann Arbor)
Re-Interpreting Condorcet: Foundations and Incentives for Collective Accuracy

Abstract. The Condorcet Jury Theorem assumes independent signals of truth or innocence that when aggregated produce a more accurate signal. In this paper, I unpack the independence assumption, asking when and how actually signals would disagree. I make a distinction between complex and randomness and discuss the limits of accuracy. I also discuss the role of incentives in creating the diverse information structures and models necessary for accurate collective judgements.

Rajiv Sethi (Economics, Barnard College, Columbia University, and the Santa Fe Institute)
Culture and Communication.

Abstract. A defining feature of culture is similarity in the manner in which information about the world is interpreted. This makes it easier to extract information from the beliefs of those within one's own group. But this information itself may be of low quality if better informed sources lie

elsewhere. Furthermore, observing individuals outside one's culture deepens our understanding not only of those individuals, but also of their group. We model this process, using unobservable, heterogeneous priors to represent fundamental belief differences across individuals; these priors are correlated within but not across groups. Within this framework, we obtain the following results. First, groups that are smaller and have higher levels of correlation in perspectives will be more likely to exhibit homophily to begin with. If the correlation in perspectives is sufficiently high, then this homophily persists over time, resulting in homogeneity and insularity in observational patterns. If not, then persistent behavioral heterogenity can arise both within and across groups, even if individuals in the same group are identical at the outset. Patterns of observation exhibit considerable structure. Under certain conditions --which depend on the variability across individuals in the quality of information, initial uncertainty about the perspectives through which this information is filtered, and the degree to which these perspectives are correlated --individuals in each group can be partitioned into two categories. One of these exhibits considerable homophily, rarely if ever stepping outside group boundaries, while the other is unbiased and seeks information wherever it is most precise.

Wednesday afternoon

Hélène Landemore (Political Science, Yale University)
When Democratic Theory Meets Political Epistemology: Epistemic Democracy as a Research Program.

Kai Spiekermann (Political Philosophy, London School of Economics)
Truth in Politics: Finding Your Epistemic Peers

Abstract. Proponents of epistemic conceptions of democracy think that competence to track the truth is a necessary condition of good government. Skeptics insist either that pursuing "the truth" in politics does more harm than good, or that there are no truths to be tracked. One way to sidestep this debate is to allow for multiple standards of correctness, with different individuals pursuing different standards. This move raises a new epistemic question: What is in one's own best interest? To find out, it is helpful to ask one's epistemic peers. However, identifying one's epistemic peers is not a trivial task. To demonstrate, I consider a stylized political setting, an electoral competition of 'Masses' and 'Elites'. To succeed, the Masses need to know which alternative on offer is truly in their interest. The Masses can pool their privately held information in a pre-election ballot to reliably identify what is in their interest and vote in solidarity for the identified alternative. This paper investigates the process of finding the relevant peer group before such information pooling can take place. It models this group formation process as dynamic network change. The simulations show that the Masses can succeed, but they also suggest reasons why the Elites may ultimately be better at identifying alternatives that promote their true interests.

Antoine Billot (Economics, Université Paris 2) and **Jérôme Lang** (Computer Science, CNRS and Université Paris Dauphine): *Open panel discussion*

Erik J. Olsson (Philosophy, Lund University)
The Epistemology of Social Networks: A Bayesian Account

Abstract. Many of us are participating in social networks, whether online or offline. Indeed, many use their social networks as their main source of information. Can we say anything interesting about how the fact that we communicate in networks influences our epistemic positions? Are we thereby better off if our main goal is to arrive at true beliefs about the world on interesting matters?

In his seminal 1999 book, Alvin Goldman outlines a theory of veritistic (i.e. truth-centred) social

epistemology which promises to shed light on these and related issues by providing a way of assessing the truth-conduciveness or "veritistic value" of a social process. Interaction in social networks would be a case in point. However, as Goldman himself is acutely aware, his social epistemology faces numerous challenges. Some are of a principled kind, others of a more practical nature. Goldman is surprisingly unassertive in his attempts to deal with the objections.

In this talk, I outline and defend an epistemology of social networks based on Goldman's work. I address three main challenges for that account: the truth objection, the computational objection and the scoring rule objection. The first objection basically states that it is impossible to determine the truth-conduciveness of a social practice because we don't know what the truth is. The second objection states that, even if we knew what the truth is, it would be practically impossible to actually compute the truth-conduciveness of a social practice. These objections are raised, but in my view inconclusively dealt with, by Goldman himself. The third, less fundamental, objection states that Goldman's simple way of measuring truth-conduciveness (veritistic value) is flawed (Kopec, 2012). I argue that all these challenges can be overcome.

The talk develops and extends ideas that were first published in Olsson (2011).

References.
- Goldman, A. I. (1999). *Knowledge in a social world*, Oxford University Press.
- M. Kopec (2012). We ought to agree: a consequence of repairing Goldman's group scoring rule. *Episteme*, 9(2): 101-114.
- E. J. Olsson (2011). A simulation approach to veritistic social epistemology. *Episteme*, 8(2):127-143.

Thursday morning

Stephan Hartmann (Philosophy, Ludwig-Maximilians-Universität München)
Modeling Collective Decision Making

Abstract. There are various ways how groups can make a decision. They can, for example, simply take a vote or they can deliberate and arrive, if all goes well, at a consensus that everybody endorses. But how does one assess the quality of a collective decision? And which procedures are better than others given certain criteria? In this talk, I examine three examples to address these questions. These examples are often quite applied and relate to questions in public policy and social psychology. At the same time, all examples have a philosophical twist and relate to discussions in formal epistemology and social epistemology. The first example considers the decision-making in the European Union. We ask: How shall the various nations be represented in the Council of Ministers? What is the fair weight of a nation in this important decision-making committee? The second examples asks under which conditions it is better for a group to deliberate and to arrive at a consensus than to simply take a vote on a yes-no question. The third and final examples considers biases that show up in group deliberations. More specifically, I will show that under rather general conditions a structural bias (the so-called anchoring effect) occurs even if the different group members are individually boundedly rational. Each example involves a model which will be explored using computer simulations.

Umberto Grandi (Computer Science, IRIT, Université de Toulouse)
Opinion diffusion as aggregation.

Abstract. Many of the classical models for opinion diffusion on social networks are based on simple representations of opinons such as 0-1 decisions or real numbers, and are therefore not well-

suited to deal with complex qualitative representations of individual opinions, such as preferences (e.g., linear or weak orders over a set of alternatives), qualitative beliefs, or binary views over interconnected issues. In this talk I will survey a set of recently introduced models for opinion diffusion based on techniques from preference and judgment aggregation. All models are discrete-time iterative processes, where at every step one or more individuals perform an opinion update by aggregating the opinions of neighbouring individuals. I will present a number of results that investigate the termination of such iterative processes, depending on the topology of the network and on the aggregation procedure used, as well as the properties of the opinion profiles at termination (consensus, "aligned" profiles...).

Thursday afternoon

Brian Hill (Economics and Philosophy, CNRS and École des Hautes Études Commerciales, Paris) a n d **Philippe Mongin** (Economics and Philosophy, CNRS and École des Hautes Études Commerciales, Paris) *Open panel discussion*

Dimitri Landa (Political Science, New York University)
Deliberation as Self-Discovery

Catherine Hafer (Political Science, New York University)
Cognition, Argumentation, and Informed Choice

Richard Bradley (Philosophy, London School of Economics)
Learning from Others

Abstract. What others say can legitimately influence our own opinions in at least two different ways. Firstly, they can deliver new information that we can draw on to improve our opinions. And secondly, they can draw our attention to possibilities that we were previously unaware of or had forgotten about. In this talk I will present a simple model in which these two modes of influence can be distinguished and explore the different constraints that they place on opinion formation and revision. Finally, I will look at the implications for strategies of persuasion in group deliberations.

Friday morning

Bernard Chazelle (Computer Science, Princeton University)
Opinion Dynamics Out of Equilibrium

Abstract. One of the key features of any living system is to stay away from equilibrium. The same is true of common processes in opinion formation and social learning. The current scarcity of techniques for out-of-equilibrium systems points to the need for a radical rethinking of the current approach to multiagent dynamics in that context. We discuss some of the issues at stake.

Fabio Fagnani (Mathematics, DISMA Politecnico di Torino)
Centrality, consensus, wisdom of crowds in network models

Abstract. In this talk, we will review the concept of Bonacich centrality for networks and its connections with the famous French-De Groot averaging model and the so-called 'wisdom of crowds' phenomenon. We will also consider some recent research lines regarding the sensitivity/resilience of such concepts with respects to local perturbations of the network. In the final part of the talk, we will extend our analysis to a different type of centrality, known as page-

rank centrality, and discuss some recent applications in economic networks.

Friday afternoon

Mikaël Cozic (Philosophy, Université Paris 12 and IHPST) and **Juliette Roussin** (Political Philosophy, Collège de France) *Open panel discussion*

Franz Dietrich (Economics and Philosophy, CNRS and Paris School of Economics)
Pooling opinions and their informational basis

Mark Thordal Le Quement (Economics, University of East Anglia)
Disliking to disagree

Abstract. We study disclosure by a disagreement-averse sender facing a receiver with different prior beliefs. With a binary state, full disclosure is feasible only if the receiver's prior is close enough to one minus the sender's prior. If full disclosure is infeasible, only information congruent with the prior bias of the most extreme player is fully disclosed. The active avoidance of perceived disagreement can paradoxically lead to larger (perceived or actual) disagreement in beliefs from an ex ante perspective. Disagreement aversion arises endogenously within simple games of compromise decision making and delegation. Finally, moderate prior heterogeneity encourages public information acquisition in committees featuring disagreement averse players.

Banquet

The banquet will be Thursday evening at 19h30, at the restaurant **Tintilou** (37 bis Rue de Montreuil, 75011 Paris). Vegetarian options will be available. The banquet is **free** for all conference participants. You are also welcome to invite guests to accompany you, but they will have to pay for their dinner (50 euros per person).

The closest metro station is **Faidherbe-Chaligny**, which is on Metro **Line 8**. It is about 30 minutes by metro, but is also a pleasant 50 minute walk across eastern Paris. After the Thursday session ends, we can walk there as a group. Here is a map:

Conference organization team

Marcus Pivato (Economics, Université de Cergy-Pontoise)

With the invaluable administrative assistance of Yolande Gustave (Université de Cergy-Pontoise).