“Let’s act! -- Formal models of collective agency, intention, and responsibility”

Date: 4/8
Presented by: Frederik Van De Putte (CLPS, Ghent University)

**General Aim of the Meeting**

Collective agency has received significant interest in various domains over the last few decades: social choice theory, ethics, metaphysics, economy, game theory, artificial intelligence, etc. Among philosophers, there has been a growing consensus that group agency is distinct from the mere sum of acts by individuals. It is often claimed that a so-called “shared intention” is crucial for this distinction. However, the way this notion is spelled out differs significantly. For instance, Gilbert [1] argues against Bratman’s reduction of shared intention in terms of a (suitably structured) amalgam of personal intentions [2]. One basic disagreement between both authors concerns the role of each member’s obligations towards the group, as constitutive of shared intention.

STIT logic – the logic of “seeing to it that” [3, 4] – has proven very successful for the analysis of individual agency and the associated obligations. In recent work, Broersen and others have extended this framework to handle the interaction between choice, knowledge, and intentions (see e.g. [5,6]).

Nevertheless, from the perspective of groups, many logico-philosophical issues remain unsettled. How should we model group agency in a way that it relates to individual agency, but is not reducible to it (as in classical STIT approaches)? Do we need shared intentions at all in order to arrive at an irreducible concept of joint action? If so, can we define shared intentions in terms of individual intentions (along the lines of Bratman’s theory of planning agents) and does this allow us to explicate “acting as a group”? How can we model an agent’s obligations towards a group that it is a member of, and (when) are these the same as his personal obligations? When and how exactly can a group “as a group” achieve more than a mere collection of its members?

This meeting’s aim is to bring together fresh views on these matters, and to stimulate new formal work in order to help clarify ongoing debates in the aforementioned disciplines. In doing so, we want to bridge the gap between, on the one hand, the philosophical literature on joint action, and on the other hand, formal work on group agency.

**References**


Abstracts of the Contributed Talks (in the order of the schedule)

Allard Tamminga (University of Utrecht, University of Groningen) & Frank Hindriks (University of Utrecht): Collective Obligations and Member Obligations

Most benefits and harms in the socio-economic realm are brought about by collectives rather than by individuals. Individuals can be held morally responsible for their actions. But does it also make sense to hold a collective morally responsible for the things it does or fails to do? An affirmative answer immediately raises the question of whether collective moral responsibility is reducible to the individual moral responsibility of the collective’s members. Individualists say yes, collectivists say no. If the individualists are right, what kind of reduction proves them right?

As moral responsibility presupposes moral obligations, we address the issue by investigating collective obligations. Not fulfilling a collective obligation is a necessary, but not a sufficient condition for being collectively blameworthy: if a collective is blameworthy, then at least it does not fulfill a collective obligation. We study collective obligations by way of a deontic logic that models collective actions, abilities, obligations, and their interrelations.

The structure of our talk is as follows. First, we present a deontic logic of collective action. This deontic logic is then used to study logical relations between collective obligations and individual obligations. We list some principles about collective obligations and use our deontic logic to determine whether they are valid or not. Secondly, we argue that when assessing the obligations of an individual agent, we must distinguish individual obligations from member obligations. We argue that collective obligations are not logically reducible to individual obligations, but that, given some well-defined assumptions, collective obligations do imply member obligations towards the collective. It follows that each individual has a member obligation towards the collective to help ensure that the collective fulfills its collective obligation. In conclusion, we argue that, because member obligations presuppose collective obligations, our formal analysis supports collectivism.

Marek Sergot (Imperial College, London): Some forms of collectively seeing to it that

In philosophical logic, most work on the logic of action focusses on agency, that is, on characterising the conditions under which one can say that it is the actions of a particular agent that are the cause of, or responsible for, a certain outcome or state of affairs. The semantics is usually based on a branching-time structure of some kind. The best known examples are probably the STIT logics associated with Nuel Belnap and colleagues, though there are other examples, including a formalism of my own that combines a transition-based account of action with “sees to it that” modalities.

Often, it is not the actions of an individual agent but those of a set of agents, collectively, that bring about a certain outcome. Collective agency has received comparatively little attention. I am going to map out several different forms, several different senses in which one can say meaningfully that it is the actions of a particular set of agents, collectively, that are responsible for a certain outcome. This outcome may be unintentional, and perhaps even accidental; I am deliberately factoring out aspects of joint action such as joint intention, communication between agents, awareness of other agents’ intentions and capabilities, even the awareness of another agent’s existence. The aim is to investigate what can be said about collective agency when all such considerations are ignored, besides mere behaviour. In passing I will relate my account to some tentative suggestions made by Belnap and Perloff in 1993 on the distinction between what they call “inessential members” and “mere bystanders”. I will adjust some of their conjectures and distinguish further between what I call “potentially participating bystanders” and “impotent bystanders”.
Gillman Payette (University of British Columbia): Group agents – do they make sense?

To address this question, I will discuss the meaning of Martin van Hees' theorems on group responsibility. His theorems say, roughly, that a decision method which always assigns individual responsibility uniformly over a group must be dictatorial. The results are formulated using strategic game forms as decision procedures. However, I suggest a different formal framework for representing these results. The reason for the change is that within a game form the decision procedure and overall power structure are mixed together, whereas I would like to separate them. To that end, I use the formal apparatus of effectivity functions to represent the overall power structure of a society/group, and a representation of decision procedures is then grafted on to that. This method allows me to look, separately, at the properties of decision procedures, and see how they relate to van Hees' results.

I will also change focus from responsibility to the more fundamental property of group agency. If there are problems for group agency, then this may pose problems for responsibility—as long as causal agency is a part of responsibility. Along those lines I look at variations of van Hees' problematic conditions. The conditions he imposes on decision procedures require that there always be some individual who is responsible, and that all of the parties to the decision share responsibility in the same aspects of the decision and in the same manner. I offer different interpretations of these requirements to see whether van Hees' results can be avoided in the case of group agency. The switch from responsibility to agency and the framework I introduce, bring the results into contact with the treatment of agency in stit logic. I end by discussing the upshot of the results for that formalism.

Emiliano Lorini (IRIT, Toulouse): A logical analysis of responsibility attribution: emotions, individuals and collectives

In my talk I will provide a logical analysis of the concept of responsibility attribution; that is, how agents ascribe responsibility about the consequences of actions, either to themselves or to other agents. The talk is divided in two parts. The first part investigates the importance of the concept of responsibility attribution for emotion theory in general and, in particular, for the theory of attribution emotions such as guilt, pride, moral approval and moral disapproval. The second part explores the collective dimension of responsibility attribution and attribution emotions, namely the concepts of collective responsibility and collective guilt. The proposed analysis is based on an extension of the logic STIT with three different types of knowledge and common knowledge modal operators, depending on the time of choice: before one’s choice, after one’s choice but before knowing the choices of other agents, and after the choices of all agents have become public.
Jan Broersen (University of Utrecht): Objectivity versus subjectivity and contribution versus avoid ance in a formal theory of shared responsibility

In this talk I will consider formal theories of shared or partial responsibility, such as the one put forward by van Hees and Braham. I will argue that in theories like these there are (at least) two distinctions that have to be made. The first is a distinction between objective and subjective elements in attributions of responsibility for effects. This distinction is linked – as I will argue – to different notions of responsibility and from a logical point of view it seems wise not to combine them in one and the same semantics for responsibility. The second is a distinction between aspects of contribution and aspects of avoidance in shared responsibility for the outcome of a joint action. I will ask whether, from a logical standpoint, both aspects should be dual or not. From a game theoretic standpoint – the standpoint taken by van Hees and Braham – these distinctions may not seem very important, but from a logical viewpoint aimed at capturing the logics of shared agency and responsibility, they are. I will investigate logical properties aimed at characterizing the different positions along the two mentioned dimensions.

John Harty (University of Maryland): Knowledge based oughts for individuals and groups

In a previous book (Agency and Deontic Logic, OUP, 2001), I developed a framework in which individual rights and wrongs could be compared to group rights and wrongs. For example: if a group does the right thing, does it follow that each individual from that group does the right thing? If each individual from a group does the right thing, does that mean that the group itself does the right thing? The framework within which I addressed these questions was that of standard stit logic, with no knowledge or intensional concepts at all. In recent work, following many others, I have explored ways of introducing knowledge into a stit logic incorporating action types. The work I propose to present at this meeting involves reformulating the earlier theory into this richer framework, and exploring connections between the knowledge-based obligation of individuals and groups.

Roberto Ciuni (Ruhr-Universität Bochum): Knowledge and Agency of Groups under Uncertainty

An interesting insight on the propositional attitudes of groups can be provided by the analysis of the decision-making problem of a group – that is, how a group of agents makes a decision in view of the best responses of all the agents in the group. Indeed, this will crucially reveal the need for given mechanisms of knowledge distribution from individuals to groups, and connections between individual updates and a change in the information state of the given group. In this talk, I approach the problem by analysing the connection between group agency and group knowledge in situations where we have uncertainty of an entire group alongside the uncertainty of the individuals in the group. This is done by a semantics that (1) combine the basic features of STIT logic with the representation of uncertainty in terms of type-spaces from Bayesian Games, (2) allows for announcements that reveal correct type-spaces and decrease the uncertainty of the group, while at the same time modelling notions of individual and distributed knowledge and belief. The talk is divided in two parts. In the first part, I introduce the ‘statics’ of the framework, including a notion of ‘knowingly seeing to it that’ and a notion of belief based on a plausibility ordering. In the second part, I introduce the ‘dynamics’, that is the update mechanism that allows individuals and groups to decrease their uncertainty about the background of their interaction. Particular attention will be paid to two topics: (1) the way updates on one agents’ correct type affect the knowledge of an entire group including the agent, and (2) the issue of Ramsey conditionals connecting the knowledge (belief) of a group conditional on some type and what the group unconditionally comes to know (believe) after the type is announced.
**Programme Schedule**

The meeting will start at 9h20. Each talk will take 1 hour (including 15 minutes of Q&A and discussion). The coffee breaks will coincide with those of the main track of CLMPS2015.

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