

# Introduction

## *Beyond the Big Four and the Big Five*

**SARA RACHEL CHANT, FRANK HINDRIKS,  
AND GERHARD PREYER**

Many of the things we do, we do together with other people. Think of attending a meeting, carpooling, and playing tennis. So how does doing something together differ from doing something on your own? Presumably, this question cannot be answered in terms of external behavior only. There need not be any outward difference between my raising an arm and my arm's rising. Similarly, there need not be any behavioral difference between two people who happen to walk adjacent to each other and the same people going for a walk together. Most answers to the question of how my raising my arm differ from my arm's rising refer to the intention involved in the former but not in the latter. In response to the question about how going for a walk together differs from merely walking adjacent to each other, an answer that has become increasingly popular in the past two to three decades also refers to an intention: the collective intention to go for a walk together.

### COLLECTIVE INTENTIONALITY: THE BIG FOUR

What is a collective intention? Are there any collective intentions? If so, are there any other collective attitudes, such as beliefs and desires? Questions such as these are answered by a theory of collective intentionality. The four most influential theories of collective intentionality are those of Michael Bratman, Raimo Tuomela, John Searle, and Margaret Gilbert. We refer to these theories

as well as to their protagonists as “the Big Four of collective intentionality.” As each of them features in some of the contributions below, we start by briefly introducing the Big Four.

Bratman (1992) provides an account of what he calls “shared cooperative activity” that is individualist: it invokes only individual attitudes and the relations between them. A shared cooperative action is distinct from mere uncoordinated actions of unrelated individuals in that the individuals who engage in it exhibit attitudes that bear particular relations to each other. Those relations are not restricted to epistemic relations, such as common knowledge. They extend to semantic relations: the relevant intentions refer to a “we”: the canonical specification of a shared intention, on Bratman’s view, is “I intend that we *J*.” And they include causal relations: insofar as shared actions are concerned, an individual possesses an intention due to the fact that the relevant other individuals do so as well.

Tuomela (1984, 2002) argues that what he calls “joint intentions” comprise sets of “we-intentions,” which are the participatory intentions held by the members of a group (see also Tuomela and Miller 1988). A “we-intention” to perform a joint action involves the intention to perform that action, a belief that a sufficient number of other individuals will participate in its performance, and a belief that others believe that there is an opportunity to perform the action. This set of beliefs at least in part explains why each individual intends to participate in the joint action. Tuomela has developed accounts of stronger and weaker varieties of collective attitudes. I-mode collective intentionality requires only private commitments. The more holistic we-mode collective intentionality involves an irreducible collective commitment.

The notion of a joint commitment forms the cornerstone of Gilbert’s (1989, 1996) theory of collective attitudes. On her view, a joint commitment cannot be reduced to individual attitudes. A joint commitment exists when two or more individuals have openly expressed their willingness to be jointly committed as a body. Gilbert uses the phrase “as a body” to signal that a whole is formed in the process that cannot be reduced to the individual members. She also draws attention to this by referring to the parties to a joint commitment as “a plural subject.” A joint commitment entails a social (i.e. nonmoral) obligation to uphold the relevant collective attitude. Joint intentions come with a right of each party to rebuke anyone who fails to do her part of the collective action. Thus, Gilbert regards collective attitudes as intrinsically normative.

Searle (1990, 1995, 2010) resists any reduction of collective attitudes to individual attitudes. He maintains that no set of individual attitudes adds up to a collective attitude no matter how interdependent they are. On this view, a collective intention is a mental state that is possessed by an individual in a collective mode due to which it is irreducibly collective. Individuals who participate

in a particular collective action derive their individual intentions from the collective intention. Searle's (1990, 415) account used to be solipsist in that a single individual could have a collective intention without bearing any particular relations to other individuals. Now he insists on each individual having beliefs about the derived intentions of the other participants (Searle 2010, 55–56).

Each of these theories is discussed in one or more of the chapters in this book. See Deborah Tollefsen (2004) for a more detailed overview of the Big Four. David Schweikard and Bernhard Schmid (2013) discuss the notion of collective intentionality both from a historic and systematic perspective. They also comment on the uses to which the notion is put insofar as collective reasoning, collective responsibility, social institutions, and human sociality are concerned. Almost all contributors draw on the work of at least one of the Big Four. A lot of them also draw on insights from a wide range of disciplines, including cognitive science, dynamical systems theory, economics, and psychology. Some are critical in that they reject a particular theory of collective intentionality, if not the very idea. Others are more constructive and develop existing theories, or propose new ones.

## PART I: COLLECTIVE ATTITUDES AND ACTIONS

The essays in this collection fall naturally into two clusters. The first is concerned with collective intentionality in general and the analysis of collective attitudes as well as of collective actions more specifically. The second addresses collective rationality. A core concern that many of the chapters in the first part share is whether collective attitudes can be reduced to individual attitudes, or eliminated altogether. Related to this, a central question is: if particular collective attitudes cannot be reduced, how are they to be analyzed? What is striking is that most of the contributions do not take this to be an all or nothing proposition. Many contributors recognize that an argument concerning, for instance, cognitive states might not transfer to motivational states. Perhaps only some attitudes can be attributed to collectives and not others.

In the first chapter of this volume, Deborah Tollefsen introduces a new theory of collective intentions that focuses on the dynamic process of maintaining coordination throughout the performance of a collective action. Tollefsen draws on empirical findings from cognitive science concerning the way in which individuals maintain control over their bodily actions over time. Her ambition is to explicate the dynamics of collective action in considerable detail in a way that is less cognitively demanding than rival theories are. She argues that a dynamic theory of collective intention serves to improve our understanding of the phenomenology of collective action and the experience of joint control.

Raimo Tuomela and Kaarlo Miller present an analysis of collective goals that extends the ideas that in particular Tuomela has developed over the past three decades. Tuomela and Miller are concerned with understanding the apparent variety of collective goals and set out to explain what makes a goal collective. They argue that collective goals are collectively accepted and that a collective goal is such that it is satisfied for one member of a collective only if it is satisfied for all. Tuomela and Miller prefix their analysis with an illustration of the uses to which they can be put. They argue that conceptions of collective goals are important not only to a number of social sciences but also for political philosophy. More specifically, they point out a number of similarities between the notion of a collective goal and Rousseau's conception of a general will.

Frederick Schmitt criticizes the widely held view that group beliefs are not proper beliefs, but are acceptances instead. Whereas belief is commonly taken to be evidence-based and involuntary, acceptance is voluntary and based on pragmatic considerations. Schmitt argues against this that acceptance is involuntary at least some of the time. He goes on to argue that it is quite possible for a group attitude to be sensitive to evidence and aim at truth. To be sure, interests of the group or its members can subvert its doxastic attitudes, but the same holds for individuals. Hence, the role that interests play is not a good reason for doubting the existence of proper group beliefs. A further point Schmitt makes is that acceptance is parasitic on belief. This entails the idea that it is not possible for an agent to accept anything without having any beliefs. All of these arguments clear the way for the idea that, in addition to acceptances, groups can have proper beliefs.

The chapter by Robert Rupert examines the question of whether cognitive states should be attributed to groups. Rupert investigates the explanatory power that cognitive states have insofar as collective actions are concerned. They seem to have such power in folk explanations. Rupert, however, argues that there are a number of disanalogies. First, none of us have first-person access to group attitudes. Second, group actions can be explained more parsimoniously in terms of individual attitudes. Rupert goes on to argue that cognitive science has not provided any evidence in favor of group attitudes. Furthermore, group behavior in animals can be explained in terms of individual cognitive processes. All of these considerations are broadly epistemic. And none of them support the idea that groups can have cognitive states.

Kirk Ludwig argues that there are no group agents. In contrast to Rupert, he approaches the issue from a semantic rather than an epistemic perspective. Rupert grants that we typically speak as if there were group agents, as when we attribute actions to corporations or blame a group for a collective action. Ludwig argues, however, that the claims we make do not logically imply the existence of group agents. Ludwig's argument revolves around a semantics that

he provides for the relevant kinds of claims that do not involve any quantification over group agents. A further implication of the proposed semantics is that there can be unintentional collective actions such that none of the individuals involved have any intention to perform their individual actions as part of a collective action. Interestingly, this puts Ludwig's theory at odds with those of the Big Four who made joint intentions and/or individual intentions the cornerstone(s) of their theories.

## SOCIAL ONTOLOGY: THE BIG FIVE

Theories of collective intentionality are part of social ontology. The ontology of the social realm includes a wide range of topics including social groups, social norms, and social institutions. A topic that currently draws a lot of attention is collective agency. The idea that is at stake in this debate is that it might be possible for a group to function as an agent in its own right. Peter French (1984) argued that the existence of such group agents has to be recognized if we are to make sense of the responsibility that organizations bear (see also Copp 2006, 2007 and Pettit 2007). More recently, Philip Pettit (2003) has argued that groups can have minds of their own. Together with Christian List, he has made this claim more precise by arguing that the beliefs of certain groups cannot be reduced to the beliefs of the individual members (List and Pettit 2011). The underlying idea is that if a group is to preserve its rationality, it will at some point have to adopt beliefs that are in some way inconsistent with those of its members.

Even if this may sound surprising at first, this phenomenon can be encountered in collective settings ranging from small committees to big companies and governments. Consider the jury of a singing competition. The jury, made up of three people, uses three criteria when selecting finalists: vocal quality, technical skill, and musical talent. When a particular singer is up for evaluation, it can happen that his average is high on all three dimensions, even though none of the jury members give him high scores on all of them. This might mean that, even though none of the jury members would have accepted him as a finalist individually, they accept him collectively. List and Pettit (2006) conclude that, rather than supervening on individual beliefs *per se*, the beliefs of group agents supervene on those beliefs in combination with the collective decision mechanism that transforms them into a collective judgment.

By assumption, all three jury members are individually rational. What the example reveals is that, if the jury as such is to form consistent beliefs and be collectively rational, it may have to take decisions that none of the members support individually. In such a situation, List and Pettit argue, there is a discrepancy between individual and collective rationality. In this respect, there

are many parallels between their views and Kenneth Arrow's (1950) work on preferences, voting paradoxes, and social welfare (List and Pettit 2004). In order for us to take the group seriously as an agent, Pettit (2003) proposes, the group has to "collectivize reason" by applying requirements of rationality such as consistency at the collective level. When this is done, the group acts as a rational and intentional agent and does in fact constitute such an agent. Due to his contributions to the literature on group agency as well as collective responsibility and sociality more generally, Pettit can—in combination with the Big Four of collective intentionality—be regarded as one of the Big Five of social ontology.

## PART II: COLLECTIVE RATIONALITY

The chapters in Part II of this volume reflect the significance of Pettit's work on collective rationality, as well as that of others. What is distinctive about these chapters is that each of them in its own way challenges the idea that there is a straightforward dichotomy between individual and collective level rationality. As is discussed in more detail shortly, Abe Roth, Paul Weirich, and Julian Nida-Rümelin each show that new perspectives on the interplay between individual and collective rationality shed a different light on the alleged discontinuities between these levels.

Melinda Bonnie Fagan asks whether scientific rationality is to be located at the level of individual scientists or at the collective level. She starts by examining scientific knowledge as a candidate for irreducible group belief. Beliefs are frequently attributed to the scientific community. Think, for example, of the claim that the physics community now believes that the Higgs boson has been observed. Note that in this example, the belief is attributed to a large, diverse, and geographically separated community of physicists. Fagan considers various arguments for and against the proposition that groups have irreducible scientific knowledge. But ultimately, she concludes that the crucial issue is not who possesses such knowledge, but how the knowledge is produced. Her contribution takes a significant step toward understanding the dynamic process by which individuals both rely upon and change the body of established scientific knowledge. She concludes that the traditional individualistic view of scientific knowledge is vindicated, whereas production of scientific knowledge is an irreducibly collective process.

The chapter by Abe Roth concerns the rationality of group agents. Roth challenges the List and Pettit argument on which group agents have to collectivize reason and apply criteria such as consistency at the group level rather than at the individual level. He argues that, in order for a group's rationality to truly override the rational concerns of the individuals, it must not be rational for the individuals to implement the group judgment. If this were the case, the group's

decision and subsequent action would be straightforwardly rational from the perspective of the individual members. For example, if the members of a committee were to realize that they were on the cusp of a collectively irrational vote, and the members of the committee were each to be penalized for such a vote, then there is no conflict between individual- and group-level decisions. It would be straightforwardly rational for the individuals to vote in such a way as to avoid those penalties and thereby to safeguard the rationality of the group. In this way, Roth raises the stakes in the debate about what Pettit has called “group minds.”

Paul Weirich argues that group actions are rational if the individual acts that constitute them are rational. He observes that individuals sometimes have conflicting goals and desires when they make decisions. Weirich goes on to acknowledge that some of the requirements that individuals can face align well with group efficiency, but that satisfying them can conflict with desires that the individuals may have *qua* individuals. The reverse is also possible. Weirich denies, however, that such cases reveal genuine conflicts between individual and collective rationality. Collective rationality does not demand individual efficiency in conditions that are not ideal for joint action. Furthermore, it is not irrational for individuals to make a trade-off between competing goals. In line with this, he argues that in the context of judgment aggregation, individuals can tolerate occasional inconsistencies without this entailing irrationality. Weirich concludes that individual rationality entails collective rationality.

And finally, Julian Nida-Rümelin argues that cooperation is to be explained in terms of collective intentionality and that cooperation thus explained is rational. He proposes a new conception of rationality that he calls “structural rationality.” Roughly, structural rationality consists in being guided by patterns of behavior that the agent approves of or accepts. Nida-Rümelin argues that, as it respects the Ramsey postulates of the utility theorem, structural rationality is a conservative extension of rational choice theory. He goes on to argue that cooperation requires the availability of a collective action that is acceptable to all cooperators. Cooperation is in part explained—and this is where collective intentionality comes in—in terms of a consensus concerning a particular action as acceptable to all. The upshot is that cooperation is to be explained partly in terms of a normative belief about action opportunities.

All of the contributions to the second part of the volume break new ground in their quest of charting individual and collective level processes, as well as the interplay between them. And most of them engage with one or more of the Big Five. Fagan resists the claim, which has been defended among others by Gilbert (2000), that scientific knowledge is irreducibly collective. At the same time, however, she acknowledges that collective processes are crucial insofar as the production of scientific knowledge is concerned.

Roth is skeptical of Pettit's (2001) claim that collective rationality sometimes requires compromising the rationality of individual members. He points out that individuals might have a stake in how collective decision processes develop. This insight takes the sting out of charges of irrationality targeted at individuals. Weirich agrees with Roth that individuals can have multiple goals, some of which pertain to collectives. He takes a further step, however, and argues that it is simply impossible for individual and collective rationality to diverge. Nida-Rümelin is also critical of alleged divergences between individual and collective rationality. He proposes a conception of structural rationality on which cooperation is often rational both individually and collectively.

These chapters on collective rationality make abundantly clear that it is no longer an option for people who contribute to social ontology to juxtapose analyses of individual and collective level phenomena and claim that there is some discrepancy. Both the conception of rationality employed and the interplay between the two levels require careful scrutiny. It may well be that the alleged discrepancies dissolve in the face of an in-depth exploration of these two issues.

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