

On Behalf of Knowledge-First Collective Epistemology

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Abstract. Can groups have beliefs? On the one hand, there is a growing number of researchers who argue that the answer to this question is ‘no’. On the other hand, extant attempts to counter this rejectionism about group belief in the literature remain unsatisfactory. Of course, if there is no such thing as group belief, the worry is that there can be no group knowledge or justified belief either. In this way, collective epistemology threatens to fall into disarray. This paper argues that a distinctively knowledge first approach to collective epistemology carries great promise, in that it can remain neutral on the issue of whether groups can host beliefs proper, while at the same time allowing us to develop workable accounts of knowledge and justification.

1. Introduction

There is a growing consensus in epistemology that groups are genuine epistemic agents in the sense that, as far as epistemology is concerned, groups are more than the sum of their members. The reason for this is that it is more and more widely agreed that groups can have epistemic

properties that none of its members have (e.g. Lackey, 2014b, 282).¹

Most importantly for present purposes, one key thought here is that groups can have knowledge that *none* of their members have individually. Cases like the following forcefully drive this point home: having responsibly evaluated the evidence in accordance with the highest epistemic standards, a jury comes to know that the accused is innocent. At the same time, each individual member privately, due to prejudice, bias, etc., does not form the corresponding belief and so fails to know this.²

What is the structure of group knowledge? Given that groups are indeed genuine epistemic agents, we may expect that, whatever the right answer turns out to be, it is going to be the same as for individual knowledge. For instance, according to the traditional view in the literature, individual knowledge is justified true individual belief, supplemented by a suitable anti-Gettier condition.³ Accordingly, the straightforward view of group knowledge is that it is ungettiered justified true group belief.

Unfortunately, trouble is looming for the straightforward view of group knowledge: there has been a growing number of researchers in recent literature who embrace a view we will henceforth refer to as *rejectionism* and according to which groups simply cannot have beliefs (e.g. Hakli, 2007; Meijs, 1999; Preyer, 2003; Wray, 2001). If this is right, then since on the straightforward view group

¹ For some representative discussions of this kind of view, see for example the essays in Brady and Fricker (2016) and Lackey (2014a).

² See, for example, Kallestrup (2016, 7) for such a case.

³ For discussion see, e.g., Shope (1983) and Ichikawa and Steup (2017).

⁴ While in a broad sense, sceptical views, expressivist views (e.g., Ridge

² See, for example, Kallestrup (2016, 7) for such a case.

³ For discussion see, e.g., Shope (1983) and Ichikawa and Steup (2017).

knowledge entails group belief, groups cannot have group knowledge either. The straightforward view of group knowledge threatens to lead straight to group knowledge scepticism. Furthermore, since groups cannot have beliefs, they cannot have justified beliefs either. In this way, collective epistemology as a whole threatens to fall into disarray.

In this paper, we do two things. First, we argue that extant collective epistemology faces a dilemma: on the one hand, rejectionism about group belief, unpacking knowledge in terms of group acceptance, remains unsatisfactorily motivated and extensionally inadequate (§2). On the other hand, extant traditional responses to rejectionism, unpacking group knowledge in terms of distributed group belief, conflate belief hosting with belief formation (§3). Second, we argue that a knowledge-first approach to collective epistemology offers us the resources to emerge from the dilemma unscathed and that, as a result, a non-sceptical approach to collective epistemology remains viable (§4 and §5).

2. Rejectionism

Any viable view of knowledge must account for the mental reality of knowledge.⁴ That is to say, it must tell us how knowledge is realized in our minds. According to the

⁴ While in a broad sense, sceptical views, expressivist views (e.g., Ridge 2007), and error-theoretic views (e.g., Olsson 2011), of knowledge lack any commitment to the mental reality of knowledge, none of these views presently enjoys any serious defences in contemporary epistemology. To the extent that error theoretic and expressivist views of epistemic discourse have received sympathetic attention, this has been primarily outside epistemology, in metanormative theory. For a metanormative critique of both kinds of proposals from a realist point of view, see, e.g., Cuneo (2007); see also, for discussion, Carter (2016, Ch. 1).

traditional view, it is the belief condition on knowledge that does the job. It captures what we will refer to as *the mental realizer* of knowledge.

The most prominent alternative to the traditional view explains the mental reality of knowledge in terms of acceptance, at least in part.

2.1 The Acceptance View

Acceptance-based views either take *acceptance* to be *the* mental realizer of knowledge (Lehrer, 1990) or *a* mental realizer of knowledge, alongside belief (Cohen, 1992). While these views were first developed in individualist epistemology, an application to collective epistemology naturally suggests itself. And, in fact, an acceptance-based account of group knowledge has been defended in some detail by Raul Hakli (2007).⁵

To see why Hakli thinks that an analysis in terms of acceptance promises to improve on an analysis in terms of group belief, it will be instructive to briefly look at why he thinks that groups cannot have beliefs. In a nutshell, Hakli takes it that beliefs are paradigmatically formed in an automatic and involuntary manner.⁶ By way of evidence, consider your perceptual belief that you are currently reading this paper. You formed this belief automatically and

⁵ The most notable competitor is the joint acceptance account of group belief. According to this view, versions of which have been defended by, e.g., Gilbert (2013), Tuomela (1992), and Tollefsen (2003), the members of a group, P, collectively believe that p if and only if they are jointly committed to believe that p as a body. For our purposes here the debate amongst the defenders of versions of this proposal is largely inconsequential. The arguments that we give here for the implausibility of group acceptance being constitutive of knowledge apply equally to joint acceptance view generally and thus to specific versions of it its proponents have developed.

⁶ See also Meijers (1999) for a notable defence of this asymmetry.

involuntarily. The trouble is that it is hard to see how whatever mental states groups are capable of hosting, they could paradigmatically be formed in this way, especially once we conceive of them as agents over and above their individual members. If this isn't immediately obvious, consider the case of the jury again. When the jury comes to know that the defendant is innocent, the jury members must agree on this view. By the same token, they do not arrive at their view in a likewise automatic and involuntary fashion. Moreover, this point holds for group views in general. That's why, according to Hakli, groups cannot have beliefs.

Crucially, acceptance differs from belief in that, unlike belief, acceptance is non-automatic and voluntary. As a result, even though it's implausible that groups have beliefs, groups may very well accept certain propositions. What exactly does group acceptance amount to? Hakli does not offer a full answer. However, he does suggest that the kind of group acceptance at issue in group knowledge that p "requires that the group members (or perhaps just the operative group members) agree that they, together, take the content p to be the view of their group." (2007, 256) Of course, this is only a necessary condition on group acceptance. But if we assume for a moment that it is also sufficient, we can easily see that, on the resulting view, group acceptance is not only possible but common. For instance, in our jury case, it is clear that the group comes out as accepting that the defendant is innocent. After all, what is going on here is precisely that the (operative) members of the group agree that they jointly adopt as their view that the defendant is innocent. In this way, opting for an account of group knowledge in terms of group acceptance continues to be

promising even if those who think that there cannot be group beliefs are right.

2.2 Problems for the Acceptance View

Unfortunately, Hakli's rejectionism remains ultimately unsatisfactory. There are two main reasons for this: first, his justification for the negative claim – i.e. that groups cannot have beliefs – fails on closer inspection. Second, his alternative proposal, in terms of acceptance, is too strong to account for all cases of group knowledge.

To see why the former is the case, recall that the main motivation put forth by Hakli (and following in the footsteps of Cohen 1989) for rejecting the idea that groups can have beliefs concerns beliefs' paradigmatic automaticity. According to Hakli, beliefs are paradigmatically formed in an automatic and involuntary manner, while whatever mental states groups are capable of hosting are not automatic, but rather, the result of careful deliberation – especially once we conceive of them as agents over and above their individual members. Consider the case of the jury again. When the jury comes to know that the defendant is innocent, the jury members must agree on this view. By the same token, they do not arrive at their view in a likewise automatic and involuntary fashion.

Note, however, that even though beliefs are plausibly paradigmatically formed in an automatic fashion – especially beliefs formed e.g. via perception or memory – it is less than plausible that automaticity is a *necessary* condition on a mental state being a belief. Indeed, beliefs based on inference are paradigmatically sourced in careful deliberation, and often so are beliefs (partially) based on

testimony: we often weigh testimonial sources before forming testimonial beliefs. If this is so, however, even if we accept that groups can only come to know via deliberation, it will not follow that group knowledge does not imply group belief.

One way to charitably reformulate the rejectionist argument, in light of this problem, would be as an inference to the best explanation, along the following lines: the vast majority of individual beliefs are automatic; group knowledge is not; the best explanation for these data is that group knowledge is not belief-based. Once again, however, we have reasons to believe this argument fails as well, on two separate grounds. First, it is not plausible that group knowledge is necessarily the result of deliberation: to see this, note that groups, just like individuals, can have implicit knowledge (which, of course, is unlikely to be sourced in active deliberation). To see this, consider the claim: ‘The government knows the budget will run out before the year ends.’ This claim can be true, intuitively, even if the members of the government haven’t sat down and jointly accepted it, and without any of the individual members having explicit beliefs on the matter. Another kind of case that serves to make this point features simple examples of presupposition. Take, for example, the lexical class of presupposition involving aspectual verbs (e.g., Simons 2001; see also Guerts and Beaver 2012). Suppose the FBI knows that China has stopped stockpiling weapons. This proposition presupposes that China *used to* stock pile weapons. Plausibly, the FBI can know the latter proposition, provided it knows the former, without explicitly coming to a view about the latter through any explicit deliberation or agreement. In this way, it

becomes clear that groups can have automatically formed knowledge as well.

If this is so, the rejectionist will have to reformulate their inference to the best explanation as follows: the vast majority of individual beliefs are automatic; the vast majority of group knowledge is not; the best explanation for these data is that group knowledge is not belief-based.

We don't trust that the second claim is correct, even in this weaker form. However, we will not press this any further, and here is why: it's just not clear that, in this shape, the argument will go through to begin with, in virtue of its conclusion not constituting the best explanation of the data in the premises. To see this, note that groups are not the only agents that, when it comes to automaticity, seem to be inclined to mostly form a particular variety of knowledge (i.e., in their case, non-automatic). Non-sophisticated cognizers – such as small children and animals – have the opposite tendency: they tend to mostly form automatic knowledge, in virtue of their impoverished capacity for deliberation.⁷ Surely, though, these creatures' knowledge is belief-based.⁸ If this is so, however, the best explanation of all these data is that the following picture is correct: tendency to form non-automatic beliefs is directly proportional to cognitive sophistication: non-sophisticated agents have a tendency to form more automatic beliefs – e.g. children – , while more sophisticated agents tend to form more deliberative beliefs, in proportion to their

⁷ For discussion on this point, see, e.g., Nagel (2013)'s ontogenetic argument from child and developmental psychology for knowledge as a mental state.

⁸ This is the case, to note, even if Nagel (2013) is right that children acquire the *concept* <knowledge> before acquiring the concept <belief>.

sophistication: i.e., groups will do so more than average individual adult agents.

Last but not least: an acceptance-based of view knowledge will have trouble of its own. To see this, consider first cases of distributed cognition that are plausibly cases of group knowledge. For example, consider Edwin Hutchins' (1995) classic case featuring the deliberate and well-informed behaviour of a ship crew navigating a ship safely to port. Plausibly, the crew as a whole can know, for instance, that they're traveling north at 80 miles per hour.⁹ At the same time, no individual crew member may have even considered the proposition, as each is occupied just with making their own particular and often very specific contribution to the ship's smooth functioning. By the same token, it's clear that the kind of agreement between group members that Hakli takes to be necessary for group acceptance has not taken place. The group thus knows how fast they are travelling even though they do not jointly host the corresponding acceptance.

It may also be worth noting that there is reason to think that this argument will generalise beyond Hakli's specific view of group acceptance. To see how, note that it's plausible that accepting a proposition is intentional, at least in cases in which the agent doesn't also have the corresponding belief.

As William Alston (2007) captures this line of thinking:

⁹ See Lackey (2014b, 282) for discussion of this case and Bird (2010) and Kallestrup (2016) for alternative cases of group knowledge by distributed cognition that will equally cause trouble for the justified, true acceptance accounts of group knowledge.

I find the voluntary character of the act of acceptance to be the best way of giving an initial idea of it. The act of acceptance, unlike a state of belief, is the adoption, the taking on of a positive attitude toward a proposition. . . a mental act . . . But when we come to saying just what positive attitude to a proposition is adopted when one accepts it, we are back to the pervasive similarity of acceptance and belief. . . accepting that p is both a complex dispositional state markedly similar to believing that p, but distinguished from it by the fact that this state is voluntarily adopted by a mental act (2011, 11).

For instance, you may not believe that God exists, say because you find the relevant arguments unconvincing. Compatibly with this, you may accept that he exists. But, in this case, it is hard to see how you could arrive at the point at which you accept this unless you do so intentionally. You cannot take this leap of faith unless you do so intentionally. Since the scenario we are considering is one in which rejectionists are right and groups cannot have beliefs, all group acceptance must be arrived at intentionally. Crucially, however, in cases like Hutchins's, no group member even considered the target proposition. For that reason, it is hard to deny that the intention required for group acceptance is not present here.

Last but not least, not that an acceptance-based view of group justification will have difficulties accommodating the plausible thought that groups can have biases: indeed, we often ascribe racism and sexism to groups in everyday talk.

Biases, however, are definitionally unjustified implicit beliefs, rather than unjustified conscious acceptances.¹⁰

3. Social Distributive Views

Paradigmatic examples of distributed cognition involve relatively tightly integrated groups working together, with scientific research teams being the classic example (e.g., Bird 2010; De Ridder 2014; Palermos 2016). In virtue of the social relations at work, different parts of the system contribute to the generation of the system's collective mental state. Take, as a paradigmatic case, a group of scientists working towards the result p . According to people like Bird (2010) and Palermos (2016), all components of the p -production process constitute the corresponding group belief that p , although no individual component needs to host it. The mathematician contributes her results (e.g., to a centralised database), the physicist contributes hers, and so on, and, as a whole, the group comes to know that p , although individual scientists need not host this belief.¹¹

3.1 Bird's Account

The distributed model essentially relies on an analogy between groups and individual believers. Bird thinks the best way to see the analogy implicit in the distributed model is in terms of the analogy between social institutions and

¹⁰ For a detailed recent discussion on the this point, see Broncano-Berrocal and Carter (2020, Ch. 6).

¹¹ See also Kallestrup (2016) for a similar example case, where individual scientists communicate their own results to an administrator, who simply conjoins the results, generating a group output in a reliable way, despite the administrator not understanding the belief output, nor either contributing scientist being aware of it..

organisms developed as ‘structural functionalism’ by, most notably, Émile Durkheim (1893). This view sees the whole of society as an organism, with the various institutions (the law, parliament, business, the security services, etc.) performing different functions in order to contribute to social cohesion. The institutions themselves will have a set of roles or goals they pursue. They will do so by giving distinct functions to sub-groups or to individuals. This parallels the different functions of the systems and organs of a biological organism that contribute to its organic unity and stability and to the pursuit of its overall goals. Furthermore, those functions in the social entity may have direct analogues with specific functions in the individual organism. In particular, the pursuit of institutional goals (itself involving the analogue of action) will require social analogues of belief and desire or intention. An institution cannot pursue its goals without institutional beliefs.

It is worth noting that Bird’s Durkheimian model (2010) is characterized by quite a radically permissive way of thinking about the subjects of group knowledge. And to the extent that these more radical positions are plausible, we would have further reason to resist a characterization of group knowledge in terms of group acceptance, as well as further reason to resist rejectionism. Consider, for example, Bird’s case of Dr. N.

Case of Dr. N. Dr. N. is working in mainstream science, but in a field that currently attracts only a little interest. He makes a discovery, writes it up and sends his paper to the Journal of X-ology, which publishes the paper after the normal peer-review process. A few years later, at time t , Dr. N. has died.

All the referees of the paper for the journal and its editor have also died or forgotten all about the paper. The same is true of the small handful of people who read the paper when it appeared. A few years later yet, Professor O. is engaged in research that needs to draw on results in Dr. N.'s field. She carries out a search in the indexes and comes across Dr. N.'s discovery in the Journal of X-ology. She cites Dr. N.'s work in her own widely-read research and because of its importance to the new field, Dr. N.'s paper is now read and cited by many more scientists (2010, 32).

Bird's take on The Case of Dr. N. is that the (entire) scientific community itself knew the results of Dr. N's paper all along, and that this is so despite there being a period of time where everyone who was aware of Dr. N's result was dead (for critical discussion, see Lackey 2014b).¹²

The main worry we have for Bird's model is that, in virtue of imposing only social constraints on group membership – i.e. constraints pertaining to participating in the pursuit of the common goal – membership in the believing group becomes implausibly easy to attain. This, in turn, opens the door to rejectionism about groups belief once again. To see this, consider the role, *vis-à-vis* a group belief, of the mailperson delivering the correspondence to the group of scientists. Is the mailperson a proper member of the group that believes '*p*', where *p* is a complicated scientific proposition the group arrives at via distribution of labour?

¹² For a recent discussions of Bird's case of Dr. N. in connection with epistemic defeat, see, e.g., Lackey (2014b) and Carter (2015).

According to Bird, this will have to be the case:¹³ after all, the mailperson, just like the scientists, contributed to the attainment of the goal of the group – i.e., knowledge that p . This, intuitively, is highly problematic in more than one way: first, in terms of extensional adequacy: there is a strong intuition that the mailperson is not a proper part of the believing group in this case. Second, the mailperson problem is just one symptom of a more general, theoretical problem for the view: not all contributions to knowledge formation are cognitively relevant contributions, be they in individuals or in groups. Your heart and my stomach contribute to your belief formation via keeping you alive. They are, however, not proper part of your cognitive system. Similarly, the mailperson, the employees of the company delivering electricity to the group of scientists, the workers who repair the Xerox machine etc. are all contributing to forming the group knowledge that p . However, not all contributions are such that they render their sources proper parts of the believing group.

3.2 Palermos's Account

Orestis Palermos (2016) defends a distributed model of group belief that imposes stronger conditions on membership of the believing group than Bird does. According to Palermos, to produce knowledge, epistemic collaborations rely heavily on the *mutual* interactions of their group members. He takes the following case from

¹³ Note, also, that even if the model would survive the mailperson problem, it can become even more counterintuitive once we replace the mailperson with a couple of primary school children (suggested by Alexander Bird, p.c.).

Wegner et. al. (1985) as paradigmatic of epistemic collaborations:

Suppose we are spending an evening with Rudy and Lulu, a couple married for several years. Lulu is in another room for the moment, and we happen to ask Rudy where they got that wonderful stuffed Canadian goose on the mantle. He says “we were in British Columbia...,” and then bellows, “Lulu! What was the name of that place where we got the goose?” Lulu returns to the room to say that it was near Kelowna or Penticton—somewhere along lake Okanogan. Rudy says, “Yes, in that area with all the fruit stands.” Lulu finally makes the identification: Peachland (1985, 257).

Just like in the case above, the thought goes, what is required for membership in the believing group is reciprocal relations of collaboration that function to generate the belief in question. Palermos models his view on Dynamical Systems Theory, which is a mathematical framework for studying the behaviour of systems¹⁴: on this theory, when two (or more) systems engage in continuous, *reciprocal* interactions with each other — such that the effects of each system are continuously fed back to itself — they give rise to an integrated, distributed system. Similarly, on Palermos’s view, in collaborative scientific research teams, the completion of the relevant cognitive task involves ongoing reciprocal interactions between the participating individuals. Therefore, in such cases we can talk of an overall distributed

¹⁴ For overviews, see, e.g., Beer (1995) and Abraham et al. (1990).

cognitive system that consists of all the participating individuals (Palermos 2016).

According to Palermos, then, for a group belief to arise, information must describe a closed feedback loop from each of the group members to the group. This information feedback loop, on Palermos's view, is what delineates group membership: when individuals interact loosely and in a largely unidirectional way they do not give rise to a distributed cognitive system: the mailperson in the case above is not a member of the believing group, because they merely input information, without any feedback loop being described; the relevant causation here is entirely asymmetrical. In contrast, the scientists both input information into the system, and receive information from the system, which they then use in generating further inputs, etc..

Although Palermos's view seems to do better than Bird's as a way of 'ruling out' the mailperson as part of the believing group, it achieves this result at the cost of making group membership *too* hard to attain. To see this, consider a case in which one of the scientists in the group that hosts the belief that p – indeed, maybe even the head of the group of scientists – knows that p (where p is the content of the group belief at stake) but never communicates that p to any of her colleagues. By stipulation, the informational feedback loop fails to be described in this case. *Mutatis mutandis*, Palermos's model will predict, against intuition, that this scientist is not a member of the believing group.

3.3 A Dilemma for Social Distributivism

To sum up: We have considered two distinct models of distributed cognition on which the contributory social relations between the members are taken to circumscribe the margins of the believing group. We have seen that on Bird's model, on which input towards p was all that was needed for membership, group membership was too easy to attain. Conversely, though, we have also seen that a stronger view, on which the traffic of contribution needs to go both ways – both from and to the member, via a closed feedback loop – was too narrow. Thus, a model that delineates believing groups via their social ties – i.e., via their contributions towards the formation of the belief in question is either too weak (if the contribution is unidirectional) or too strong (if the contribution is taken to be bidirectional). This suggests in-principle difficulties for social-first distributed models – i.e. distributed models that purport to deal with group individuation via use of the social ties at work: they seem to be bound to run into a strength dilemma.

Last but not least, we have one methodological worry for both distributed models under discussion: we worry that they are more plausibly describing the *process* of belief *formation* in groups rather than the group belief itself. Notice, crucially, that in individual cognizers, the respective contributors to the two – i.e. belief formation and belief hosting – come apart: my eyes, for instance, contribute to my belief formation, but not to its hosting. If so, we shouldn't conflate belief formation and belief hosting at group level either – at least not if the ambition is to build our model of group belief on the parallel model of the individual belief, as in the case of distributed cognition models.

Note, furthermore, that this conflation explains the difficulties encountered by the models we have been looking

at: in the case of Bird's model, the mailman may well be a proper part of the process of group belief formation, while not plausibly a member of the believing group. Conversely, in the case of Palermos's model, the knowledgeable scientist who does not share his knowledge with the rest of the group may well not be part of the process of belief formation – but he surely is a member of the believing group.

5. Knowledge First Collective Epistemology

We started off by registering that summativism about group knowledge is widely believed to be mistaken: a group can know a proposition p , that none of its individual members knows. Furthermore, it looks as though a group can know a fact even when none of its members form the corresponding belief.

We have seen, further, that there are two broad reactions to these results in the literature: one places the individual at the center of the analysis of what is going on in cases of group knowledge: according to rejectionism about group belief, group knowledge is individual-acceptance-based: the individuals forming the group in question jointly accept that p is the case. When all other epistemic conditions necessary for knowledge are in place (e.g., reliability), this joint acceptance is converted into group knowledge. We have also seen, however, that this individual-first approach suffered from serious problems, both regarding its motivations for belief rejectionism itself, and concerning the extensional adequacy of the acceptance-based model.

We then looked at the alternative, distributivist proposal about group belief. According to the champions of this view, groups are *bona fide* epistemic agents, and they

can host beliefs via the distributed contribution of the epistemic labour of their members. This approach places not the individuals in the group, but their social ties at the centre of the analysis of group belief: a person is a member of the believing group insofar as she contributes to the group belief (on Bird's model) or exchanges information with the group towards the formation of the group belief (on Palermos's model). We have seen, in turn, that these social-first models suffer from problems of extensional adequacy, in that they either over- or under-generate group membership – and, further, that these proposals also seem to mistakenly conflate group belief with group belief formation.

Overall, the result should be quite worrying for collective epistemology: after all, group knowledge either is based on group belief or it is not. In turn, since there isn't much to groups other than the individuals forming them and the social ties obtaining between them, it would seem that group belief should be a function of the relevant individuals and/or their social ties. However, we have just seen that neither of these models worked well. This result, in turn, threatens to lead straight to an intractable kind of group knowledge scepticism. In this way, collective epistemology as a whole threatens to fall into disarray.

In what follows, we want to argue that things are not as bad as this picture suggests and offer a way out of this dilemma. More specifically, we want to argue that one important social epistemological aspect is omitted by this pessimistic outlook: social epistemological affairs are not mere functions of individual knowers and the social relations obtaining between them. They are also, importantly, characterized by a specifically epistemic output: knowledge. Collective epistemology need not place either individuals nor

their social ties centre stage in philosophical analysis: we can do collective epistemology *knowledge-first*.

5.1 Individual-First, Social-First, Knowledge-First

In what follows, then, we will take a cue from the literature on individualist epistemology, where a recent strand of thinking has moved away from the thought that knowledge must itself be analysed in terms of constituent parts such as belief or acceptance. The most prominent champion of this kind of view is Timothy Williamson (2000), who has pioneered what is called a ‘knowledge first’ approach to epistemology. One key thought here is that rather than trying to analyse knowledge in terms of various other epistemic phenomena, such as justification, evidence and understanding, other epistemic phenomena are to be analysed in terms of knowledge. Of course, this raises the question as to whether there is anything of substance to be said about the nature of knowledge. Fortunately, the answer to this question is yes. In particular, Williamson takes knowledge to be a *sui generis* mental state, on a par with more familiar mental states such as belief, desire, fear and regret.

While Williamson’s focus is decidedly on individualist epistemology¹⁵, we believe that his view carries promise for an application to collective epistemology, and, in particular, to the problem of group knowledge and group justification. If

¹⁵ See Carter, et al. (eds.) (2017) for a recent collection of essays that explore some of the key philosophical questions, in both epistemology and mind, raised by Williamson’s knowledge first programme. See also the essays Greenough and Pritchard (eds). (2009) for essays featuring champions and critics of the knowledge-first programme in epistemology, specifically.

knowledge in general is a *sui generis* mental state, then so is group knowledge. But if we think of group knowledge as a *sui generis* mental state, we do not need to analyse group knowledge in terms of group belief or group acceptance for that matter. In principle, it may well be that group knowledge does not involve *either* of the two (more on this below). And that will of course immediately sidestep the above problems for belief- and acceptance-based accounts of group knowledge.

What's more, this approach still promises to enable us to do a considerable amount of collective epistemology beyond group knowledge. After all, if we take the knowledge-first programme seriously and venture to analyse other epistemic phenomena such as justification, evidence and understanding in terms of knowledge, nothing will prevent us from applying this approach to the collective case to develop accounts of phenomena such as group justification, group evidence and group understanding. In fact, many of the proposals that have been developed in the individualist literature carry straight over to the collective side. For instance, one might take collective justification to be group knowledge (in line with e.g. Williamson 2000; 2018; Sutton 2007; Littlejohn 2013) possible group knowledge (e.g. Bird 2007; Ichikawa 2014) or one can venture to analyse it in terms of group abilities to know (e.g. Kelp 2016, 2018, Miracchi 2015, Silva 2018) or group processes that have the function to generate knowledge (Simion 2019). One can also embrace Williamson's 'E=K' account of evidence according to which, in the group case, a group's evidence is its knowledge. And one could adopt knowledge-based accounts of understanding such as the view that group understanding, i.e. understanding why, is group knowledge why (e.g. Lipton

2004; Khalifa 2013; Grimm 2006) or that group objectual understanding, i.e. understanding of a phenomenon, is best when a group knows everything there is to know about the phenomenon and better as it approximates maximal knowledge more closely (e.g. Kelp 2015).

Compatibly, if one does not like rejectionism about group belief, the knowledge-first programme can still deliver the goods: for instance, knowledge firsters typically also accept a distinctive view of belief, which analyses belief in terms of knowledge. Roughly, the key thesis here is that belief constitutively aims at knowledge and, as a result, mere belief is tantamount to something like ‘botched knowledge’¹⁶. Now, it is easy to see that if this view of belief is defensible, then knowledge firsters can resist on independent grounds the argument that groups simply cannot have beliefs. After all, since groups can have knowledge as well as botched knowledge (see below), if the knowledge-first view of belief is correct, it follows that groups must also be able to have beliefs. Second, even if the knowledge-first view of belief turns out not to be defensible, the claim that knowledge entails belief is much less central to the knowledge-first view than it is to the traditional view. After all, the knowledge-first view has an independent account of the mental reality at issue in knowledge, to wit, knowledge is a mental state in its own right. To account for how knowledge is realized in our minds, then, knowledge firsters simply don’t need the thesis that knowledge entails belief. In contrast, according to champions of belief-based views, belief is the mental realizer of knowledge. As such, it is absolutely key to their account of

¹⁶ For discussion on this point, see Williamson (2000, 47) and (2017, §§1-2).

how knowledge is realized in our minds and for that reason much more central to their view.

In previous work (Simion 2020), one of us has defended knowledge-first views of group belief and group justification as part of a broad, integrated knowledge-first social epistemology. In what follows, we will run through the details of the view with an aim at bringing in to sharper focus the excellent resources we have at our disposal as soon as we decided to do collective epistemology knowledge-first.

5.2 Knowledge-First Collective Belief Functionalism

On the knowledge-first social epistemological framework defended in (Simion 2019, 2020), we should put not individuals and not social factors, but *epistemic value first* when theorising about social production and exchange of information. Such an account takes *knowledge* as a primitive in the philosophical analysis of social epistemic phenomena. It starts the investigation with the epistemic function of social epistemic interactions – that of generating knowledge – and asks the question: ‘How should we proceed in social epistemic interactions in order to generate knowledge?’

Functionalist normative frameworks have been thoroughly researched and developed in the philosophy of biological functions. The etiological theory of proper functions¹⁷ is notably well suited for applications to normative domains more generally. The main idea is that, just like biological functions generate biological functional norms, epistemic functions generate epistemic functional

¹⁷ For defences, see, e.g., David J. Buller (1999), Ruth Millikan (1984), Karen Neander(1991), Peter Godfrey-Smith (1994) and Larry Wright (1973). For applications to epistemology see e.g. (Graham 2012), (Kelp 2018), and (Simion 2018, 2019).

norms: a token process has the etiological epistemic function of producing effect E in system S if and only if (1) tokens of T produced E in the past, (2) producing E resulted in epistemic benefit in S/S's ancestors and (3) producing E's having epistemically benefitted S's ancestors contributes to the explanation of why T exists in S.

On this view, social epistemic interactions have produced knowledge in the past, which was epistemically beneficial to us and our ancestors, and this contributes to the explanation of why we continue to engage in social epistemic interactions.

This account predicts there is a difference between a mere social agent and a proper epistemic agent. A group is an epistemic agent rather than a mere social agent insofar as it has an epistemic function: a function to generate knowledge. It is a group that has generated knowledge in the past, which was beneficial and thereby contributes to the explanation of its continuous existence.

Group knowing and believing are analogues of individual knowing and believing: mere group belief that falls short of knowledge is botched knowledge in the sense that it is an instance of failure in epistemic function fulfilment. This account's take on the nature of group belief is strongly committed to multiple realizability: it claims that what makes something a group belief does not depend on either the internal constitution of the group nor on a particular way to realise the mental state in its members. Groups are taken as social epistemic agents, they can have knowledge and beliefs independently of whether any individual member knows or believes the target proposition.

In turn, a subject is a member of a group that hosts a belief that p just in case: (1) she is a member of the

corresponding social group (in the sense favoured in Bird 2010 and discussed above), and (2) she contributes *cognitively* to the generation of the web of beliefs of the collective epistemic agent. In this, the account predicts that for a given social group ‘G,’ the epistemic agent ‘G’ will be a proper subset of the social agent ‘G.’ For instance, for the social group ‘the CIA,’ the epistemic agent ‘the CIA’ will be a proper subset of the social agent ‘the CIA.’

The model is a distributive belief model insofar as the cognitive contribution in question can be of two sorts: full and partial cognitive contribution. Agents contribute cognitively fully to the group’s web of beliefs just in case, for some group belief that p , they host a full belief, an acceptance, or a credence of more than .5 that p is the case. Agents contribute partially to the group’s web of beliefs just in case, for some group belief that p , they host a full belief, an acceptance, or a credence that q is the case that stands in a basing relation to the group belief that p .

This account predicts correctly that one can contribute both actively and passively to group web of beliefs. Passive contributors merely host the corresponding beliefs/acceptances/credences, but don’t do any further collaborative cognitive labour. In contrast, active contributors work collectively to produce the group beliefs by imputing information into the system, on which the output beliefs are based.

The account compares favorably to Bird’s account in that it relies on a cognitive rather than a merely social contribution; as such, it does not over-generate group membership. The mailman will not qualify as a member of the knowing group, in virtue of not making cognitive contributions to the output web of beliefs hosted by the

group. The account is also more permissive than Palermos', in that it recognizes members who make cognitive contributions to the group belief that p in virtue of merely believing, accepting, or having a credence that is higher than .5 that p .¹⁸

5.3 Knowledge-First Collective Justification

In turn, this knowledge-first functionalist account of group belief affords a corresponding knowledge-first functionalist account of group justification.

The epistemic function of group epistemic processes is generating knowledge. There are two ways a functional device might go right, and two ways it may go wrong. The unhappy cases are: malfunction (my heart beats at an abnormal rate) and failure to fulfil its function (my heart fails to pump blood in my circulatory system). The happy scenarios are proper functioning (my heart beats at a normal rate) and function fulfilment (my heart pumps blood in my circulatory system). Proper functioning can obtain independently of function fulfilment. Just take my heart out of my chest and place it in a vat with orange juice: it will be beating at a normal rate, but it won't pump blood in my circulatory system (Graham 2012).

On the etiological theory of functions, proper

¹⁸ One may worry that the account is too demanding for two reasons: (1) How about q -contributions that don't stand in the basing relation to q because of overdetermination? Shouldn't their bearers count as members of the believing group? The answer is 'no': if one keeps trying to contribute information to group belief formation and fails, one is (alas, blamelessly) not part of the collective belief-producing mechanism. We think this prediction is correct: members of scientific teams can, at times, through no fault of their own, fail to be doxastic contributors due to their contributions not being taken up. This variety of exclusion is a known phenomenon, and it most notably happens to members of historically marginalized groups in scientific practice.

functioning obtains when the trait is functioning in the way in which it did back at the moment of function acquisition (my heart is properly functioning when it beats at (roughly) the rate at which it did back when it acquired its function to pump blood in my circulatory system). In turn, when properly functioning and in normal conditions, my heart will reliably pump blood in my circulatory system.

Similarly, when properly functioning and in normal environmental conditions, group epistemic processes reliably generate group knowledge. Reliability is not infallibility, however: group epistemic processes can function properly and still fail to generate knowledge (proper functioning without function fulfilment).

On this account, when groups' epistemic processes are functioning properly, even if they fail to fulfil their function of generating knowledge, they generate justified group belief. Epistemic norm compliance supervenes on the proper functioning of group epistemic processes that have generating knowledge as their epistemic function. A group belief is justified if and only if it is generated by a properly functioning group epistemic process that has the etiological function of generating knowledge. The standards for epistemic justification are thus constitutively associated with promoting group knowledge.

The account proposed is inflationist in that group belief justification does not rest on the justifiedness of the beliefs of its members. Inflationism about group justification gets its primary support from *divergence arguments* (Lackey 2016), which purport to show that there can be a divergence between the justificatory status of a group's beliefs and the status of the beliefs of the group's members: a group can

justifiedly believe that p , even though not a single one of its members justifiedly believes that p .

It falls beyond the scope of this paper to compare this view of group justification with all of its rivals on the market in order to highlight its comparative strengths. It will be informative, however, to briefly look at how the present proper functionalist inflationist view of group justification compares with its rejectionist inflationist competition, joint acceptance-based accounts of justified belief (Hakli 2011, Schmidt 1994). That is, at how the proposed account deals with what is widely taken to be the main problem for joint acceptance views: cases meant to show that group justification is too easy to come by via manipulation.

Consider a case in which there is overwhelming evidence for p and very little for not- p . The jury, however, because offered a bribe, stubbornly refuses to collectively accept p as well as all the evidence in favour of p , although each of its members justifiably believes that p . Instead, the group jointly accepts that not- p based on the remaining, non- p favouring evidence. Joint acceptance accounts mistakenly predict that, in this case, the jury justifiably believes that not- p (Lackey 2016), since it accepts that not- p based on the evidence it has. Group justification is too easy to come by.

In contrast, Simion's functionalism correctly predicts, in line with intuition, that this is a case of group cognitive fragmentation: since there are cognitive contributions made by the group members for both the belief that p (member's beliefs) and the belief that not- p (members' acceptances), the group believes a contradiction: that p and that not- p . At the same time, the view also explains why the acceptance-based belief is not justified: the process that generates it – i.e.

deciding to ignore evidence and to accept that p for practical reasons (or being offered a bribe, in this case) – is not a belief-formation process that is knowledge-generating.¹⁹

6. Conclusion

The rejectionist view that groups cannot have beliefs enjoys a growing degree of popularity in collective philosophy of mind. Rejectionism means trouble for collective epistemology as it threatens to lead straight to a highly unattractive form of scepticism about group knowledge. This paper has shown a novel way in which that this danger can be avoided. In particular, we have argued that a distinctively knowledge-first approach to collective epistemology can allow us to steer clear of group knowledge and justification scepticism even if rejectionists win the day in the philosophy of mind.²⁰

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¹⁹ Note that this also gives knowledge-first collective functionalism an edge over truth-first process-based views: after all, we can easily stipulate that as a matter of fact, in the particular case of this jury, this bribe-based process is actually truth-reliable.

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