Organic Solidarity, Science and Group Knowledge

Mark D. West, University of North Carolina at Asheville


http://wp.me/p1Bfg0-3eN
Abstract

Recently, a discussion has arisen in the pages of Social Epistemology and the Social Epistemology Review and Reply Collective concerning whether groups can have knowledge that individuals cannot. This discussion, it seems to me, has been particularly fruitful in that it has sought to maintain the definition of knowledge as justified true belief, while seeking to determine whether or not groups could have justificatory procedures which individuals could not. As such, the discussion quickly moved towards scientific investigatory groups, particularly those in the “hard” sciences, because of the divisions of labor which arise due to the technological nature of the instrumentation necessitated in such groups. Thus the discussion moved towards a debate about whether or not scientific knowledge could be held by groups, specifically scientific research groups, which I contend here obscured the more fundamental and more important issue about group epistemic knowledge. I present two arguments to support my contention. One, a variant of a Gettier paradox from Reynolds, suggests that even informal groups (groups showing only mechanical solidarity) can have knowledge as groups that the individuals in the group could not. The second argument suggests that discussions of “organic solidarity” à la Durkheim are at once insufficiently precise to enable us to tell “science” from “not science,” and descriptions of “scientific knowledge” are essentially value judgments about what sort of knowledge is worthy of respect which have no epistemic justification; if knowledge is “justified true belief,” what value does the descriptor “scientific” provide beyond that?

Recently, a discussion has arisen in the pages of Social Epistemology and the Social Epistemology Review and Reply Collective concerning whether groups can have knowledge that individuals cannot. This discussion, it seems to me, has been particularly fruitful in that it has sought to maintain the definition of knowledge as justified true belief, while seeking to determine whether or not groups could have justificatory procedures which individuals could not. As such, the discussion quickly moved towards scientific investigatory groups, particularly those in the “hard” sciences, because of the divisions of labor that arise due to the technological nature of the instrumentation necessitated in such groups. Thus the discussion moved towards a debate about whether or not scientific knowledge could be held by groups, specifically scientific research groups, which I contend here obscured the more fundamental and more important issue about group epistemic knowledge.

I present two arguments to support my contention. First, I argue pace Fricker and Apel that groups, whether chartered or not, or whether they have organic solidarity, have epistemic responsibilities vis-à-vis their interpersonal responsibilities to one another as conversationalists. Then, I suggest that the notion of ‘scientific knowledge’ in groups is a concern that tends to bias, rather than clarify, the terms of the debate concerning group knowledge.
The Debate

In recent days, an emerging consensus amongst epistemologists has suggested that groups, at least under certain conditions, can have knowledge. The question that appears to remain is, ‘Under what conditions, and for what sort of knowledge, can group knowledge exist?’ Wray (2007) argues that scientific knowledge can inhere to a group, provided that the group has organic solidarity, in Durkheimian terms; Wray’s definition of Durkheimian solidarity suggests that the research team was organized functionally to attain a collective goal with the members of that group fulfilling various knowledge seeking goals, which, taken together, enable the group as a whole to possess knowledge which no individual member can possess as an individual researcher (342-343).

The debate, in a recent reformulation offered by Dragos (2016b) and by Wray (2016), deals with the possibility of knowledge that is irreducibly knowledge of a group, which is Wray’s position; Rolin (2008) and Tossut (2016) by contrast, suggests that groups can have knowledge provided that they have collective justification.

The divergences in the positions between the two groups also include differences in the understanding of the nature of group solidarity. In Tossut’s (2016) discussion, scientific groups, or the general scientific community, have some division of labor; in generic social groups, since individuals have not set themselves specific roles in re the epistemological task at hand, organic solidarity does not exist regarding the justificatory task, and hence, in Wray’s view, generic social groups cannot have justified true belief (343).

Rolin (2008), as Tossut (2016) discusses, argues against Wray's conclusions by suggesting that a group subject need only have group justification to have knowledge. Members of a group can have distributed responsibility for addressing epistemic challenges that imply, as Dragos (2016b) suggests, that epistemic justification, following epistemic responsibility, is a group property. Rolin suggests perforce that the scientific community as a whole, as well as research teams and the like can have knowledge.

Dragos (2016b) suggests that Rolin advocates the epistemological principle of allojustification, in which individuals who are not members of the group purporting to hold knowledge nevertheless contribute important information pertinent to the justificatory process. Dragos (2016a) further argues that such collective justification is insufficient for collective knowledge, suggesting in (2016b) that the principle of allojustification is necessary but not sufficient for collective knowledge. Throughout the debate, the question of the difference between scientific knowledge and quotidian knowledge remains unaddressed; is scientific knowledge different from quotidian knowledge because of the division of epistemic labors enforced by the nature of the organic solidarity of the research group? Or does the nature of the chartered group, with its epistemic goal, suffice to make a venture scientific in its outcome (as in the case of a jury, say?) Or is ‘science’ merely a term used to denigrate vernacular knowledge, types of pseudo-knowledge we hold to have been gained without proper warrant?
How might we proceed to answer such questions?

A Thought Experiment

Let us consider a situation in which a group, which has only mechanical solidarity, can be construed to have knowledge as a group, but not as individuals.

Let's imagine three epistemologists who are having lunch. One of the epistemologists is making sandwiches, while another scans the table of contents of the most recent issue of social epistemology, in the third has gone to the nearby wine shop for a bottle of wine. The first epistemologist, while she is making lunch, asks if Inky, a cat, is out in the fenced backyard.¹ The second epistemologist who is a guest in the household, inquires as to which cat Inky is, and is told that Inky is the black-and-white cat, not Pinky, the reddish cat.

The second epistemologist then looks out the window. He sees a black-and-white cat. At least, he says, it appears to be a cat; it is the image of a cat-like form, black and white, rustling amongst the rosebushes. But says epistemologist number two, we must remain conscious of Gettier; although I am justified in my belief that Inky, the cat, is in the backyard, having gone through a reliable process to investigate the matter, it could still be just a piece of newspaper, trapped in the rose bushes, moving about in the wind. The two epistemologists remain puzzled regarding whether they have justified true belief.

But then the third epistemologist enters, bearing wine. She says that she heard meowing in the backyard, and asks if one of the cats has been let out. At that point, with the additional evidence the three may reasonably conclude two things: firstly, Inky is indeed in the backyard. Secondly, a Gettier case does not hold. And thirdly, the three epistemologists as a group have knowledge with regard to the location of the cat, information that no single individual possessed. The first epistemologist did not look out the window, but possessed the information that Inky was the black-and-white, rather than the reddish cat; the second epistemologist looked out the window and saw the black-and-white form, moving in the rosebushes; and the third epistemologist heard the meowing, removing the possibility of the Gettier dilemma.

Epistemologist number one goes out into the back yard and fetches Inky, who was indeed in the back yard. So, the three epistemologists had justified true belief concerning the location of Inky; but that knowledge arose only between the three. No individual had sufficient information themselves to know the location of the cat, but that knowledge arose as only as a group phenomenon.

¹ This is a somewhat modified version of a Gettier paradox from Reynolds (2002), where Harry and his wife see a calf near a barn.
On Organic Solidarity

In the group at hand in this thought experiment, it would be difficult to argue for any kind of organic solidarity, at least in the sense Durkheim argues for organic solidarity. There exists here a mechanical solidarity in that they have common values and beliefs with regard to what sort of evidence would mean that the cat was indeed in the backyard, but there is no sort of organic solidarity in that there is a prior agreement about who will serve which sort of differentiated function within the epistemological determination of whether the cat is or is not in the backyard. Any epistemologist, or indeed any person, could have served any function within the adventure of determining the location of the cat, since the functions served were merely looking, hearing, and knowing that Inky was black and white.

The problem, as Gibbs (2003) suggests, arises in exactly what we might mean by organic solidarity. Does organic solidarity mean functional interdependence in which the functions that one individual plays are differentiated from the functions served by another in terms of a given venture? Or does organic solidarity imply that functions within a venture are defined by occupations? Durkheim's thesis, as Hawkins reminds us (2004), begins with a quotation from Aristotle:

ο γαρ γίνεται πόλις εξ ομοιον. ε τε ρον γαρ συμμαχία και πόλις.

'A city is not made up of people who are the same; it is different from an alliance' (Watts Miller 1995, 2) In his thesis, Durkheim envisioned, but did not discuss at any length, the existence of a pure sociological type, the horde, which exhibited only mechanical solidarity — that is to say, its members were thrown together purely by the most basic of human needs and interests. Even such human agglomerations as the very earliest cities of antiquity, Durkheim argued, had some degree of organic solidarity; the business enterprise, with its fixed and highly defined functional roles for individuals, had the highest level of organic solidarity. The horde, in which individuals were ‘juxtaposed like atoms,’ (Durkheim, [1895a] 1982, 113) was the initial human mode of organization, and it had existed only in times so remote that no record existed of it. Durkheim, in his thesis arranged human societies throughout history on a spectrum ranging from mechanical solidarity to organic solidarity, with the Athenian polis at a higher level of organic solidarity than the Hebrew tribal structure but at a lower level of organic solidarity than modern industrialized society.

From all this, it seems clear that Durkheim's conceptualization of organic and mechanical solidarity were intended as ideal types. In any event, it seems that the Durkheimian conceptualization of organic solidarity has little utility for consideration in the matter of whether or not groups can have justified true beliefs.

About Scientific Knowledge

Further, by introducing the notion of scientific knowledge into the debate, it seems to me that we have further and unnecessarily complicated our considerations. What, exactly, is
‘scientific knowledge?’ Is there a ‘nature of science’ that exists outside of a construction of such by those who practice within the field? (Millar, Driver, Leach & Scott, 1993) Surely, as Haraway (2003, 110) suggests:

The only people who end up actually believing and, goddess forbid, acting on the ideological doctrines of disembodied scientific objectivity enshrined in elementary textbooks and technoscience booster literature are nonscientists, including a few very trusting philosophers.

and we have reached a point where we turn a jaundiced eye to the notion that ‘scientific’ knowledge is somehow generated by disinterested scholars, each hewing to their own domain, in compartmentalized divisions, toiling away in organic solidarity.

Research which has attempted to examine levels of organic solidarity across disciplines has determined that such research itself is contentious; historians may use specialized archaeological teams in the same manner that physicists use technicians to run ‘atom-smashers’ (Hargens 1975, 72-73), while mathematicians may have the same number of graduate students but whose work is devoted to other tasks. In the ideal situation, Wagenknecht (2015) argues, the individuals in the scientific setting are motivated by distrust of one another to check one another’s performance through indirect assessments involving conversations, evaluations of the degree to which co-authors are responsive, and the like. Such distrust is present in a higher level in interdisciplinary research groups, where the members of the team do not understand fully the epistemic procedures followed by other members of the groups (Andersen and Wagenknecht, 2013). But this is no different from the ways in which individuals in any situation might ask one another whether they are sure about things they think they have seen or heard.

The three epistemologists in the example above could be replaced with three plumbers, or the traditional priest, rabbi and preacher of hundreds of jokes; so long as the individuals involved engage in Wagenknecht’s appropriate level of distrust of one another, they can at some point claim to have done their due diligence, and to have, as a group, knowledge that Inky the cat is outside. They need have only a relatively low level of organic solidarity (the level of solidarity that leads to agreeing that, by virtue of being in a group, one must agree to standards of truthfulness re discourse à la Habermas (2000), which can in principle lead via argumentative dialogue toward the discovery of mutually intelligible justification for action (Smith, 2006).

Apel (1972) argues that all groups have such an agreement, by dint of their use of language in order to coordinate behavior, to a basic level of epistemic coordination; ² Moran’s (2006) characterization of ‘telling someone something’ as an assurance leads to an understanding that most assertions, at least in the context of attempts to coordinate behavior or to form

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² The specific dimensions of the interpersonal and situational demands of Habermas and Apel for rational communication situation to arise are presented in Kettner (1993).
understanding, are epistemic events which serve, as Fricker (2006a) claims, as “a crucial means of knowledge-spreading which is a true epistemic kind” (607). And, as in the example of the cat in the yard, any assertion is probabilistic; the cat may have run out of the back yard since one obtained justified true belief it was there, or some incredibly unlikely but nevertheless factual Gettier condition may have obtained, or the light-bending demon Descartes imagined may come into play. In such a case, the epistemologists would excuse one another for the falsehood of their assertions; we only say to each other when we make assertions that our statements are true as far as human beings can manage. As Foley (1996) puts matters, the desiderata of human knowledge is justified true belief, but the reality of human knowledge is “accurate and comprehensive enough true belief,” whose goal is further coordinated behavior (Bittner 2001).

More on Group Knowledge

To argue that the individuals in the example of the three epistemologists who jointly try to figure out where Inky the cat is located have knowledge in the sense of justified true belief, we must answer Gilbert’s (1994) questions re ‘believing as a body’:

It is as if the participants ask themselves, “What do I need to do to make it the case that I and these others together believe that p as a body?” – And then act accordingly (253).

As Wray (2001) argues, “the members of a plural subject are held accountable for their actions by each other,” individuals may challenge the statements made by others, or their qualifications to make such statements, at will. Any account of group epistemology must rely on testimony, at some level; such a group must have what Fricker calls “actual engagement of a counterfactual sensitivity” to cues bearing on trustworthiness” (2006a, 628). In interpersonal situations, we attempt to evade gullibility (Fricker, 1994) via interpersonal strategies, as suggested by Lackey:

[First, T]he interpersonal relationship between the two parties in a testimonial exchange should be a central focus of the epistemology of testimony. Second, and closely related, certain features of this interpersonal relationship—such as the speaker offering her assurance to the hearer that her testimony is true, or the speaker inviting the hearer to trust her—are (at least sometimes) actually responsible for conferring epistemic value on the testimonial beliefs acquired. Third, the epistemic justification provided by these features of a testimonial exchange is non-evidential in nature. Let us call the general conception of testimony characterized by these theses the Interpersonal View of Testimony, or the IVT (2010, x).

As Ross (1986) suggests, it is the social (i.e., interpersonal) transactions between the members of the group which serve to provide epistemic justification between the members; questions like “Are you sure that’s what you saw?” or “Did you check the beta weights on
the regression.” As Fricker (2004) suggests, it is epistemologically necessary for a hearer to take a critical stance to a speaker’s utterances and thereby to assess their statements for trustworthiness. To be epistemologically justified, the hearer must always critically monitor what the speaker says (154).

The important aspect of a group, as in the ‘Inky’ example, is that individuals are contributing justified information independently, which are to the other individuals testimonial, but are to the agents themselves justified per se. Each agent submits knowledge to the group, and the group (by dint of their critical stance toward that testimonial knowledge) can be said to create knowledge above and beyond that of the individuals who make up the group. In the ‘Inky’ case, no individual has sufficient knowledge; but the group, taking an epistemically responsible stance toward testimonial knowledge, can accumulate sufficient information to form knowledge that the individuals cannot. As Foley says,

My suggestion ... is that having knowledge is essentially a matter of having sufficiently accurate and comprehensive beliefs. So what must be added to a true belief P in order to get knowledge? The answer is more true beliefs (3).

If the three individuals having lunch still doubted if Inky was in the backyard, they would no doubt have gone and looked; “more true beliefs” is always the right answer to the question “what must be added to a true belief P in order to get knowledge.”

And the question of whether or not such questions pertain only to ‘chartered groups,’ as Schmitt argues, or to ‘scientific communities,’ as the discussion in SERRC seems to hold, seems to reflect a bias about the quality of certain kinds of knowledge. Schmitt suggests that “chartered” groups, groups that have a commitment to performing only a certain kind of joint action, “must employ a special standard” of epistemic justification, a standard suited to the social role of the group (Schmitt 1994, 273). That may be the case, but juries, which are generally seen as the exemplar of a “chartered” group, do not in fact have an agreed-upon standard for their epistemic charter; should they uphold the letter or the spirit of the law? If the facts of the case call for a conviction, but a sense of fairness leads one or more jurors to refuse to convict, such ‘jury nullification’ is decried by some scholars, upheld by others:

Nullification is but one legitimate result in an appropriate constitutional process safeguarded by judges and the judicial system. When juries refuse to convict on the basis of what they think are unjust laws, they are performing their duty as jurors (Weinstein 1992, 239).

Conversely, as Simson (1975) argues, when a jury nullifies a verdict, it arrogates unto itself a power constitutionally vested in the legislative branch of government. Such arguments, at the

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3 Clearly, a problem with testimonial epistemic justification is that it is prey to the diallelus; in that light, Pritchard (2004) and others have proposed modifications of the testimonial views which make a move toward an internalist position as a compromise to end the regress difficulty.
very least, indicate that the epistemic role of a jury is not settled – and, as such, if the epistemic nature of such a ‘chartered’ group is questioned amongst legal scholars, what are the laypersons that make up such groups supposed to be thinking when they are actually empaneled upon a jury?

Here, then, I have suggested a classic inflationary argument, in which the knowledge of the location of ‘Inky’ cannot be reproduced by any given individual, but arises only in the group via discussion. I think the Gettier-type argument suggested by Reynolds and the calf in the barnyard makes it intuitively plausible that collective knowledge can exist despite the fact that there is no individual member that instantiates knowledge of the location of the cat; individual members of the group (which cannot be called ‘chartered’ or as possessing ‘organic solidarity’) know only pieces of information; only the collective can possess the knowledge of the location of the cat. Thus, I argue that the group justifiably believes that P, but no individual member justifiably believes that P. The group obviously, then, has a justifiable true belief that P, which is over and above individual beliefs. Such a group phenomenon is irreducible to individual phenomena; but this example requires no property of the group other than the epistemological virtue suggested by Fricker (1995), that of a critical stance toward the testimony of others.

**Conclusion**

An early version of the story of the Blind Men Describing the Elephant appears in the Udana of the Pali Canon of Theravada Buddhism; a similar version exists in the Jain literature (Dhruva 1933) The story is there intended to describe how individuals, with their limited viewpoints, can describe what they perceive in ways which are inaccurate because of their limitations.

Similarly, a child’s elephant joke goes like this:

> Six blind elephants were discussing what men were like. After arguing they decided to find one and determine what it was like by direct experience. The first blind elephant felt the man and declared, ‘Men are flat.’ After the other blind elephants felt the man, they agreed.

These stories, however familiar or silly, illustrate a point; no matter how arbitrary a group, it may be the case that when their knowledge is taken together, they will have enough information, gathered in such a manner, as to have justified true belief. Were the group of blind men to say what they had seen to one another, rather than to keep silent until in the king’s presence, they would have come to understand enough of the true nature of the elephant to describe it as well as any schoolchild. Similarly, the arrival of an outside party with a good vantage point— that is to say, with more knowledge— would solve most Gettier problems; Gettier problems are unavoidable, but they are only inescapable if we refuse to be Bayesian about our understanding of how testimony, and justification, suffice for our real-world needs. We launch spacecraft, and they return with their occupants intact; we drive cars...
every day to remote locations using the guidance of geo-synchronous satellites; we wager our lives upon the reliability of automobiles repaired by individuals we would flunk out of our introductory philosophy classes; and we do all this with happy reliance upon the statistical warrant of testimony.

And, as Zagzebski (2003) suggests, the sorts of critical stances to testimonial information are surely part of a humanistic stance toward information in general, one which we would all support; is denying group knowledge to all but scientific sodalities with the proper credentials part of what the Enlightenment program entails? The goal of ‘knowing’ is ‘behaving,’ and as such is a property of all human groups, who communicate in coordinated ways in order to come to states of knowing. Surely, when we deny the potential of group knowledge to all but properly constituted scientific bodies, or to groups with some sort of proper charter—with their potentials for real gender and racial biases—we are, to paraphrase Haraway, “a few very untrusting philosophers” indeed.

Contact details: westinbrevard@yahoo.com

References


