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Pluralism About Group Knowledge: A Reply to Jesper Kallestrup¹

Avram Hiller, Portland State University, ahiller@pdx.edu; R. Wolfe Randall, University of California, Santa Barbara, rwrandall@ucsb.edu

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Jesper Kallestrup (2022b) has provided an insightful response to our paper, “Epistemic Structure in Non-Summative Social Knowledge” (Hiller and Randall 2022). Kallestrup identifies some important issues pertaining to our non-summative, non-supervenient (*NSNS*) account of group knowledge which we did not address in our original paper. Here, we develop our view further in light of Kallestrup’s helpful reply.

To briefly review: according to *NSNS* views, a social group G (as a whole) can know that p even if no group member knows that p . On our *NSNS* view, a group G knows that p only if the following two conditions are met:

- (i) G is structured in such a way as to collate or gather information about p ,
and;
- (ii) G ’s structure is in fact functioning properly with respect to p (2022, 8).

Furthermore, whether or not a group knows that p does not locally supervene on the minds of the members of the group. As we discuss in our paper, following in the spirit of Bird (2010) and Tollefsen (2006), this is because there may be two groups whose members have identical states of minds, but one of the groups knows some proposition p , and the other does not, because of the way that the different groups employ non-agential devices like computers, notebooks, archives, etc.

Kallestrup’s Challenge and Dispositional Belief

In the MISSING CHILD* example (Hiller and Randall 2022, 37) discussed by Kallestrup, a group is designed so that a light goes on, and a printout is made, when a computer collates some information acquired by individual group members. On our view, the reason why the group possesses knowledge is not because, given that the printout now exists, it is accessible to the individual members of the group. (We deny the central importance of accessibility in the same manner as Bird 2010, 48.) Rather, it is that the printout itself *constitutes* the knowledge of the group. The group was structured to create the printout with the relevant information, and potentially distribute it, so as to perform its function as a provider of information. (In our example, the printout is sent to an external individual as the group’s report.) We agree with Lackey (2020, 117-18) and others that knowledge connects with action, and part of our aim in the paper is to show that groups can rationally act on information even when the information is not available to the individual members of the group.

Kallestrup’s challenge for our view can be seen as a dilemma: either we should view this kind of situation as a case of an extended mind of the group, or as a case of dispositional belief. As Kallestrup notes, we deny that the situation is best explained as one involving an extended mind (or minds). In our discussion of the extended mind (Hiller and Randall 2022, 41-42), we claim that it would be wrong to understand non-agential material objects (e.g., printouts) as parts of the extended mind of the *individual* members of the group. Further,

while we are sympathetic to accounts of distributed cognition whereby the cognitive states of the *group as a whole* are comprised in part by things like the computer and printout, ours is not an account of an extended *mind* of the group as a whole. For despite our attribution of knowledge to groups, we are hesitant to characterize groups as a whole as having *minds*, let alone extended ones.

Thus, taking up the other horn of Kallestrup's dilemma, we need some account of dispositional belief, and in particular, a way to distinguish between a group's being *disposed to believe* that *p* and a group's *having a dispositional belief* that *p*. What makes the CPD in the MISSING CHILD* case have a dispositional belief, as opposed to it being merely disposed to have a belief? This question is especially pressing, given that on our account, there are some cases where information that is stored in an archive accessible to members does *not* count as group knowledge (see Hiller and Randall 2022, 39). Furthermore, as in the example discussed by Kallestrup, if group members each independently know some basic information, but only a computer or other device has collated this information and drawn an inference from the basic information, it *can* count as knowledge even if it is not accessible to the group members.

So what *is* dispositional belief? For Rose and Schaffer, it is “information to mind available for endorsement” (2013, 22). In his reply to us, Kallestrup writes that “What matters for dispositional belief is that the proposition be preserved in memory from which it can effortlessly be recovered for active deployment in reasoning or planning” (2022b, 39-40). Elsewhere (2022a), Kallestrup characterizes dispositional belief as “having information *q* readily available for endorsement” (17).

Pluralism about Group Belief

Our main reply is to espouse a kind of *pluralism* about group belief. Different groups may possess information and have it available for use in reasoning, planning, and action, in very different ways. For example, the operative members of a company (e.g., its board of directors) might believe that *p* even though non-operative members do not (Tuomela 2011, 97). Or maybe research committee *R* believes that *p* because its members are jointly committed to *p* (Gilbert 2013, ch. 6). In the former case, perhaps it is the literal individual dispositional belief of a member that comprises the dispositional belief of the group as a whole. Alternately, the USS Palau (Hutchins 1995, ch. 8) knows its location in virtue of a dynamic process whereby its instrumentation keeps track of the location. The scientific community as a whole possesses knowledge contained within journal articles (even ones written by now-deceased researchers) in virtue of the continued physical and online existence of these journals and their indexing so as to be available to researchers, as is an understood practice in scientific inquiry (Bird 2010, 32).

More generally, we espouse *group knowledge pluralism*: some groups know information in virtue of having an operative member be responsible for it (e.g., Lackey 2020; Tuomela 2011); some know things in virtue of a dynamic system (e.g., Palermos 2016); some know things in terms of joint commitments (e.g., Rolin 2008; Tuomela 2011; Wray 2007). What we deny is

that any of these accounts is the unique correct account of, or a necessary condition on, group knowledge. Rather, our more general view is that a group has knowledge when it has an epistemic structure that is designed to possess and process knowledge of the relevant sort, and it is functioning properly in accord with that structure, and this may be realized in many different ways.

What unifies these disparate ways that groups can possess information? On our view, groups are like (or perhaps *are*) artifacts: they are human creations and possess a given structure in order to fulfill certain aims. How they each possess information may differ, but the overarching spirit of the view is that what is written into the epistemic structure of each of the different kinds of groups is how to possess information in accord with what qualifies as meeting the belief component of knowledge.

So, for example, even within a loosely structured collective like the scientific community as a whole, given that it is an understood and somewhat regulated practice for researchers to consult indexes that may lead to rediscovering articles forgotten by individuals, we may say that the community as a whole still, currently, possesses that knowledge (in the spirit of Bird 2010) and thus has those dispositional beliefs. A similarly assembled group of people with access to scientific archives, who *would* form beliefs about facts contained in journal articles but who lack a standardized practice of looking into the archives, might be said to be disposed to believe the truths in the journals, but that group as a whole does not have the relevant dispositional beliefs.

This can meet the spirit of Kallestrup's main challenge of distinguishing between dispositional belief and disposition to believe. In Lackey's (2020, 130) original case (which we refer to as 'MISSING CHILD', Hiller and Randall 2022, 36), it could be said that the CPD does have a mere disposition to believe that Jimmy Smith is in Rogers Park (Proposition 4), insofar as individual CPD members could have shared their individual pieces of information with each other and could *then* have come to group knowledge of (4). But given that the group was (unfortunately) not in fact structured so as to function that way, we should not attribute a group dispositional belief that (4). However, in our MISSING CHILD* example, given that the computer has in fact collated the information in accord with the design/structure of the group, we can attribute a dispositional belief to the group even though none of the members believes (4). This is because the group as a whole possesses the information in a way that it is ready for, and in fact used in, action, given that the information is sent to relevant outside parties (despite the fact that none of the members, as an individual, acts upon its content).

Occurrent Beliefs

At this juncture, one might wonder whether the CPD's belief that (4)—in MISSING CHILD*—is in fact *occurrent*.² In a recent paper, Kallestrup characterizes occurrent belief as

² It is worth noting that some (e.g., Bartlett 2018; Steward 2018) are skeptical about the proper categorization of 'occurrent states'.

“[that is] a thought currently endorsed” (2022a, 17-8). We worry about talk of group “thought”, and would not hold that groups have occurrent states, if occurrent states have a conscious element (as in Rose and Schaffer 2013, 22; Goldman 1970, 86), because we do not believe that groups as a whole are conscious. Likewise, and as noted earlier, we are rather hesitant to say that groups as a whole have *minds*, even though we argue that groups possess epistemic and cognitive states.

However, if we recast Kallestrup’s construal of occurrent states as something *like* “information currently endorsed”, then there are good reasons to regard the CPD’s belief that (4) as occurrent. We mentioned above that the print-out in MISSING CHILD* itself *constitutes* the CPD’s knowledge that (4). Of course, this group knowledge that (4) need not entail an occurrent belief that (4), yet we think that, in virtue of having been printed out as a result of information gathering and collation by the computer, there is information—*viz.* (4)—currently endorsed by the CPD, despite none of its human members being aware of it (and, in principle, they need not be able to access it). Furthermore, *typically* (though not always), when an occurrent belief has a causal effect in action, it is the physical instantiation of the belief itself that plays a direct causal role, whereas for a dispositional belief to play a direct causal role in action, it *typically* must be activated in some way. But if this is the case, then group beliefs of the sort in the MISSING CHILD* case are more like occurrent beliefs: given that the printout is made and the information is sent to a third party by the computer, it is the instantiation itself that has the causal effect, without needing to be further epistemically activated. So, with some trepidation, we take it that this group belief is occurrent. We should note, though, that on the definitions of dispositional belief noted above, these kinds of beliefs also count as dispositional, since they are both activated (as in being occurrent beliefs) *and* available (as in dispositional beliefs). Of course, alternatively, one could have a stipulation that only non-occurrent beliefs should count as being dispositional.³

A further consideration is that one can divide dispositional beliefs into two kinds. Rik Peels (2016, §1.3) distinguishes between *dormant* and *tacit* beliefs.⁴ Dormant beliefs are those where a believer is not occurrently entertaining the proposition but has, at one point in time, learned some information, and is such that the believer has the ability to recall that information (when considering the proposition). Tacit beliefs are ones where a believer could very easily infer a fact that the believer has never considered. Peels’ discussion concerns individual believers, but it can be extended to apply to group dispositional belief.⁵

For dormant dispositional beliefs, we deny that there is an “effortlessness” or “ready availability” requirement (as in Kallestrup 2022a and 2022b). Perhaps a group’s archives are not accessible at the moment due to a temporary computer network disruption, which will only be resolved after a lot of effort to restore the network. But the group should still be said

³ Rose and Schaffer (2013, 23 fn. 6) accept that occurrent beliefs are also dispositional. Peels (2016, §1.3) explicitly defines dormant and tacit beliefs as being non-occurrent.

⁴ Thanks to Tom Yates and Rik Peels for drawing our attention, in the Board Certified Epistemologists facebook group, to Peels’ discussion of this distinction.

⁵ We don’t endorse all the details of Peels’ account, especially insofar as we wish to extend it to group dispositional belief, but reserve further analysis for another occasion.

to dispositionally believe the content of the archives. Or perhaps an individual person is having a hard time at a certain moment recalling a fact that they know that they know, and the person needs some time, or perhaps a complicated trigger, to recall it. Again, the person has knowledge of the dormant belief but cannot bring it to mind or put it into use in action except with some effort. Seemingly, as long as the information is stored by the individual/group, and the individual/group is capable of recalling the information, or (at least in the case of a group) use it in at least *some* relevant actions, it can still count as a (dormant) dispositional belief.⁶

For tacit dispositional beliefs, however, matters differ. Consider a group of mathematicians who set out to prove a difficult theorem, which ends up taking them three years. On the first week, did they have a dispositional belief in the proof, or a mere disposition to believe it? It seems to us that the latter is the case, and that in the first week, they lack knowledge of the proof, even though the group fits our (necessary) criterion of functioning properly in accord with their structure and are ultimately able to access the proof (via inference). So if a process of inferring a proposition even from already-believed propositions is too laborious, the epistemic agent in question should *not* count as having a tacit belief (see also Peels 2016, 36-37). So while an effortlessness or ready-availability criterion is not appropriate for dormant dispositional beliefs, one *does* seem to be appropriate, both for individuals and for groups, when restricted to tacit dispositional beliefs.

Group Knowledge

We should make one further note. As mentioned above, according to one view, occurrent beliefs have conscious phenomenological properties. Furthermore, one might say that dispositional knowledge consists in dispositions to have occurrent beliefs (e.g. as in Feldman 2004). At the same time, we do not think that *NSNS* group cognition has any group-level consciousness or phenomenology. So we have three choices:

- (1) deny that groups have beliefs, and thus concede that groups lack knowledge, though argue that groups have something quite *like* knowledge;
- (2) deny that belief has a phenomenological component, and maintain that groups have beliefs (and knowledge);

⁶ Our view of dormant beliefs may be contrary to Audi's (1994) argument that stored information is not genuine dispositional belief if it is not accessed in some relevant situation. (Rose and Schaffer 2013 must likely face this issue as well.) More space would be needed to provide a complete response to Audi's concern, though Peels (2016, 193) gives reason to reject Audi's concern. Additionally, there is a burgeoning literature that relates to this topic (see e.g., the papers in Borgoni et al. 2021), but it is plausible to think both that (A) belief is *fragmented* (as in Lewis 1982; Borgoni 2016; and Bendaña and Mandelbaum 2021), whereby some beliefs may not align with other beliefs or with action, and (B) as long as a stored proposition is available to the believer in *some relevant* contexts, it still counts as a dispositional belief rather than being a mere disposition to believe. (More generally, new research regarding the fragmented (individual) mind provides interesting models for group belief.)

(3) deny that groups have beliefs, but claim that for groups, knowledge does not require belief.

Although in this paper we will not stake out a position on which of these options we most favor, we'd like to say a few things to defend the coherence of (3). In claiming that groups have knowledge, we can accept a functionalist account of knowledge—for an entity to have knowledge, it must perform the appropriate knowledge-function(s) (whatever they may be). However, this allows for the possibility that different types of knowing entities can perform the function(s) in different ways. While we grant here that for individual persons, knowledge necessarily requires belief, that does not entail that all possible knowers have beliefs. More generally, if one takes a functionalist view of p , and the most typical instantiations of p necessarily involve q , it does not entail that all instantiations of p will involve q . Perhaps the paradigm mousetrap is a spring-loaded mousetrap, which necessarily has a spring, but this does not mean that other mousetraps must have a spring, for they may have other ways of trapping the mouse. Likewise, assuming functionalism about knowledge is true, then even if paradigmatic human knowledge entails belief, it does not follow that group knowledge entails belief.

That being said, groups do need something at least quite *like* belief in order to perform the knowledge function(s)—groups must in some way possess information and have it available for use. So, despite how we have phrased our view throughout the foregoing, perhaps groups lack genuine beliefs. Still, one could simply rename the occurrent and dispositional beliefs discussed above as belief-*proxies*, as they fulfill the functional roles occupied by belief in persons. As such, we take it that we would have adequately addressed the concerns raised by Kallestrup even if, in the end, we were forced to deny that groups have beliefs.

In sum, we differ from Kallestrup (2022a especially) in that when we appeal to a group's knowledge, we intend that it does not supervene on the mental states, or even dispositional states, of the individual members of the groups. Groups should be understood as being like material artifacts—as structured entities created by people (typically) to perform some function, and as such, groups' non-agential devices form, in many cases, ineliminable features in the group's functioning. While there is no single way in which a group can have a dispositional belief (or belief-proxy), owing to the multitude of ways in which groups can store, access, and use information in action, what non-occurrent dispositional beliefs (or proxies) have in common is that different groups are such that they are able to possess and use the information, in at least some relevant contexts, *in accord with the way the group is structured to possess and use the information*.

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