

WHY GROUP MENTAL STATES ARE NOT EXHAUSTIVELY DETERMINED BY MEMBER STATES

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With few exceptions, theorists analyze group attitudes in terms of the attitudes of members. Lackey 2021, for instance, puts forward the following analysis of group belief:

A group, G, believes that p if and only if: (1) there is a significant percentage of G's operative members who believe that p, and (2) are such that adding together the bases of their beliefs that p yields a belief set that is not substantively incoherent. (Lackey 2021, p. 48)

Group belief here is analyzed in terms of member beliefs—not only their beliefs that p, but also the beliefs that are the bases of their beliefs that p. Other theories of group belief analyze it in terms of different individual attitudes—but individual attitudes all the same. (This includes, among many others, Gilbert 1987; Gilbert 1994, Tuomela 1992, Wray 2001, and List and Pettit 2011). Similarly with analyses of attitudes other than belief. Bratman 2014, for instance, analyzes the shared intention of a group in terms of various attitudes of members, including their intentions and knowledge. Pettit 1993 and List and Pettit 2006 argue that individual attitudes need to be understood externalistically, but that is no obstacle to taking group attitudes to supervene on individual attitudes. I will give this nearly universally assumed thesis a name:

(MEMBERS ONLY) The attitudes of groups are exhaustively determined by the attitudes of group members.¹

In Epstein 2015, 2019a, 2019b, I argued that this thesis—and hence any theory that analyzes group attitudes in terms of member attitudes—is mistaken: the attitudes of many groups are ontologically determined by a broader range of factors than member attitudes. MEMBERS ONLY is false, so *any* analysis of group attitudes in terms of member attitudes is incomplete.

My aim was to challenge MEMBERS ONLY on several fronts. One was to argue that group attitudes are determined in part by attitudes of other people in the population, apart from group members. Another was to argue that group attitudes are determined in part by factors apart from attitudes altogether—by environmental and material features of the world, for instance. Still another aimed to show that the relevant environmental and material features could be distinct even from those which a semantic externalist would take to be in the supervenience base of people's attitudes. The argument did not apply to every attitude of every group. For some simple groups, it *is* possible that MEMBERS ONLY is correct. But those cases are rare. In the typical

case, an analysis of group attitudes exclusively in terms of the attitudes of individuals is inadequate, regardless of the details of that analysis.

But the grip of MEMBERS ONLY is, evidently, strong. Perhaps it is because abandoning it would complicate an already thorny topic. If we need more than member attitudes to analyze group attitudes, it makes it even harder to see how these are related to one another. Or perhaps it is because the arguments challenging MEMBERS ONLY are not as direct as they could be.

My earlier arguments against MEMBERS ONLY turn on some key *differences* between groups and individuals—in particular on how the actions of groups are determined differently from the actions of individuals. I have come to believe, however, that there are more intuitive reasons MEMBERS ONLY is incorrect, arising from *similarities* between groups and individuals.

My aim in the present paper is to consider new arguments against MEMBERS ONLY, and to sort the good arguments from the bad ones. Clarifying and diagnosing the failed arguments is just as important as articulating the successful ones. There are, I suggest, no fewer than six distinct arguments one might give against the exhaustive determination of group attitudes by member attitudes:

1. Argument from individual content externalism (*bad*)
2. Argument from external determination of group membership (*bad*)
3. Argument from hybrids (*plausible, but only applies to social entities that are not groups, so does not challenge MEMBERS ONLY*)
4. Argument from group activity (*my 2015 argument*)
5. Argument from group extended mind (*dubious*)
6. Argument from group content externalism (*new and promising*)

It is particularly helpful to dwell a bit on the argument from group extended mind—despite its failure in the end—because it helps clarify differences between claims about the *parts or constituents* of mental states (if those make sense at all) and the *ontological determination* of mental states. Getting clear on these differences helps set the stage for developing positive arguments from group externalism.

1. Some Arguments That Do Not Work

In order to see what it takes to deny MEMBERS ONLY—and why so many theorists take it for granted—it is important to clarify what the claim is not. In particular, MEMBERS ONLY is compatible with externalism about individual mental states, and it is compatible with the observation that group membership is often determined in part by factors external to the group. MEMBERS ONLY is also compatible with the claim that the attitudes of “hybrid” entities may have very heterogeneous determination-bases. None of these are reasons MEMBERS ONLY fails. (If they were, the failure of MEMBERS ONLY would not be particularly surprising.) I

begin, therefore, by clarifying MEMBERS ONLY and showing why these arguments do not succeed at challenging it.

1a. Individual externalism and group membership

Consider the determination graph displayed in Figure 1. The figure depicts a hierarchy of exhaustive determination: it depicts fact (1) as being exhaustively determined by facts (2) and (3), facts (2) by facts (4) and (5), and so on. From it, we can read off claims and questions as to what ontologically determines what.²

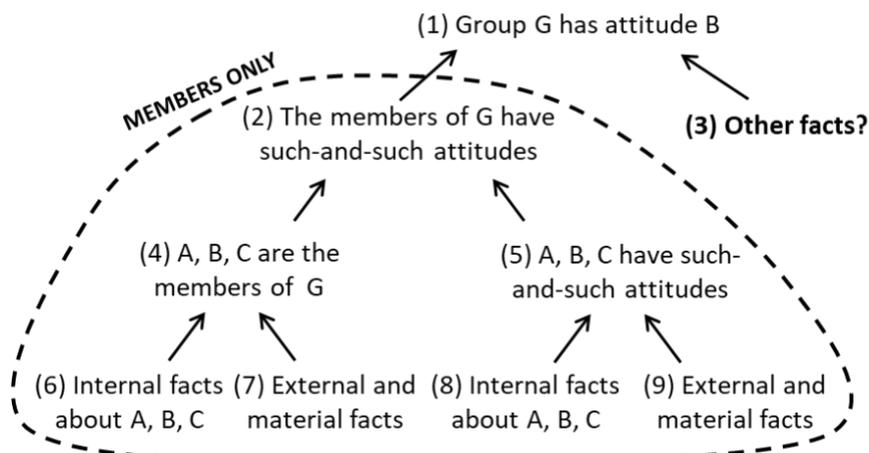


Figure 1: Whether member attitudes exhaustively determine group attitudes

In this diagram, MEMBERS ONLY can be understood as the claim that (2) is all that is required to determine (1). Additional facts, i.e., (3) are not part of the determination of the fact Group G has attitude B.

As can be seen in the figure, the failure of MEMBERS ONLY is *not* shown by the fact that (2) can be determined by lots of external stuff. It is not shown, for instance, by the fact that membership in G might depend on the actions and attitudes of other people in the population (such as membership in the U.S. Supreme Court depending on actions of the President and Senate).

Suppose, for instance, that Alice, Bob, and Carol are all members of group G, and suppose G has belief B. And suppose further that the fact that Alice, Bob, and Carol are members of G is partly determined by their being elected by the population. That is, membership in G is determined by external facts, not by Alice, Bob, and Carol themselves.³ In that case, it is true that G's attitudes are not exhaustively determined by the following facts: *Alice has such-and-such attitudes, Bob has such-and-such attitudes, and Carol has such-and-such attitudes.* (See the facts labeled (5) in Figure 1.) Nonetheless, the facts that *the members of G have such-and-such attitudes* (i.e., those labeled (2)) might nonetheless determine the attitudes of G. Even though the

membership of G is externally determined, that does not prove non-supervenience of group attitudes on member attitudes.

To put this point more succinctly: individual content externalism is the claim that the facts labeled (9) belong in Figure 1.⁴ The external determination of group membership is the claim that the facts labeled (7) belong in Figure 1. But neither of these contradicts MEMBERS ONLY, which is the claim that facts (2) are sufficient to determine (1), and that there is no place for the facts labeled (3).

To deny MEMBERS ONLY, rather, is to argue that the left half of figure 1 is incomplete. Even given facts (2), those only *partially* determine the fact that G has attitude B. To fully determine it, we need other facts, i.e., (3).

Thus defenders of MEMBERS ONLY would be right to dismiss objectors who draw on externalism about individual attitudes. And they would be right to dismiss external determiners of membership. Notice also that the defenders of MEMBERS ONLY need not hold that group attitudes resemble the member attitudes in content. List and Pettit, for instance, discuss many cases in which there are substantial mismatches between group attitudes and member attitudes. Yet they endorse MEMBERS ONLY (see Epstein 2015, pp. 213-16). A challenge to MEMBERS ONLY must answer this: once we fix the members, and fix the attitudes of members, what more could be needed to fix the group attitudes?

1b. Hybrids: not the target

In an interesting paper on social knowledge, Bird 2010 also disputes the exhaustive determination of the attitudes of social entities by member attitudes. His focus is on knowledge possessed by the scientific community, and he essentially gives two distinct arguments. One is that knowledge of the scientific community at a time *t* does not supervene on member attitudes at *t*. That is, scientific knowledge at *t* fails to be exhaustively determined by knowledge states of individuals at *t* (i.e., by synchronic knowledge states). The other is a non-supervenience argument for a scientific community in which knowledge-production is automated, for instance by laboratory robots or automatic weather stations. In that case, he argues, social knowledge fails to supervene on individuals' mental states altogether.

Both of these are interesting, but neither amounts to a challenge of MEMBERS ONLY. The first argument only challenges a synchronic version of MEMBERS ONLY, which is perhaps not so plausible anyway.⁵ And the second is, at least arguably, not an argument about the attitudes of *groups*, as opposed to *hybrids*.

Most theorists working on the epistemic and cognitive states of social entities focus their attention on entities made up of individual people—pairs walking together, modestly social groups, collections, pluralities, committees. The object of inquiry is people coming together to gather information, make decisions, and take action. Other theorists, however, regard collections of people as a special sub-case. They analyze ships, scientific laboratories (including equipment), cities—things are sometimes called “socio-technical systems” or what Brouwer et al. 2021 call

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“hybrid” entities. Particularly if social entities are to be understood holistically as cognizers, these theorists see no reason to limit their components to people.

The idea that instruments, computers, etc., should be included as part of a scientific community might be understood as a modest version of such theories (see also Hutchins 1995, Giere and Moffatt 2003, and Thagard 1991). Automated instruments producing knowledge, on this view, are parts of the scientific community, or at least part of the scientific “system” that possesses knowledge. Thus it should be expected that the knowledge the system possesses will in part be ontologically determined in part by those automated components.

If one accepts that a hybrid can be a cognizer, it is not a huge leap to think its attitudes will not depend only on attitudes of individual people. As soon as one agrees that a hybrid can have an attitude, one has already supposed that the determination base is broader than just people’s attitudes. So an analogue to MEMBERS ONLY applied to hybrids rather than groups would not be plausible at all. If one restricts the inquiry to groups, to *non*-hybrids, Bird’s second argument does not apply, and hence is not a challenge to MEMBERS ONLY.⁶

Hybrids are not the target of most theorists in this literature. They are not in the scope of analyses like Lackey’s, Tuomela’s, Bratman’s, and others—i.e., the analyses I intend to challenge by rejecting MEMBERS ONLY. Hybrids are an interesting topic, but a different one.

Hybrids will come up again, however, in the course of discussing another line of challenge to MEMBERS ONLY that I will consider in detail. Namely, in connection with the “argument from group extended mind.” Tollefsen 2006, 2015 and Theiner 2011, 2013 deploy the hypothesis of extended mind (Clark and Chalmers 1998) as an argument for group cognition generally. But, as I will discuss, the hypothesis also could suggest a different way to confront MEMBERS ONLY: what if *collective* minds are extended? If so, we might expect that member attitudes will be inadequate for exhaustively determining group attitudes.

In the following pages, I will consider this “strategy from group extended mind” at some length. In the end, I will argue that it does not succeed as a challenge to MEMBERS ONLY. If it is to be plausible at all, I will argue, extended mind is best understood as buttressing the argument from hybrids, rather than as a different kind of challenge. Again, hybrids are constituted by heterogeneous stuff. Thus if they are cognizers, it is no surprise that their mental states are also heterogeneously constituted, and *a fortiori*, that these states are ontologically determined by heterogeneous factors.⁷ The argument from extended mind, then, is not the way to see that MEMBERS ONLY fails. But clarifying these arguments does point us to other routes—apart from the argument from group activity—for showing the failings of MEMBERS ONLY.

2. Artworks and Collections

To get a sense for why MEMBERS ONLY is mistaken, consider the case of artworks and collections. There is an obvious sense in which a painting is something made of paint and canvas, and that hangs on the wall. By now, though—after decades of work on artifacts and

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material constitution—the idea is familiar that artworks are ontologically determined in part by stuff beyond their constitution.

Likewise, there is an obvious sense in which a *collection* of paintings consists of lots of smearings of paint on canvas that hang on the walls of a building. But it is also the case that a collection is ontologically determined in part by external stuff as well. And crucially, by *different* stuff than the external factors that figure into determining the artworks. What ontologically determines an art collection? Despite the fact that a collection is *constituted* by the artworks in the collection, the factors that ontologically determine those artworks are not enough. A collection may be ontologically determined in part by factors beyond those that figure into the determination of the artworks themselves.

Consider for instance *Le Bonheur de Vivre*, constituted by a lump of paint and canvas, but existentially depending on having been painted by Matisse.⁸ Drawing on the literature on the statue and clay, it is standard to hold that *Le Bonheur de Vivre* is distinct from the lump that constitutes it. We can also talk about what material constitutes *Le Bonheur de Vivre* at a given time, and what does not. Certain flecks of paint have fallen off, so the constitution has changed over the years. Yet at any given time, certain bits of paint and canvas are part of the constitution of *Le Bonheur de Vivre*.⁹ Matisse is not and never was part of the constitution of *Le Bonheur de Vivre*. Sometimes this is put in terms of supervenience, but it is clearer to use ontological determination. *Le Bonheur de Vivre* is in part ontologically determined by a thing (Matisse, that is), that is not part of *Le Bonheur de Vivre*'s constitution.

Now consider a different entity—not *Le Bonheur de Vivre*, but the Barnes Collection (the art collection to which *Le Bonheur de Vivre* belongs). Like the artworks in it, the collection is also naturally understood—at least to a first approximation—as a sort of artifact. Just as the fact that Matisse painted it is part of what ontologically determines the existence of *Le Bonheur de Vivre*, likewise the fact that Albert Barnes collected it is part of what ontologically determines the existence of the Barnes Collection.

The crucial point is that part of what ontologically determines the existence of the collection is different from, or goes beyond, what ontologically determines the existence of the 4,000 or so objects in the collection. Albert Barnes is not part of the ontological determination of a single one of the pieces in the collection, even though all the pieces are “widely” determined. The collection is ontologically determined by more.

Thus an analysis or real definition of the Barnes Collection—for instance, of the necessary and sufficient conditions for some object x to be the Barnes Collection—will include Albert Barnes. That is, will include an object that plays no role in the ontology of the pieces. An analysis that fails to include Albert Barnes will be incorrect.

In this analogy, it is member cognitive states that are analogous to artworks, and group cognitive states that are analogous to the Barnes Collection.¹⁰ The analogy is not perfect, and I make some moves later on to buttress it. Still, it does nail down one crucial point: just because an

entity is constituted by some other set of entities does not mean that its determination-base is inherited from that set. We cannot just take MEMBERS ONLY for granted.

3. Argument From Group Activity

The argument against MEMBERS ONLY in Epstein 2015 is a bit indirect. I will not rehearse that argument here, but only mention that it involves three steps: (a) showing that group *actions* have determination diagrams that look like Figure 1 (that is, including various external and material facts in (3)); (b) showing that other group attitudes would fail to perform their functions if they did not align with group action, and (c) showing that to properly align with action, their determination diagrams also look like Figure 1 (again including (3)).¹¹ If this argument is correct, MEMBERS ONLY falls: any analysis that analyzes group attitudes in terms of members attitudes cannot be adequate.

The argument does involve several of its own assumptions. Most importantly, it draws on a commitment to functional inter-relationships among the attitudes. This is indispensable if the second step is to go through. A critic might deny the functionalist approach to group attitudes altogether, or else might challenge that functionalism implies an integration of states in the way I suggest. Presumably there are other available arguments and other possible challenges. My aim here, however, is not to litigate the details. It is rather to point out its extent and limitations.

The strength of the claim is that it applies quite generally to groups.¹² This failure of exhaustive determination is not a product of the social entity being a hybrid, i.e., to its being constituted by material factors. And the failure occurs even for groups whose constitution is not externally dependent, and even when the member attitudes are internalistic. That is, even if there are no facts (7) or (9). (See, for instance, the case discussed in Epstein 2015, pp. 239-41.) While it may not apply to the simplest collectives, it applies to most real-world groups.

A shortcoming of the claim, on the other hand, is that it is little more than negative. It does not indicate how to understand a group attitude or cognitive state, nor does it shed much light on the relation between the external determining material and the group. It is also complicated, and turns on a particular understanding of the attitudes as interdependent. This understanding is plausible: many theorists also think of cognitive states as interdependent in this way without realizing that it entails that MEMBERS ONLY be abandoned. Still, it would be nice if there were alternative routes or more direct arguments for rejecting MEMBERS ONLY. After all, the intuition about art collections seems relatively straightforward, so we might reasonably hope that there are more direct and intuitive ways to see why MEMBERS ONLY fails. One intriguing possibility—as I mentioned above—is to apply the hypothesis of extended mind to groups.

4. Extended Minds and Hybrids

Tollefsen 2006, 2015 and Theiner 2009, 2011, 2013 argue in related ways in defense of collective cognition by way of the hypothesis of the extended mind. I do not think they take

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positions on MEMBERS ONLY in their discussions; still, the arguments are interesting and at least seem to be connected to it. So my discussion of their views has a funny structure: I consider a potential implication that neither Tollefsen nor Theiner puts forward, and in the end argue that it is not an implication after all. My excuse for this narrative is that I find it illuminating.

Tollefsen 2006 argues that the hypothesis of extended mind is an interesting way to support collective cognition. “The resistance to collective mental states,” argues Tollefsen, “is motivated by the view that mental states are located in minds and minds are located in heads. Since groups do not have heads or brains, they cannot have mental states.” (Tollefsen 2006, p. 140). But, she goes on, the extended mind thesis—which Tollefsen regards as plausible albeit controversial—undercuts this intra-head view of cognition. Thus it “removes a major barrier preventing acceptance of the idea that groups are bearers of mental states.” (ibid.) In her discussion, she draws on Clark and Chalmers’ case of Otto and the notebook (Clark and Chalmers 1998, pp. 12-16), highlighting the tight coupling of Otto and the notebook, where (by hypothesis) the notebook plays a role in Otto’s mental functioning analogous to the way memory plays a role in ordinary mental life. Subsequently she argues from cases in the literature, such as transactive memory (Wegner 1987), with couples and larger groups performing joint cognitive functions.

Theiner argues along similar lines, aiming “to reconnect the cognitive-scientific-driven “extended mind” thesis with complementary areas of social-scientific research in which groups are analyzed as the seats of action and cognition in their own right.” (Theiner 2013, p. 191) Using cases of collective decision making and judgment aggregation, Theiner argues for a “social parity” principle analogous to Clark and Chalmers’ parity principle:

if, in confronting some cognitive task, the members of a group collaboratively interact in a process which, were it done in the head, would be accepted as a cognitive process, then that group (as a whole) is performing that cognitive process. (Theiner 2013, p. 197)

In these two articles, neither Tollefsen nor Theiner addresses hybrids. But both consider hybrids in a number of other places, such as “technologically enhanced transactive memory systems” in Theiner 2009, and Tollefsen’s discussion of Hutchins in Tollefsen 2015. It is not difficult to see how arguments from extended mind apply to hybrids, and hence how their arguments, if successful, would vindicate not only claims about cognitive states of collectives, but also of heterogeneous entities.

Exactly how to understand the hypothesis of extended mind, and the merits of various interpretations, is of course the topic of a large literature (Adams and Aizawa 2008; Aydede and Robbins 2008; Rowlands 2009; Rupert 2009; Clark 2010; Menary 2010a; Rupert 2011, etc.) For our purposes, though, we can distinguish three versions, a “constitution” version, an “extended body” version, and a “systems” version.¹³ The “constitution” version is the thesis that the cognitive states of a cognizer may be constituted by stuff outside the cognizer. In the case of Otto, it is Otto who is the cognizer, and he has belief states that extend beyond his head. The

“systems” version is the thesis that cognitive systems can consist of components that are not just inside people’s heads. Since Otto and the notebook are coupled in the relevant way, they are a cognitive system. The belief state of this system is constituted by stuff inside the system, though it is outside Otto. The “extended body” version is perhaps the most radical. It is the thesis that the notebook becomes part of Otto. That is, the extended body version holds that the cognitive coupling of Otto and the notebook does not imply that cognitive states are constituted by stuff outside of Otto (either by an external notebook or because the system consists of more than Otto). Rather, it is that Otto the person is extended, so the cognitive state remains within extended Otto.

Some take the point of the hypothesis of extended mind to be to erase the distinction between these, perhaps by abandoning an object-based understanding of cognition in favor of a process-based one (Clark 2010; Menary 2010b; Rowlands 2010). But supposing that we are in the business of analyzing the epistemic or cognitive states of entities—entities like groups—these interpretations are not the same.

Tollefsen 2006 and Theiner 2013 argue for group cognition on the basis of extended mind arguments. It is notable, however, that both understand extended mind in the most conservative of these three versions, the “systems” version. Consider, for instance, the way that Theiner casts the “social parity” principle: collaboration of the group in the right way implies that the group as a whole is going through a cognitive process, or perhaps is a cognitive system. This is not analogous to the idea that states of Otto’s notebook are part of Otto’s belief state. Nor does it claim a change in how group members are circumscribed. Instead, it is analogous to the idea that Otto-together-with-the-notebook is a cognitive system. A similar point holds for Tollefsen’s argument: the role extended mind plays in Tollefsen 2006 is as evidence that cognition need not be confined to individual heads. But the argument is entirely compatible with a “systems” interpretation of putatively extended mind cases, rather than regarding cognitive states to have parts that are not parts of the bearers, or regarding the boundaries of the bearers to have changed.

If the systems version is controversial, the constitution version is even more so, and the extended body version still more. And it is not clear that Tollefsen and Theiner intend to—or need to—endorse these more controversial versions for their argument. Indeed, the structure of their arguments seems straightforwardly that cognitive science supports regarding systems as the bearers of cognitive states. Thus none of this challenges MEMBERS ONLY: all the cases they discuss are compatible with that thesis. If the systems in question are hybrids, MEMBERS ONLY does not apply, since it was never meant to address hybrids. And the non-hybrid cases they discuss are ones in which it is the interaction of individuals’ cognition that determines the group states.

All this does lead us to wonder, however, what the implications of the constitution version would be for MEMBERS ONLY, if it were applied to *groups*. Namely, what if it were the *group* whose cognitive states were extended in the constitution sense? Take the group to be like Otto,

and take a belief state of the group to be partly constituted by a state of a notebook. In that case, the group need not be a hybrid, but still could have belief states that are partly determined by factors external to the group. Determined by external factors, that is, because the group's belief-state is partly *constituted* by external factors. This is the argument I have in mind as the "argument from group extended mind." Will this strategy work? In the next two sections I argue that it is not likely to. But the tools we need for assessing the strategy helps raise new and better challenges to MEMBERS ONLY.

5. Clarifying Dependence and Constitution of Mental States

To make headway, consider Rowlands et al. 2020's introduction to content externalism and extended mind. Their discussion is useful in part because it needs a bit of modification, which forces us to think through some pertinent issues.

They introduce content externalism via *individuation dependence*:

The general idea of individuation dependence is that the identity of an entity, as an entity of a particular kind *s*, depends upon things (objects, properties, facts, etc.) distinct from it... the identity of a skin disturbance as an instance of a sunburn depends on its standing in an appropriate relation to ultraviolet radiation, and it cannot be an instance of sunburn unless it stands in this relation... (Rowlands et al. 2020, section 3)¹⁴

Content externalism is the thesis that at least some mental content is, similarly, individuation dependent on the nature of the environment... the identity of given content *p* is dependent on circumstances that lie outside the biological boundaries of the individual who entertains this content. (ibid.)

Subsequently, they characterize extended mind:

Extended mind is the view that not all mental states or acts are exclusively located inside the person who believes, desires, ... Rather, some mental states or acts are, in part, constituted by factors (e.g., structures, processes) that are located outside the biological boundaries of the individuals that have them. Thus, extended mind differs from content externalism not merely in being about mental vehicles rather than mental contents, but also in being committed to a claim of external location rather than simply external individuation. (ibid., section 5)

Extended mind, they assert, contrasts in two ways with content externalism. It is a thesis about vehicles rather than contents, and about location (or constitution) as opposed to individuation. (Notice that this—at least when they speak of mental states rather than mental acts—the constitution version of extended mind.¹⁵)

I find it clearer, however, to take these claims to differ in just one way, rather than two. Content externalism may be about individuation, but it is preferable not to see it as about the

individuation of *content*. Instead, better to see content externalism as being about the individuation of mental states on the basis of content differences (see for instance Burge 1979, 1986). One way of casting content externalism, at least, is this. We assume that mental states are individuated, at least in part, by their contents. That is to say, if mental state A and mental state B have different contents, that implies that they are distinct mental states. Externalism can then be understood as the claim that at least some mental states are individuation dependent on the environment.

In a sense, externalism can be seen as a thesis about the ontological determination of one thing exceeding the constitution of another. Standardly, it is the thesis that there are mental states of individuals that ontologically depend on things that are not parts of the individual (i.e., of the bearer). That is the typical thesis, but in fact we can distinguish some weaker varieties of externalism as well: the weak thesis that there are mental states that ontologically depend on things that are not parts of those very mental states; or the intermediate version that there are mental states that ontologically depend on things that are not parts of the brain.

I want to note something here, to which I will return later. If this is how we understand externalism, then we actually need to distinguish it from content externalism: content externalism may be just one subtype of externalism about mental states. Again, the way content externalism works, on this understanding, involves two steps: the content of a mental state ontologically depends on external factors, and mental states are individuated in part by their contents. Thus it shows the ontological dependence of mental states by way of the ontological dependence of the content of those states. However, their content may not be the only thing mental states depend on. So there may be other species of externalism that involve other individuating aspects of mental states apart from their content.

Turning to extended mind, it can be understood more closely along Rowlands et al.'s lines: it too is a thesis about mental states, but is about their own constitution or location. Again we might have several versions: the claim that there are mental states partly constituted by things that are not part of the constitution of the bearer. Or a weaker claim: that there are mental states partly constituted by things apart from the constitution of the brain. (The gap between these two claims is one way of understanding the thesis of “embodiment” as an ontological thesis: namely, that there are mental states that are partly constituted by non-brain parts of the body.) One claim that does not seem to be coherent is this: there are mental states partly constituted by things that are not part of the constitution of mental states.

Two worries about all this. One concern is that I am being imprecise in speaking about material constitution, composition, parts, etc. Many philosophers regard constitution as a one-to-one relation, which would make it incorrect to speak of the things of which something is constituted. It may be preferable to speak of parts or composition, but those are often infelicitous in this context. It might be better to follow Fine 1999 and speak of the “embodiment” of these entities; though of course “embodiment” already means something else in a cognitive science

context, so this might confuse things more than clarifying them. I am inclined to think that the substantive issues in this discussion do not turn on these imprecisions, but that may be too optimistic.¹⁶

A second thing people might worry about is the way this discussion involves mental states, and especially as particular things that have parts or locations. The whole idea of this, and hence the formulation of extended mind in the first place, may be questionable. Steward 1997, pp. 105-34 and Williamson 2000, p. 40, for instance, deny that it makes sense to talk of instances or tokens of mental states at all. (See also Fricker 2009 and Williamson 2009, p. 295.) Even admitting instances or tokens, it is not clear how to make sense of their locations or constitution. In order to pursue the application of extended mind to collectives, I will put these concerns to the side. For the moment, I will suppose that token mental states can be regarded as entities with locations, and attempt to work out how this applies to collective states. Even on this assumption, the application to collectives fails. So in the end it will be for the defender of extended mind to address worries about states and locations.

6. Extended Mind and the Constitution of Collective States

In externalism and constitutive extended mind we have contrasting claims about roles of external factors in “making” objects: externalism being about the ontological dependence of states on things beyond the constitution of the bearer, and extended mind being about parts of the state beyond the constitution of the bearer. It is unclear, however, how any of this might apply to collective cognitive states and their constitutions: how are we even to think about the constitution of a collective state?

Artworks and collections may again be useful here. The above discussion of artworks and collections spoke only of ontological determination, and only of objects. It is worth considering how this case might be converted into speaking of states, and how the constitution of such states might be construed.

Above I used the example of *Le Bonheur de Vivre*, being in part ontologically determined by Matisse. Taking a few liberties, we can make this example even more similar to the mental states of an individual. Consider some particular gallery or museum, like the Barnes Foundation Building in Philadelphia. That building is in the “state of displaying *Le Bonheur de Vivre*.” (That is a bit strange to say, but may be all right.) Just as *Le Bonheur de Vivre* is wholly contained within the Barnes Foundation Building, it may be fair to say that the constitution of the “state of displaying *Le Bonheur de Vivre*” is part of the constitution of the Barnes Foundation Building.¹⁷ If so, it is thus not true that the state of displaying the *Le Bonheur de Vivre* is partly constituted by things that are not part of the constitution of the Barnes Foundation Building. Still, that state is in part *ontologically determined* by Matisse, who is not part of the constitution of the Barnes Foundation Building (or *a fortiori*, of the constitution of *Le Bonheur de Vivre*). Thus, to buttress the analogy, we may be able to convert talk of the determination of the painting and collection

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into talk about display states of the building. The same gap between determination and constitution that arises for the artwork also does for the display state.

Now consider the Barnes Collection. At the moment, the Barnes collection is only housed partly within the Barnes Foundation Building in downtown Philadelphia. At one time, it was all housed in Barnes's old building some distance away. Later, the best works were moved to the Barnes Foundation Building, but some are still housed in the original building. The Barnes Foundation Building is in the state of displaying *Le Bonheur de Vivre*. It also is in many other states, such as *the state of displaying The Acrobat and the Jester*, *the state of displaying The Card Players*, etc. The old building is in other "display states." And together, the two buildings are in the state of displaying the Barnes Collection. (We could say "jointly displaying" if one prefers.)

What determines that fact? What determines *The two buildings are in the state of displaying the Barnes Collection*? Shifting from talk of the entities (artwork and collection) to talk of the respective display states of the building again does not affect the answer. We might fix that the Barnes Foundation Building is in the state of displaying *Le Bonheur de Vivre* and so on, and that the old building is in the state of displaying *River Scene* and so on. But all those states fail to determine that the two buildings are in the state of displaying the Barnes Collection, for the same reasons that the collection is not determined by the artworks alone.

To speak of the "constitution" of the buildings' state of displaying the Barnes Collection is even a bit stranger than to speak of the constitution of the state of the one building displaying *Le Bonheur de Vivre*. But inasmuch as we can make sense of it, it does not seem any more likely to be partly constituted by Barnes than the other state is to be partly constituted by Matisse. It is hard to see—again, if it makes sense at all—how the state could be constituted by anything but the material constitution of the display states of the buildings.

On this point, it is instructive to consider a challenging case discussed (to different ends) by Adams and Aizawa and by Theiner. Adams and Aizawa 2001, p. 47 argue that the failure of extended mind is actually a contingent matter about the way cognitive systems work in the actual world. Some processes, they argue, *are* transcorporeal. For instance, rabbit digestion. Rabbits are "coprophagous," meaning that they partially digest their food, and then excrete it, after which bacteria from their intestines continue to work on it. Later, once it is sufficiently broken down, the rabbits consume it again to absorb additional nutrients (Adams and Aizawa 2001, p. 47). Adams and Aizawa argue that cognition is not like this: it might have been, but as an empirical matter is not transcorporeal. Theiner 2011 builds on this to argue the contrary for cognition. In fact, Theiner argues, it is relatively common for there to be transcorporeal systems. Epigenetic systems, for instance, extend beyond the nucleus of the cell, and systems like termite mounds can be regarded as respiratory organs for the colony (Theiner 2011, p. 77).

The discussion is plausible enough on a process perspective: it seems reasonable to regard a digestive process, in the coprophagy case, as partly taking place in the environment. It is also not

clear that the right way to understand this is with a systems version of “extended digestion”: it sounds odd to say that the “system” is the digester, rather than the rabbit. To be sure, there is a lot that needs to be cleared up in diagnosing these cases: some seem merely to involve the participation of an entity in a larger system, while others seem better candidates as partly environmental processes that “belong” to organisms.

Nonetheless, if we turn to the *digestive states* of rabbits, I find matters simpler: there is little temptation to regard the excretions (or the states of the excretions) to be part of a rabbit’s digestive state. A state might be historically and even externally dependent: what digestive state the rabbit is in plausibly involves its having partially digested some food and excreted it. It might be in a waiting state, for instance. But it would seem a challenge to argue that inasmuch as we can make sense of the rabbit’s digestive states at all, those states are transcorporeal. It is not clear that that is an empirical matter at all, as opposed to being a question about how we can make sense of the states of entities.

Here’s the upshot. For the argument from group extended mind to challenge MEMBERS ONLY, it must be the “constitution” version. For that version to be coherent—even in the individual case—requires that we can make sense of the constitution (and hence location) of cognitive states, which is already dubious. In the group case, we need further to make sense of the constitution (and hence location) of groups, and additionally of the constitution (and hence location) of collective cognitive states. Furthermore, we need to account for states in general in a way that does not require their constitution to be confined to their bearers. And then to show that collective cognitive states in particular have this feature.

It is, altogether, a tough row to hoe. The argument from group extended mind is not a plausible route for rejecting MEMBERS ONLY.

It would be a mistake, however, to regard this as a victory for MEMBERS ONLY. Because doing all this clarifying work helps draw out other ways in which MEMBERS ONLY does fail.

7. Externally Determined Activity and Group Externalism

Recall the point I noted regarding content externalism as a species of externalism more generally. I pointed out that externalism can be understood as a general thesis about the ontological dependence of mental states on things external to the bearer, while content externalism is the more specific claim that mental states ontologically depend on external things in virtue of their *contents* ontologically depending on external things. In this regard, the argument from group activity qualifies as an argument for externalism in the general sense, not specifically as content-externalism. It considers the roles that group attitudes play, and argues that attitudes must be sensitive to external factors in a similar way to how group action is, if they are to play their role. It does not single out any particular aspect of group attitudes that the external factors determine, and in particular, it does not only bear on the content of those attitudes.

This is intriguing: general externalism deserves exploration on its own, even in the individual case. But it also raises a question that probably should have been obvious from the outset: what about content externalism, with regard to the mental states of groups? Are there cases of plain old content externalism applied to groups that contradict MEMBERS ONLY? Here the prospects are promising. When we consider the sources of external determination of content in the individual case, it seems that there are analogues in the collective case in which MEMBERS ONLY is not respected.

Behind content externalism are the numerous mechanisms by which content is tied to things in the world. The variety of deference phenomena, for instance—deference to kinds and substances in the world, deference to one another, deference to experts, deference to history—all represent different ways in which the contents of our mental states come to involve factors outside ourselves for their determination. Any of these can be used to develop a more direct externalist argument against MEMBERS ONLY. The crucial point, of course, is to show not just external dependence of group mental states, but dependence on factors *apart from* those that determine the contents of mental attitudes.

One way this could arise is where there is deference of attitudes and yet the group attitude has a different content from the individual attitudes. Consider a standard case of deference to experts: an individual may have a belief about, say, the categorical imperative, without having much idea about what exactly that is. (Something akin to Putnam's elm case or Burge's arthritis case.) Now consider a transactive analogue, in which it is a transactive memory or belief involving deference to a third party. Suppose George remembers "the categorical something-or-other," while Martha remembers "the something-or-other imperative," and together (however we take the transactive memory case to go) they have a cognitive state involving the categorical imperative. Both George and Martha have attitudes with contents, but only together as a pair is there an attitude the content of which involves the categorical imperative, and hence which involves deference to the expert.

This case, then, is plausibly a counterexample to MEMBERS ONLY, and may form a template for how other standard externalist cases may also contradict MEMBERS ONLY. These cases too, however, are tricky. One route that may work—but only if formulated carefully—draws on contact with the world, such as pointing or demonstration. Suppose such a pointing is performed by multiple members of a group, rather than just an individual, in such a way that the group has an attitude towards it while the members do not. If this kind of case can be constructed, it would counter MEMBERS ONLY in a similar way to the case of George and Martha. However, in ordinary cases it may be that distributed pointing or demonstration is insufficient to prove that the members themselves fail to have the demonstrandum as an object of their individual attitudes. After all, it is reasonable to think that in much scientific inquiry, kinds are singled out by distributed demonstration, and that the individuals inherit the content from the group in which they are participants. Externalism alone does not generate a challenge to

MEMBERS ONLY. But if a concept involved in a group attitude differs from that of members, that will challenge MEMBERS ONLY.

To be sure, these cases are not worked out enough to be conclusive. But it is relatively clear where the investigation can proceed from here. For the externalist, MEMBERS ONLY is an unstable compromise. It admits that individual attitudes are partly determined by environmental features, but then insists that *all* environmental features that figure into determining a group attitude must be inherited from the determination-base of the member attitudes. If we are externalists about individual attitudes, then should we not be externalists about group attitudes? And if we are externalists about group attitudes, why should external determining factors be limited in this way? Why should we expect that the environmental factors that groups defer to in the content of attitudes be nothing more than those that members do? Shouldn't we give an account of group deference and determination on its own terms?

It is common enough to note that there can be divergences between the content of group attitudes and those of the members. Likewise, one would expect that there will also be differences in content-determination parallel to individual externalism, in cases where a group bears a different relation to the external world than the individuals do.

8. Beyond Member Attitudes

Most analyses of group epistemic and cognitive states focus exclusively on complex combinations of member attitudes. Much of the reason is that it does not occur to people that MEMBERS ONLY might be false. But it also seems likely that alternatives are ignored because some arguments that *seem* to challenge MEMBERS ONLY are not successful. In this paper much of the attention has been the assessment of extended mind as a route to challenging MEMBERS ONLY, and here too I have reached a negative verdict. But the inquiry leads to new and potentially simpler ways of seeing how MEMBERS ONLY fails.

It is surprising, in retrospect, that despite the dominance of externalism in philosophy of mind, there has not been more work on externalism at the group level. Moreover, there are many other interesting areas in need of inquiry, including general externalism, making sense of cognitive states and their constitution, as well as a number of issues pertaining to the interpretation of extended mind.

Not every route to deny MEMBERS ONLY works, and those that do remain complicated. There may be simpler ways to demonstrate its failure, and to explain the underlying phenomenon more intuitively. The fact remains, though, that it fails. And it fails in far-reaching ways: an analysis of a group attitude that relies only on member attitudes is liable to get in the way of group attitudes doing their jobs in the course of group activity. And such an impoverished analysis is also liable to overlook externalist features of cognition that have become central to our understanding of cognition and epistemology in the individual case. I see no reason to expect that these failures can be fixed with minor tweaks to an analysis of a group attitude built

exclusively on member attitudes. Instead, it is likely that the analysis of group attitudes needs to be built on a broader basis from the outset.

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¹ This thesis might also be cast in terms of cognitive states rather than attitudes. For most of the purposes of this paper, these will be interchangeable. There are of course cognitive states that are not attitudes (such as emotions, on most accounts), and there is debate over attitudes that may not be cognitive states (see, for instance, Nagel 2013). The positive arguments of this paper are independent of these debates, though some of the discussion of extended mind below does require certain assumptions about states in order to be set up; see the section on dependence and constitution of mental states below.

² I tend to read the arrows as grounding, and the facts as generic facts, but one might prefer a different interpretation of ontological determination. For more discussion and examples of such figures see Epstein 2015, chapters 11 and 14.

³ Here I contrast “internal facts about individuals” from “external facts.” This contrast is not unproblematic, but I’ll operate on the assumption that there is a reasonable way of making sense of it.

⁴ This assumes that the content of an attitude is essential to it; see the discussion below on content externalism.

⁵ On the other hand, Bird is right that most analyses of group attitudes do just make use of synchronic member attitudes. So even this argument, if correct, does show the inadequacy of many analyses. Perhaps its impact is limited because it seems to apply only to the case of knowledge in scientific communities; it also relies on intuitions which opponents may not find entirely persuasive.

⁶ In the last few years, a number of interesting articles on the nature of groups have come out, including a number that consider the relation between groups and their members (see for instance Harris 2020 and references therein). My aim here, however, is not to focus on questions of the relation of groups to their members, especially constitution views versus others, such as in terms of composition, embodiment, realization, etc. These are important topics, but the points I make are fairly independent of these differences. The key feature for the current argument is that the social groups do not include things like ships or cities; but there are also issues pertaining to supervenience that may depend on a certain realism about social groups that some theorists dispute.

⁷ Indeed, this point is crucial for understanding a vast array of social entities and their cognition (see Brouwer et al. 2021 for a sophisticated recent treatment). Corporations, for instance, are better understood as hybrids than as groups. Bird is probably right that the scientific community should be understood as a hybrid. Applications of extended mind to collective cognition may add fuel to this fire. Nonetheless, theorists of collective attitudes are not typically focused on hybrids, but rather on entities like groups, which are constituted just by people.

⁸ This is a fairly standard view on artworks (at least certain of them). I will just assume that this existential dependence is so, since this case is simply an illustration.

⁹ I am being casual with the terminology here, in speaking of “part of the constitution.” I discuss this terminology below.

¹⁰ The analogy is not that groups are ontologically determined by factors apart from their members; that, we have already established, is not the way to challenge MEMBERS ONLY. Rather, the point is about the determination of group cognitive states.

¹¹ Step (a) is presented in Epstein 2015, chapter 15, and steps (b) and (c) are presented for various cases in chapter 16. See also chapter 14 for background on approaches to attitude determination.

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¹² Again, this is to distinguish groups from hybrids, not to commit to composition or constitution or embodiment etc. regarding the relation between a group and its members.

¹³ Adams and Aizawa 2008 distinguish the “extended cognitive system hypothesis” from the “extended cognition hypothesis,” and similar distinctions are made by others. My “systems” version is much like their “extended cognitive system hypothesis,” but it is also useful to divide the “extended cognition hypothesis” between “constitution” and “extended body” versions. I am grateful to Dan Lopez de Sa for raising and discussing this point.

¹⁴ I include this because the basic idea is a useful one, but I think there are some issues with this formulation. We need to be clear what is meant by “the identity of the entity depends on things distinct from it,” especially the way it is cashed out as “the identity of the skin disturbance as a sunburn.” Presumably one would say different things if one regarded the property *being a sunburn* as a contingent property of a skin disturbance, or else if one regarded a sunburn as an entity that is essentially a sunburn (i.e., that would not exist were it not a sunburn). But in neither case would one say that the “identity of the skin disturbance as an instance of sunburn” depends on ultraviolet radiation. In the first case, one would say “the fact that the skin disturbance has the property *being a sunburn* depends on such-and-such,” and in the second case, one would say “the existence of the sunburn depends on such-and-such.” The first case is not one of individuation or identity, and the second is more perspicuously cast in terms of ontological dependence. On ontological dependence, see Correia 2005 and Tahko and Lowe 2020.

¹⁵ Rowlands et al. do go on to contrast versions that take extended mind to be a thesis about acts rather than states. Even in that form, “constitutive” extended mind is not the same thing as “systems” extended mind; it may be worth exploring whether that move makes a difference to the present discussion.

¹⁶ On the relation between some of these, see Eynine 2011.

¹⁷ Again, one might prefer a term other than ‘constitution’ here. Also, I am assuming that the contents are part of a building. Clearly it is also possible to construe the constitution of a building to include just the fixed structures, but I will construe it more broadly. One can modify the terminology if one is unhappy with this.