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Collective Communicative Intentions in Context

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What are the objects of speaker meaning? The traditional answer is: propositions. The traditional answer faces an important challenge: if propositions are the objects of speaker meaning then there must be specific propositions that speakers intend their audiences to recover. Yet, speakers typically exhibit a degree of indifference regarding how they are interpreted, and cannot rationally intend for their audiences to recover specific propositions. Therefore, propositions are not the objects of speaker meaning (Buchanan 2010; MacFarlane 2020a; 2020b; and Abreu Zavaleta 2021). In this paper I do two things. Firstly, I outline a collective analogue of this challenge that undermines the most prominent responses to the original challenge. Secondly, I provide a new solution: typical utterances are backed by a cluster of partial communicative intentions. This response resolves both individual and collective variants of the problem and allows us to retain the traditional propositional view of speaker meaning.

1. Introduction

When thinking about linguistic communication it is natural to start with face to face communication between individuals. Such interactions plausibly constitute the most central cases of linguistic communication. However, individuals are not the only entities that communicate. Collectives also produce assertions and other speech acts. Indeed, collective testimony constitutes the basis for much of our scientific knowledge. It is also common to think of legislative acts as collectives speech acts. Thus, it is imperative that our models of language and communication extend to the assertions of collectives as well as those of individuals.

The standard picture of communication between individuals is broadly Gricean. It tells us, that in a typical communicative exchange, the speaker performs an utterance intending a) that their audience recover a particular proposition, and b) that their audience recognize their communicative intention. This tra-

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ditional picture faces an important challenge. As Buchanan (2010) points out, there will often be no single proposition that a speaker intends to communicate. There will typically be a number of ways in which an utterance can be understood, and speakers will usually be indifferent between a range of admissible interpretations.

There are a number of responses to this challenge, all of which entail radical revision of the Gricean picture (Buchanan 2010; Bowker 2019; MacFarlane 2020a; 2020b; and Abreu Zavaleta 2021). In this paper I extend Buchanan's challenge to collective assertion: when collectives produce assertions their intentions will often underdetermine the values assigned to any context sensitive terms in the uttered sentence. I will consider what I take to be the two most promising responses to Buchanan's challenge (Buchanan 2010; and Abreu Zavaleta 2021) and argue that they do not carry over to the collective analogue of the challenge.[1] I will then present a new response to Buchanan's challenge: I will argue that we should model the indifference and indecision characteristic of communicative intentions with clusters of partial intentions. This response carries over straightforwardly to collective assertions, and it is conservative in the sense that it retains core elements of of the traditional Gricean picture that are discarded by rival solutions (i.e., those of Buchanan 2010; Bowker 2019; MacFarlane 2020a; 2020b; and Abreu Zavaleta 2021).[2]

2. Context Sensitivity: Two Problems

2.1. Buchanan's Challenge

The standard Gricean picture of communication holds that in a normal communicative exchange when a speaker performs an assertion there will be some

1. I focus on these responses rather than the approaches of Bowker and MacFarlane for three reasons. Firstly, by highlighting the problems for these approaches I will lay the groundwork for my positive proposal. Secondly, unlike the approaches of Bowker (2019) and MacFarlane (2020b) they do not presuppose the Stalnakerian conception of assertion to which I am unsympathetic. For a powerful challenge to the Stalnakerian approach see Harris (2020). I am also sympathetic to the worries raised by Peet (2021). Thirdly, for reasons I note later, there are aspects of Buchanan's original challenge that are not fully met by MacFarlane's approach. Nonetheless, as I also note later, many of the problems raised here are damaging to both Bowker and MacFarlane's approaches.

2. It is worth noting that I am not the first to broach the issue of collective communicative intentions, and that collective communicative action raises many important issues beyond those discussed here. For example, the relationship between collective intentions and proxy assertion has recently been discussed in the literature on collective action (Paterson 2020). Moreover, there is a rich debate in the philosophy of law about the nature of the intentions underlying legislative acts, and the role such intentions should play in statutory interpretation (see, for example, Ekins 2012). My focus here is much narrower. I am concerned specifically with cases in which the speech act itself is constructed by a small unstructured collective. And I am concerned specifically with what we can learn about ordinary run of the mill communicative intentions from such cases.

proposition that they intend to communicate to their audience. The speaker's communicative intention will be satisfied only if the audience recognizes the speaker's intention, recovering the intended proposition. Buchanan identifies two key components of the standard view:

1. **Content**: What a speaker means, or intends to communicate, (at least in cases of indicative speech) must be a proposition.
2. **Success**: Understanding a speaker's utterance U requires (minimally) entertaining what she meant by U. (Buchanan 2010: 342).

Buchanan suggests that the standard approach struggles with cases such as the following:

> **Beer** While preparing for their first party at their new off campus apartment, Chet and Tim go out to buy provisions for the night. After a long and heartfelt discussion, Chet convinces Tim that 'sophisticated' partygoers, like the charming ladies next door, do not like to drink beer from a keg—'especially if it is domestic, bro'. To cater to the sophisticates that they hope will show up later that night, they decide to go to a local corner store to pick up several cases of imported bottled beer which they will serve from a giant ice-filled plastic bucket, decorated in a pirate motif, which is to be located in their back yard. An hour before the party is to begin, Tim asks Chet 'Are we ready to rage?' 'So bro', Chet responds, 'We are totally ready. The living room totally looks like a pirate ship. The strobe lights are up. Every beer is in the bucket. I just need to find an eye patch to wear with this pirate hat'. (Buchanan 2010: 346–47).

He asks us to consider the following sentence:

1. (1) Every beer is in the bucket.

Chet clearly does not mean to communicate that every beer in the world is in the bucket. Rather, he intends to communicate that every beer in some restricted domain is in the bucket. Here are a few things he could mean:

- Every beer for the sophisticates is in the bucket.
- Every beer purchased from the bodega is in the bucket.
- Every imported beer for the party is in the bucket.
- Every bottled beer for the party is in the bucket.
- . . . etc.

If the traditional Gricean view is correct then Chet must intend to communicate one of these propositions (or a similar proposition). This is what **Content** tells us. So, there must be at least one proposition that the audience has to recover if communication is to succeed. This is what **Success** tells us. However, at least if we make the following widely accepted assumptions about intention, it doesn't look like any such proposition exists:[3]

1. **Belief in Success**: It is irrational to intend to ϕ if it is irrational to believe that one will succeed in ϕ ing.[4]
2. **Indifference**: If one intends to ϕ one cannot be indifferent as to whether or not one ϕ s.

Firstly, it would be irrational for Chet to intend that Tim recover any such proposition. He has not given Tim enough evidence to distinguish the intended interpretation. Secondly, Chet will likely exhibit a degree of indifference as to how he is interpreted. Certainly communication will fail if Tim takes him to be saying, for example, that every beer in Tibet is in the bucket. But there is a range of propositions (including those listed above) the recovery of which by Tim will be sufficient for communicative success.

Put this way, it becomes clear that Buchanan's challenge goes beyond that of simply finding a way to retain (or identify alternatives to) **Content** and **Success**. Indeed, it is not actually clear that Buchanan's core case really challenges **Success**: as Davies (2021) has pointed out, it will always be possible to identify some coarse grained proposition that is a part (in the sense of Fine 2017) of every proposition consistent with the speaker's intention. It will plausibly be a necessary condition on communicative success that the audience recover at least this proposition.[5]

However, the standard view really entails something stronger than **Success**. It tells us that there must be some proposition the recovery of which is both necessary and sufficient (at least, when combined with various other other Gricean conditions) for communicative success. What Buchanan's examples show is that, in reality, there will usually be a range of distinct propositions the recovery of which would suffice for communicative success.[6] Given this, it is not hard

3. These assumptions are common to both Buchanan and the standard theorist. They derive from the fact that the Gricean picture of communication is formulated in terms of all-out intentions, and the fact that all-out intentions involve undertaking a commitment to success.

4. There are well known counter examples to this assumption, but see Marušić and Schwenkler (2018) for a response.

5. Both Buchanan's own positive view and the view I advocate here entail that such a proposition will exist. They are, thus, both consistent with **Success** as stated above.

6. Sometimes recovery of Davies's coarse grained proposition will be among this range. But this will not always be the case.

to identify a replacement for **Success**: communication will succeed whenever the audience recovers at least one of the propositions the speaker is indifferent between (assuming the other Gricean criteria for communicative success are satisfied).[7] The real challenge we face in responding to Buchanan's puzzle is to identify a replacement for **Content** that captures the indifference speakers typically exhibit toward the many different ways in which they could be interpreted. This is what I will aim to provide in what follows. Indeed, I will aim to present a conservative replacement for **Content** that allows us to retain the claim that propositions are the objects of speaker meaning.

2.2. Group Assertion

An analogous problem arises for group assertions. Consider the following case:

> **Stranded** A large passenger jet (flight AA7971) crashes in the Pacific Ocean. The survivors wash up on a desert island. Like many desert islands, the one upon which they are stranded is covered in garbage. They use the garbage to write a message on the beach. However, instead of writing a standard 'HELP' or 'SOS' they write 'Everyone is stuck on this island. We would really like some help. Thank you very much!'.

Consider the following sentence:

1. (2) Everyone is stuck on this island.

The survivors clearly don't mean that everyone in the world is stuck on the island. Rather, they intend to communicate that everyone in some restricted domain is stuck on the island. Here are a few things they could mean:

- Everyone who survived the crash is stuck on the island.
- Everyone who made it to the life rafts is stuck on this island.
- Everyone who boarded the flight AA7921 and is still alive is stuck on this island.
- Everyone in this local vicinity is stuck on this island.

7. I don't claim that this is an entirely satisfactory account of communicative success in general. Indeed, I suspect that as a theory of communicative success in general the Gricean picture is untenable. However, I believe it gets us at least close to the truth with respect to an important dimension of communicative success: the structure and satisfaction conditions of typical communicative intentions.

- Everyone who is alive and whose jet crashed in this area of the pacific within the last few days is stuck on this island.
- Everyone you are looking for is on this island.
- . . . etc.

If the traditional Gricean view is correct then the survivors must intend to communicate one of these propositions (or a similar proposition). There must be some proposition the recovery of which is necessary and (as long as various other Gricean conditions are satisfied) sufficient for communicative success. However, there is no such proposition. It would be irrational for the group to intend their audience to recover any one of these individual propositions. After all, they have not provided sufficient evidence for their audience to narrow down which interpretation is intended. Moreover, they will be indifferent as to which of a wide range of propositions is recovered.

Beyond this, the group is unlikely to have reached any form of consensus with respect to the precise interpretation intended. We can imagine the dialogue between the group members going as follows:

- Survivor 1: We should write a message so people know we are here.
- Survivor 2: That seems sensible, maybe we should write 'SOS' or 'HELP'?
- Survivor 3: Well, we have lots of space, and lots of trash, so why don't we write something longer?
- Survivor 1: Good idea. How about 'Everyone is stuck on this island. We would really like some help. Thank you very much!'
- Survivor 2: OK, yea that sounds great!
- Survivor 3: Agreed!

At no point in this dialogue does anything occur that could settle the meaning of (2). The group does not seem to form a joint intention that the statement be interpreted in any particular way. And it is extremely unlikely that all three group members will understand the sentence in exactly the same way. Just as it would have been miraculous for Chet and Tim to coordinate on the same meaning for (1), it would be miraculous for our group of survivors to coordinate on exactly the same meaning for (2).

This problem is extremely similar to Buchanan's challenge. Indeed, I believe it is essentially the same problem. Thus, it should admit of the same solution. Unfortunately, this problem is significantly harder to solve than Buchanan's. I will illustrate this by showing that the responses to Buchanan's original challenge presented by Buchanan (2010) and Abreu Zavaleta (2021) fail as responses to the collective analogue of the problem. I will then present a new solution to

Buchanan's challenge that is both more conservative, and generalizes to the collective case.

3. Existing Responses

3.1. Buchanan's Response

Buchanan's own solution involves denying that propositions are the objects of speaker meaning. Instead, he holds that 'restricted proposition types' (properties of propositions) are the objects of speaker meaning. A proposition type is a template determined by the meanings and syntactic arrangement of an utterance's constituent parts. Such a template can be filled in in various ways to generate a proposition. A restricted proposition type is a proposition type with certain constraints on how it is to be filled in, and these restrictions will determine a range of propositions of the relevant type. Buchanan suggests that speakers intend for their audience to recover a proposition of their intended type.

This accounts for the indifference a typical speaker will feel between different possible interpretations of their utterance. As long as the audience recovers a proposition that fits the intended template, the communicative intention will be satisfied. It doesn't matter which proposition the audience recovers. This also accounts for the rationality of communicative intentions. It is irrational for the speaker to intend any particular proposition as they cannot expect the audience to recover any particular proposition, and typically do not provide enough evidence for the audience to single out such a proposition. However, they can rationally intend that the audience recover one of a particular range of propositions. And, in most cases, audiences can be confident that whatever proposition they recover will have been among the range of propositions consistent with the speaker's intention.

Unfortunately, Buchanan's account does not carry over well to the case of collective assertion. Consider our dialogue between the stranded survivors. We noted that nothing occurred within their dialogue that would settle the precise proposition they intend to communicate. The same is true of restricted proposition types. At no point in the dialogue does any event occur that could settle the restricted proposition type the group intends. They don't form a joint intention with respect to any particular proposition type. And, just as it would be miraculous for an audience member to recover the precise restricted proposition type intended by a speaker on a given occasion, it would be miraculous if every group member had precisely the same proposition type in mind.

What we need is a way of determining the proposition type intended by the group on the basis of the different but likely very similar and overlapping proposition types intended by each group member. But it is not clear that this will be possible. It is almost universally assumed that, outside of structured groups with agreed procedures for deferring collective decision-making authority to single group members, there needs to be *some* overlap in *some* of the we-intentions held by *some* of group members for there to be a genuine collective intention.[8,9]

The problem we face when we apply Buchanan's picture to our collective is that there are no ends shared by *any* of the group members. Each group member's intention concerns a different restricted proposition type. Survivor 1 intends that the audience recover a proposition of type 1, Survivor 2 intends that they recover a proposition of type 2, and Survivor 3 intends that they recover a proposition of type 3. There is no restricted proposition type such that more than one group member intends the audience to recover a proposition in the extension of that type.

That said, the restricted proposition types intended by each group member will be closely related, and have significant overlap. Perhaps we can marshal these facts in order to derive a collectively intended restricted proposition type. I will consider a few ways of doing this.

First, we might suppose that the restricted proposition type intended by the group is the proposition type corresponding to the union of the extensions of the proposition types intended by each member. So, suppose that Survivor 1 intends proposition type 1, the extension of which we will denote as [$p1$, $p2$]. Survivor 2 intends a proposition type 2 ([$p2$, $p2$]), and and Survivor 3 intends a proposition type 3 ([$p3$, $p4$]). Then it would follow that the group intends the proposition type with $p1$, $p2$, $p3$, and $p4$ in its extension.

This solution is untenable. Suppose that whilst the majority of group members intend sensible restricted proposition types, one of the group members intends a proposition type that includes in its extension 'every member of Brit-

8. That is, there must be some end such that multiple group members all intend that the group bring about that end. This needn't be the entire group (although this is often assumed)—it could be a majority, a supermajority, or perhaps some specially delineated minority. This is consistent with there being significant disagreement within the group about the ends. There could even be significant disagreement regarding how and why the relevant intended end is to be brought about, and what further ends this end will achieve.

9. Even the few exceptions to this generalization give us something very similar. For example, Kutz (2000) holds that group members needn't intend the end toward which the group is acting in order for them to intentionally bring about a given end. However, he still assumes that there has to be a shared end toward which all group members conceive of their action as contributing (even if they each hope the end itself won't be achieved). Likewise, Gilbert (1990; 2009) doesn't think all group members have to intend a particular end. But she does think that they must all jointly commit to that end. See Solan (2005) for an application of Gilbert's picture to the communicative intentions of structured groups such as legislatures.

ish Parliament is stuck on this island'. Moreover, suppose that by pure chance whoever flies by and sees the message interprets it as saying that every member of British Parliament is stuck on the island. If the above proposal is correct then this audience should be counted as having understood the group's utterance. Yet this is clearly not the case. They have misunderstood the utterance. The proposition they recovered is not consistent with the *group's* communicative intention even if it is consistent with the intention of one rather odd group member.

Perhaps a better response would be to hold that the restricted proposition type intended by the group is determined by the intersection of the restricted proposition types intended by the group members. So, for example, if Survivor 1 intends a proposition type 4 ([$p1$, $p2$, $p3$]), Survivor 2 intends a proposition type 5 ([$p2$, $p3$, $p4$]), and Survivor 3 intends a proposition type 6 ([$p3$, $p4$, $p5$]), then the group as a whole will intend the proposition type that uniquely determines $p3$.[10]

This gets us closer to the truth. However, it still fails. Group intentions are not determined in this way by the intentions of group members. Suppose we have a two member group. The first member intends that they perform an action with a particular property *F*, the second intends that they perform an action with a particular overlapping property *G*. It does not follow that they collectively intend to perform an action with the property ⌜ *F*&*G* ⌝. Suppose, for example, that two robbers set out to perform a heist. The first robber intends that they rob one of Fat Tony's establishments, but he is indifferent as to which. The second intends that they rob a local bank. But he is indifferent as to which. Suppose that Fat Tony owns a single local bank. It does not follow that the pair collectively intends to rob that particular bank. It is likely that after deliberating and narrowing down their plan they will form an intention to rob the bank. But prior to such deliberation they have no such collective intention. Likewise, suppose that Survivor 1 intends that they communicate a proposition of type *F*, Survivor 2 intends that they communicate a proposition of type *G*, and Survivor 3 intends that they communicate a proposition of type *H*. It doesn't follow without further deliberation that they collectively intend to communicate a proposition satisfying property ⌜ *F*&*G*&*H* ⌝.

Perhaps this approach can be improved upon: suppose we have a group with two members—A and B. A intends that they perform an action with the property *F*, and B intends that they perform an action with the property *G*. *F* and *G* overlap, but are not coextensive. Furthermore, suppose that neither A nor B knows precisely what property is intended by their partner, but there are a number of

10. Similarly a majoritarian position could be developed according to which the restricted proposition type intended by the group contains all and only the propositions that are in the extension of the restricted proposition types intended by more than 50% of the group members. In this case the restricted proposition type would contain $p2$, $p3$, and $p4$. This approach gives rise to a similar problem.

actions such that it is common knowledge between A and B that these actions fall within the extension of the properties they each intend. It might be suggested that in cases like this A and B collectively intend that they perform an action with a property *H*, where *H* has as its extension this narrower set of actions.

If this is right, and if we suppose that there is some core set of propositions such that it is common knowledge between the survivors that these propositions are in the extension of every property intended by every survivor, then it will follow that the group intends the restricted proposition type that has in its extension all and only the propositions commonly known to be in the extensions of the restricted proposition types intended by each member.

Yet again, this will not work. The intention that A and B perform an action with property *H* is more demanding than either the intention that they perform an action with property *F* or an action with property *G*. So A and B could each individually fail to intend that they, as a collective, perform an action with property *H* despite it being common knowledge that the actions in the extension of *H* would be satisfactory to both parties. The same is true with respect to the communicative intention of our survivors.

There are no doubt other strategies that could be applied to derive a collectively intended restricted proposition type from the proposition types intended by each group member. But any such approach will involve a fairly radical revision of the common assumption that a collective intention requires overlapping ends (at least in unstructured groups).

But perhaps such a radical approach is not required. Perhaps we can identify a single restricted proposition type intended by every group member.[11] A common feature of both Buchanan's examples and our plane crash example is that all the propositions consistent with the speaker's intention (be it a collective speaker or an individual) pick out the same set of objects. In Buchanan's example each proposition refers to the same set of beers. In our key example every admissible domain restriction for 'everyone' picks out the same set of individuals. Indeed, it might be thought that this is a characteristic feature of Buchanan's cases.[12] So, the response goes, it will be common knowledge among our group members what set of objects they intend to refer to. From this knowledge they will be able reverse engineer a restricted proposition type upon which they can easily coordinate.

I am skeptical. It can't simply be that the group members coordinate on the proposition type instantiated by all propositions that pick out the intended set of individuals. To see this, suppose our group has three members. Suppose Sur-

11. Thanks to an anonymous referee for suggesting the general strategy explored in what follows.

12. This observation is central to Bowker's (2019) response to Buchanan's puzzle. Some of the critical points I make in what follows carry over to Bowker's approach.

vivor 1 was born n_1 seconds after the beginning of the universe, Survivor 2 was born n_2 seconds after the beginning of the universe, and Survivor 3 was born n_3 seconds after the beginning of the universe. Suppose that somebody sees the survivors' message and somehow interprets it as follows: 'everyone who was born at exactly n_1, n_2, or n_3 seconds after the beginning of the universe is stuck on the island'. This would be a clear breakdown of communication. This proposition is not consistent with the intentions of the group.

We need a more restricted restricted proposition type. So, perhaps we could say the following: the group members intend the proposition type instantiated by the set of propositions that uniquely pick out the intended individuals via properties such that it is common ground or common knowledge that these properties apply to the group. This resolves our previous problem, but it still doesn't work. Suppose that each survivor believes that the crashed plane was flight number AA7921. They each believe that everyone else believes this and they suspect, but are not sure, that everyone else believes that everyone else believes it. So, it is neither common ground, nor common knowledge that the plane was flight number AA7921. Still, if somebody flew by, saw their message, and interpreted it as saying 'every survivor from flight number AA7921 is stuck on the island' this would suffice for understanding—the collective's communicative intention would be satisfied.

Maybe instead we should say that the group members will all intend the proposition type instantiated by the propositions that uniquely pick out the intended group via properties every group member *believes* to apply to every member of the group. This would deal with the previous problems but, yet again, it doesn't work. Suppose that Survivor 1's partner has secretly been having affairs with both Survivor 2 and Survivor 3. Suppose that Survivor 1, having seen some incriminating evidence, secretly knows this to be the case. Furthermore, suppose that Survivor 2 has secretly become aware of the affair with Survivor 3, and Survivor 3 has secretly become aware of the affair with Survivor 2. So, every group member believes that the property 'has been intimate with Survivor 1's partner' applies to every group member. Indeed, they all believe that everyone in the local vicinity has been intimate with Survivor 1's partner (assuming that they are they are the only survivors). Yet, if somebody flew past, saw the message, and interpreted it as saying 'everyone in the vicinity that has been intimate with Survivor 1's partner is stuck on the island' the group's collective intention would not be satisfied. This is not what they intended to communicate.

We could go on indefinitely coming up with more and more baroque accounts of how the group members are able to reverse engineer a proposition type from the commonly intended extension. But I won't pursue this line any further, as there is a more fundamental problem with this strategy: we can

give Buchanan-style cases in which the speaker is indifferent between different extensions. Consider the following modified version of one of Buchanan's cases:

> **Restaurant** Chet and Tim are working in a fast food restaurant. Three people enter the restaurant. Two are smartly dressed and start sniffing cutlery. The other is dressed more causally, but appears to be part of the group. Chet believes all three of them to be health inspectors. He glances at them, and then looks at Tim saying 'health inspectors!'. Chet and Tim quickly leave the restaurant out of the back door, never to be seen again.

It will be of little importance to Chet whether Tim takes him to be referring just to the smartly dressed individuals or to all three. This does not matter to his overall purpose, and he has not left Tim with enough evidence to know which set of individuals he intends to refer to. This undermines the idea that a collective could reverse engineer a restricted proposition type from the commonly intended extension. Sometimes group members will be indifferent between different extensions. And, in some cases, some group members will be indifferent between a wide range of extensions whilst others are indifferent between a smaller set of possible extensions.

For similar reasons, this strategy will fail when we move beyond quantifiers to, for example, gradable adjectives. Suppose the group writes 'our leader is tall' further up the beach. There is a range of different things they could mean by 'tall' depending on different cutoffs for tallness. The group members will likely be indifferent between a range of different cutoffs. But it is extraordinarily unlikely that they will be indifferent between *exactly* the same range of cutoffs, and even less likely that the precise range of cutoffs over which they are indifferent will be common knowledge. It is, thus, unclear how the 'reverse engineered proposition type' approach could be applied in such cases.

In light of the foregoing, it is at best unclear how Buchanan's account can be applied to collectives without yielding the result that our collective doesn't succeed in formulating a communicative intention. Lets consider an alternative.

3.2. Abreu Zavaleta's Response

Martín Abreu Zavaleta (2021), building on MacFarlane (2009), draws a distinction between two ways in which context can affect meaning. Firstly, context can, together with lexical meaning, determine the content of an utterance. This is how we traditionally think of context sensitivity: the content expressed by a particular sentence varies from context to context. In order to know what content

is expressed by a particular utterance, the audience must draw on their knowledge of the context. This is the picture of context sensitivity presupposed in Buchanan's presentation of his challenge. The problem is that there are multiple contents consistent with the speaker's intentions. Speakers do not give audiences enough evidence to identify a single content as the one expressed.

However, Abreu Zavaleta points out, there is a second way in which context can potentially affect content: it can affect the circumstances relative to which we evaluate a content. The idea that a single content can receive different truth values when assessed relative to different circumstances of evaluation should be familiar: we standardly think of the same proposition as having different truth values when assessed relative to different worlds. However, we needn't think of the circumstances of evaluation as worlds. We can also follow, among others, Barwise and Perry (1981; 1983) in treating *situations* as the circumstances relative to which contents are assigned truth values. A situation is similar to a world except that where a world settles the truth value of every proposition, a situation only settles the truth value of some. So, for example, there is a situation at which the propositions *the sky is blue* and *Akiyo ate cereal for breakfast* are true, and the proposition *Tomoa ate cereal for breakfast* is false, but which is neutral with respect to all other propositions. Truth conditions, on this view, can be seen as partial functions from situations to truth values.

Abreu Zavaleta's proposal is as follows: assertions don't express propositions, which are assessed relative to worlds. Rather, they express propositions*, which are assessed relative to situations. The sentence 'every beer is in the bucket' expresses the same proposition* at every context.[13] However, in a given context there will be a set of situations such that the speaker assumes that the audience will be taking them to describe at least one of those situations. In order for communication to succeed the audience must recover the correct content, they must take the content to describe at least one of these situations, and they must recognize that the speaker intended this result. It is not required that the audience recognize the range of admissible circumstances of evaluation. This would be too demanding. Rather, they are merely required to correctly judge that the situation relative to which they assess the content is among those the speaker is attempting to describe.

Abreu Zavaleta's proposal, unlike Buchanan's, requires that the audience recover the content intended by the speaker. However, since the same content is expressed relative to every context, this is easily achieved. The speaker's indif-

13. MacFarlane (2020b) goes a similar way, drawing a distinction between the role of context in determining content vs. circumstances of evaluation, and holding that the same content is expressed in all contexts. However, MacFarlane's account differs from Abreu Zavaleta's with respect to the circumstances of evaluation. Moreover, unlike Abreu Zavaleta, MacFarlane presupposes the Stalnakerian model of communication about which I have already expressed skepticism.

ference is captured in terms of the admissible circumstances of evaluation: there will be a number of different circumstances of evaluation such that, as long as the audience assesses the content relative to one such circumstance, the speaker's communicative intention will be satisfied.

This proposal, unlike Buchanan's, allows us to maintain that understanding revolves around intention recognition. Speakers intend for their audience to recover a particular content, and assess it relative to one of the admissible circumstances of evaluation. Moreover, they intend that the audience recognize this intention. An audience member will understand an utterance when they correctly recognise the speaker's intentions, entertaining the right content, and correctly judging that the situation relative to which they assess it is consistent with the speaker's intention.

Abreu Zavaleta's approach might also seem to help with the case of collective assertion. After all, it is easy to identify the proposition* that the group intends to communicate. They intend to communicate the proposition* that everyone is stuck on the island. The group members can plausibly be seen as agreeing to communicate this proposition*, and since 'everyone is stuck on this island' will express the same proposition* relative to each context, the group members themselves will have no problem coordinating on it.

Unfortunately, Abreu Zavaleta's approach just pushes the problem one step further back. Buchanan captured the indifference speakers typically manifest toward the manner in which they are interpreted by holding that speakers intend a property of propositions such that their intention is fulfilled as long as the audience recovers a proposition with the intended property. Similarly, Abreu Zavaleta holds that there will be some set of circumstances of evaluation such that the speaker's intention will be satisfied only if the audience assess the intended proposition* relative to one of these circumstances. But, just as it was implausible that there was any property of propositions such that our group of survivors collectively intends that their audience to recover a proposition of the relevant type, it is implausible that there is any specific range of situations *S* such that our group of survivors collectively intends that their audience assess the expressed proposition* relative one of *S*.

In the individual case it would be too demanding to require that audiences recognize the precise range of situations that are consistent with the speaker's intention. There are many similar and overlapping sets of circumstances of evaluation that may or may not be consistent with the speaker's intention. The audience does not have enough evidence to determine the precise range of admissible situations. This is why Abreu Zavaleta does not require the audience to recognize the intended range of situations. However, it would be similarly miraculous if our group of survivors somehow coordinated on precisely the same admissible circumstances of evaluation. So, the situation we face here

is similar to that we faced when trying to extend Buchanan's approach to collectives: each individual group member intends a different end. There is no end that is intended (or we-intended) by more than one group member. So, we will struggle to derive a collective communicative intention.

Again, it is notable that the sets of circumstances of evaluation intended by each group member will overlap significantly. However, there is no clear way to derive collectively intended set circumstances of evaluation from the sets of circumstances intended by the group members. The obvious strategies for doing so are analogous to those we discussed earlier for deriving a collectively intended property of propositions from the properties intended by the group members. And these strategies will run into exactly the same problems. For reasons of space (and the avoidance of repetition) I won't consider all of the strategies we considered on behalf of Buchanan. But I will mention analogues of the two most basic pictures we considered: the union and intersection approaches.

First consider the union approach: suppose that the majority of the survivors intend relatively sensible sets of circumstances of evaluation, but one idiosyncratic survivor intends that their audience take them to be describing the situation according to which every member of British Parliament is trapped on the island. Furthermore, suppose that by pure chance the individual who flies by and sees their message take it to be describing the situation in which the members of British Parlament are trapped on the island. In this case communication has clearly failed. The *group's* collective communicative intention has not been satisfied. However, according to the union approach communication should have succeeded. Therefore, the union approach must be rejected.

The intersection approach also fails. The idea here would be that if Survivor 1 intends that the proposition* be evaluated relative to a member of the set of situations $\{S1, S2, S3\}$, Survivor 2 intends that the proposition* be evaluated relative to one of the situations $\{S2, S3, S4\}$, and Survivor 3 intends that the proposition* be evaluated relative to one of the situations $\{S3, S4, S5\}$ then they collectively intend the proposition* to be evaluated relative to situation $S3$. But, just like the analogous proposal made in defense of Buchanan's view, this approach fails. None of the group members intend their assertion to be assessed relative to $S3$. Rather, they each intend that their assertion be assessed relative to $S3$ *or* some other situation. This intention is far less demanding. Consider a variant of the case we discussed earlier: a pair of bank robbers have set out in their van with the intention of robbing a bank. It is not yet settled which bank they will rob. The first robber intends that they rob either bank 1 or bank 2. The second robber intends that they rob either bank 2 or bank 3. After deliberation they will likely settle on robbing bank 2. But prior to such deliberation they do not collectively intend to rob bank 2. Intention involves commitment—intending to ϕ commits one to ϕing. But our robbers are not committed to robbing bank 2 until they deliberate and decide to do so.

Again, we could go on considering more and more sophisticated variants of these approaches. But, for parallel reasons to those that arose for Buchanan's approach, it is unlikely that any such approach will be successful. Despite managing to preserve more of the traditional picture of meaning than Buchanan's account, Abreu Zavaleta's account falters on essentially the same problem.[14]

4. Diagnosing the Problem

The approaches of Buchanan and Abreu Zavaleta fail. I have already made a suggestion as to the source of the problem: both Buchanan and Abreu Zavaleta present speakers as having a single intention directed toward a particular object (such as a restricted proposition type or a set of situations). However, in the collective case it will be impossible for group members to coordinate on the same object. So, there will be no way to aggregate these intentions into a collective communicative intention.

In light of this the solution may seem obvious: we should deny that there is some single entity (be it a proposition, a proposition type or a proposition*) that is the object of the speakers intention. Rather, we should hold that speakers typically have multiple communicative intentions directed toward different propositions. That is, we could hold that a typical speaker may intend to communicate $p1$, have a separate intention to communicate $p2$, and have another separate intention to communicate $p3$ etc.

If each group member intends to communicate multiple propositions (via multiple distinct communicative intentions),[15] then there will likely be at least a

14. I have not discussed MacFarlane's (2020b) response to Buchanan's problem here. MacFarlane's approach is similar to Buchanan and Abreu Zavaleta's responses in that he postulates a single entity toward which the speaker has a communicative intention. For MacFarlane this entity is a set of world delineation pairs (where we think of the delineation parameters as hyperplans that set the relevant values of contextual parameters (e.g., thresholds for gradable adjectives, information states for epistemic modals etc.). MacFarlane captures the ambivalence we typically feel toward the various ways we can be interpreted by allowing that the set contain various different values for the same parameter. The speaker may intend to narrow down the range of admissible values for a parameter, but they don't intend to narrow it all the way down to a single value. However, it is not clear how MacFarlane's approach captures the fact that assignment of any admissible value by the audience would be sufficient for understanding. Moreover, MacFarlane's approach is of little help with the problem of collective assertion because, as with Buchanan's approach, it would be miraculous for all the group members' communicative intentions to be directed toward the same object (in this case, a set of world delineation pairs). Analogous moves to those discussed above can be made in defence of MacFarlane, and analogous problems will arise.

15. The idea cannot simply be that each group member has an individual intention toward a set of intentions. Firstly, this would not provide a sufficient basis for intention aggregation—it would land us with the same problems we faced when considering Buchanan and Abreu Zavaleta's approaches. It is only by maintaining that there are multiple distinct intentions that we have

few propositions that are intended by everyone in the group (or, by a majority of group members, or a super-majority of group members etc.). We will, thus, have a basis from which to aggregate the group members' communicative intentions and derive a set of collectively intended propositions.

To better understand how this could work, I'll demonstrate how the idea plays out on Michael Bratman's influential picture of joint intention.[16] Bratman (1993) tells us that we (a pair of individuals) intend to *J* if:

1. (a) I intend that we *J* and (b) you intend that we *J*.
2. I intend that we *J* in accordance with and because of 1a, 1b, and meshing subplans of 1a and 1b; you intend that we *J* in accordance with and because of 1a, 1b, and meshing subplans of 1a and 1b.
3. 1 and 2 are common knowledge between us. (Bratman 1993: 106)

Suppose that our group of survivors has the following set of intentions: Survivor 1 intends that the group convey *p*1, *p*2, and *p*3, Survivor 2 intends that they convey *p*2, *p*3, and *p*4, and Survivor 3 intends that they convey *p*3, *p*4, and *p*5. In this case Bratman's condition (1) is satisfied with respect to *p*3. It is also natural to assume that Bratman's condition (2) is satisfied with respect to *p*3: each survivor cooperates in the creation of the message, and they each do so intending that they as a group communicate *p*3 (among other things).

It is less clear that Bratman's third condition is satisfied. As I have presented the case, the overlap in the intentions of each group member is minimal. This suggests that they are at somewhat crossed purposes, and likely do not have higher order knowledge of one another's intentions. However, this should not worry us too much. Firstly, in a realistic version of our example there would be far more overlap in the intentions of our Survivors. At least if we assume that the multiple propositions approach is initially plausible, then it is also plausible that all group members will intend all of the propositions listed in Section 2.2, and insofar as it is plausible that we ever have common knowledge of one anothers' intentions, these intentions could well be common knowledge between our survivors.

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any hope of guaranteeing a set of shared intentions. Secondly, it would not even resolve Buchanan's challenge at the individual level: a core aspect of Buchanan's original puzzle was that speaker's can't rationally intend to communicate particular propositions because they cannot rationally expect their audience to recover those propositions. They do not give the audience enough evidence to correctly grasp the proposition intended. Replacing a single proposition with a set of propositions does not help. Indeed, it renders the speaker's intention even more futile.

16. I have opted to present the proposal within Bratman's framework both because Bratman's framework has proved highly influential, and because it is the approach to which I am most sympathetic. However, it will be possible to make essentially the same move on many other approaches to collective intention (although the details will obviously differ).

Secondly, Bratman is clear that he is providing a set of sufficient conditions for joint intention, not necessary conditions. In his *Shared Agency: A Planning Theory of Acting Together* he suggests that the common knowledge condition captures the fact that 'shared intention will normally be out in the open: there will be public access to the fact of shared intention. Such public access to the shared intention will normally be involved in further thought that is characteristic of shared intention, as when we plan together how to carry out our shared intention' (2014: 57). Such common knowledge supports the normal functioning of collective intentions in shared planning and deliberation. But there is little reason to hold that it is necessary in all cases for joint intention. And there are clear cases of joint intention where it is unlikely to be satisfied. For example, large groups such as crowds, businesses, and organizations plausibly have joint intentions. But it is unlikely that the common knowledge condition is always satisfied by such groups. Furthermore, in our core example it is clear that there will be no further collective deliberation or bargaining within the group that will turn on precisely how the context sensitivity of 'everyone' is to be resolved. So, in cases like this, it would seem that common knowledge is redundant—there is no need for the collective intention to be out in the open.

Finally, as Lederman (2018) argues, it is not clear that we ever actually achieve full blown common knowledge in the first place. Suppose that two individuals A & B are looking at the mast of a ship in normal conditions. Suppose that the mast is 300cm tall. If our protagonists commonly know anything, they commonly know that the mast is greater than 50cm in height. However, there will always be small variations in perceptual appearances between individuals. Assume that for all A knows, if the mast appears $r$cm high to them, then it could appear to be $0.97r$cm tall to B. If this is right then, for all A knows, for all B knows it could appear to be $0.97(0.97r)$cm to A. This reasoning iterates indefinitely, entailing that there is no height r such that A and B commonly know that the mast is greater $r$cm in length. If Lederman's argument holds, then the common knowledge condition is never satisfied, and must rather be seen as an idealization. So, although our group of survivors *might* not satisfy the common knowledge condition, this does little to undermine the claim that they jointly intend every proposition that every member intends their utterance to communicate.

So far the simple 'multiple propositions' approach is looking pretty good. It provides a basis for aggregation, and even dovetails nicely with one of the leading approaches to collective intention. Unfortunately however, this approach is simply not viable. Recall, the idea is that a speaker may intend to communicate $p1$, have a separate intention to communicate $p2$, and have another separate intention to communicate $p3$ etc. The problem is that each of these individual intentions still seems to be irrational. By intending that the audience recover

*p*1, the speaker is committed to bringing about this outcome, but they have not done enough to ensure that it is brought about. The same is true for *p*2 and *p*3. Furthermore, the multiple propositions view fails to capture the speaker's indifference regarding how they are interpreted. If the speaker intends *p*1, *p*2 and *p*3, but the audience only recovers *p*1, then the speaker's communicative intentions have been frustrated. But in reality we find the opposite. As long as the audience recovers one of the propositions consistent with the speaker's intention communication will be successful.

It is issues like these that seemingly force us toward the types of approach developed by Buchanan and Abreu Zavaleta according to which there is a property or a set of situations toward which the speaker has a single intention that is easily satisfied. Unfortunately, such approaches fail when applied to groups. We appear to be in a bind. The solution, I suggest, is to identify a more sophisticated version of the multiple intentions approach that is able to capture the the indifference of typical speakers toward the multiple admissible interpretations of their utterances.

5. Partial Communicative Intentions

Buchanan's problem turns on two features of intentions, both of which derive from the fact that intending to ϕ requires undertaking a commitment to ϕ. Firstly, it is irrational to intend to ϕ if it is irrational to believe you will ϕ. Secondly, if you intend to ϕ you cannot be indifferent as to whether or not you ϕ. The problem was that there was no single proposition Chet could rationally expect his audience to recover, and he was indifferent as to which of a range of propositions his audience recovered. This suggested that there was no single proposition that he intended to communicate.

However, there is reason to suspect that not all intentions (or action guiding intention-like states) require rational belief in, or commitment to, success. Much as there are full and partial species of belief, there appear to be full and partial species of intention.[17] Consider the following examples:

> Last night's storm brought down a tree, which now lies across your driveway, penning in the car that you urgently need to use this evening. You are not sure whether you will be able to move the tree yourself, having never confronted something quite this big before. Three possibilities have occurred to you. You might lever it out of the way with a crowbar

17. See Holton (2008), Goldstein (2016), Shpall (2016), and Peet (in press) for accounts of partial intention.

> (though you are not sure how much force you can exert with that). You might saw it into manageable pieces with a chainsaw (though you are not sure that you will be able to get the chainsaw started). Or you might put a rope round it and drag it out of the way with your car (though you are not sure, given the way that the car is penned in, that you will be able to manoeuvre it into a position from which this would work). Alternatively, and at considerable cost, you could get the local tree company to move it; but the storm brought down a lot of trees, so to stand any chance of getting them out in time you would certainly need to phone them first thing. In the end you telephone the tree company, making a (cancellable) arrangement for them to come late in the afternoon. Then you walk down to the shed and load up the wheelbarrow with your biggest crowbar and the chainsaw and a rope: all in preparation for a morning attempt to move it, one way or another, yourself. (Holton 2008: 28).

> Susan is planning her trip to Europe. There are 20 cathedrals she would like to visit. Each one has a fee. She really would like to see each one. And so she makes quite specific plans for each cathedral about how to get there and when to go. She looks up the cost of admission for each one. Sadly, she discovers that the total cost of admission of all the tickets is just out of her budget; she can only afford 19 cathedrals
>
> Yet Susan also knows that not all of her plans will come about. She knows that sometimes cathedrals close for special events. Sometimes the transit workers are on strike. In fact, she is quite sure that on one of these days, she will not be able to visit the relevant cathedral. So she decides to simply plan out each trip to each cathedral, confident that she will only need to buy 19 tickets anyways. Let the cathedrals number 1 through 20. And let ϕn be the action of visiting cathedral n. Susan intends $\phi 1$, intends $\phi 2$, . . ., and intends $\phi 20$. However, Susan knows that it is impossible for her to perform the conjunctive action $\phi 1$, . . ., and $\phi 20$. She simply doesn't have the cash. And so Susan plans to skip at least one cathedral, intending the action: not $\phi 1$ or . . . or not $\phi 20$. (Goldstein 2016: 2).

In each of these cases there are a number ends the subject in some sense 'intends'. In Holton's case they 'intend' to move the tree with a crow bar, they also 'intend' to move it with a chainsaw, and they 'intend' to have a tree company move it. However, they don't fully believe that they will remove the tree with a crow bar. Nor do they fully believe that they will move it with a chain saw. Their total set of of 'intentions' does not fully commit them to moving the tree in either way. And, as long as the tree gets moved somehow, they may well

be indifferent as to how exactly this happens. Likewise, in Goldstein's case the subject 'intends' $\phi 1$, and they 'intend' $\phi 2$ etc. But they don't have an all-out belief that they will $\phi 1$, nor that they will $\phi 2$ etc. Their total set of 'intentions' does not fully commit them to $\phi 1$ or to $\phi 2$ etc. And they may be indifferent as to which of $\phi 1$, $\phi 2$ . . . ϕn they achieve, as long as they achieve 19 of the 20.[18] Since these 'intentions' lack the features characteristic of full intention let us refer to them as 'partial intentions'. For our purposes the important features of partial intention are as follows:[19]

1. One can have a partial intention to ϕ and not be committed to ϕing.
2. One can have a partial intention to ϕ without it being rational for one to all out believe that one will ϕ.
3. Partial intentions do not agglomerate: just because one has a partial intention to ϕ and a partial intention to ψ it does not follow that one intends in any sense to $\ulcorner \phi \& \psi \urcorner$
4. Sometimes subjects have clusters of partial intentions all of which concern different means to the same ultimate end. In such cases, as long as one of the partial intentions (and thus the ultimate end) is satisfied, the subject will often be indifferent as to which partial intention is satisifed.

Buchanan's problem derives from the fact that the Gricean conception of communication is formulated in terms of all-out rather than partial intentions. My suggestion is that, in typical cases, speakers have clusters of partial communicative intentions. So, for example, in Buchanan's core case Chet has partial intentions to communicate the following propositions:

- Every beer for the sophisticates is in the bucket ($p1$).
- Every beer purchased from the bodega is in the bucket ($p2$).
- Every imported beer for the party is in the bucket ($p3$).
- Every bottled beer for the party is in the bucket ($p4$).
- . . . etc.

18. It could be responded in each case that the subject actually has an all-out disjunctive intention. I.e., they intend to $\ulcorner \phi \vee \psi \vee \chi \urcorner$ etc. However, as Holton points out, it is only by appealing to the subject's partial intention to have the tree company move the tree that we can explain their phoning of the tree company. The disjunctive intention alone does not explain this.

19. There is disagreement over the precise nature of partial intentions. But there is agreement on the below points. My own preferred approach treats partial intentions as contrastive: they involve an intention to ϕ rather than ψ for some but not all alternatives to ϕ. So, a partial communicative intention would involve intending to communicate p rather than some other proposition q, whilst being indifferent as to whether p is communicated rather than some other proposition r. See Peet (in press) for a defence of this view.

Chet is not committed to communicating any one of these propositions. Nor would it be rational for him to believe of any of these propositions that his audience will recover it. And he certainly doesn't intend to communicate the conjunction ⌜ *p*1& *p*2& *p*3& *p*4 ⌝ etc. However, this is all perfectly consistent with his partially intending to communicate each of them. Moreover, like in Holton's example, it appears that each of these partial intentions concerns a means to the same ultimate end: communicating to Tim that they are ready for the party, and don't need to do any more beer related tasks. As long as one of Chet's partial communicative intentions is satisfied, this further aim will also be satisfied. So it makes sense that Chet is indifferent as to which of his intentions is satisfied (as long as at least one of them is satisfied).

So, we can capture Buchanan's original example with a minimal modification of the Gricean picture of speaker meaning. We can retain the claim, central to **Content**, that propositions are the objects of speaker meaning. We just need to maintain that communicative intentions are typically partial, and that speakers typically have a great many of them. In line with the standard Gricean picture, we are also able to maintain the claim that understanding involves intention recognition. That is, we can hold that an audience understands an utterance if they recover a proposition partially intended by the speaker, and recognize that the proposition was at partially intended by the speaker.

But what about collective communicative intentions? Well, the partial intentions approach is a version of the 'multiple intentions' view. And, as I explained in the previous section, the multiple intentions approach provides a basis for intention aggregation. My suggestion there was that if the group members each have multiple distinct intentions toward different propositions, then there will be at least some propositions that all (or, perhaps, a majority, or supermajority) of the group members will intend to communicate. If we say, for example, that a group intends to communicate a proposition *p* iff all of the group members intend that they communicate that proposition, then the group will collectively intend to communicate exactly those propositions that every group member intends that they communicate.[20] And, if we build further constrains on collective intention, such as that the group members must intend to bring about the intended outcomes in accordance with their meshing sub-plans, then we will say that the group only intends to communicate those propositions that every member intends that they communicate in accordance with their meshing sub-plans.

My proposal is simply to extend this approach to partial intentions. If we want to say that a group intends whenever every group member intends that

20. Similarly, if we say that they intend to communicate any proposition that the majority of group members intends to communicate, we'll say that they intend to communicate every proposition that more than 50% of the group intends that they communicate.

the group s, then we'll say that the group partially intends to whenever every member of the group partially intends that they ϕ. If we add further constraints on collective intention then these will apply to partial intention too. Applied to Bratman's picture of joint intention, the picture that emerges is as follows:

We (a pair of individuals) partially intend that we *J* if:

1. (a) I partially intend that we *J* and (b) you partially intend that we *J*.
2. I intend that if we *J* we do so in accordance with and because of 1a, 1b, and meshing subplans of 1a and 1b; you intend that if we *J* we do so in accordance with and because of 1a, 1b, and meshing subplans of 1a and 1b.
3. 1 and 2 are common knowledge between us.

This picture can be illustrated as follows: suppose we have a two person group, Ned and Shauna. Suppose that they each intend that they jointly ϕ (for example, move a fallen tree), and that they do so via meshing sub-plans. Furthermore, suppose that this is common knowledge between them. Now, suppose that there are three ways of ϕing: $\phi 1$ (moving the tree by chopping it up), $\phi 2$ (moving the tree by pulling it with a car), $\phi 3$ and (pushing the tree by hand). Suppose that Shauna has partial intentions that they $\phi 1$, and that they $\phi 2$ (both by means of their meshing subplans). And suppose that Ned has partial intentions that they $\phi 2$, and that they $\phi 3$ (both by means of their meshing subplans). Finally, suppose that each partial intention that they $\phi 2$ is common knowledge. Just as Bratman's account predicts, this seems to be a clear case of joint partial intention to $\phi 2$ (i.e., move the tree by pulling it with a car).

The situation is similar with our group of stranded survivors. When they write 'everyone is stuck on this island' on the beach they have a clear and commonly known end in mind: alerting would be rescuers to their presence. Moreover, they will each, like Chet from Buchanan's example, have a cluster of partial intentions regarding how their message is to be interpreted. There will likely be *some* degree of variation in the partial intentions of each group member. However, there will inevitably be a large degree of overlap in the propositions the survivors partially intend that they communicate. And, in composing their message they act cooperatively by means of one another's meshing sub-plans.

It is, as we noted in Section 4, a little less clear that Bratman's common knowledge condition will be met in cases like this. We might worry, for example, that with respect to any proposition partially intended by every group member there will be a nearby world at which at least one group member does not intend that proposition. This will prevent the group members from knowing (let alone commonly knowing) of any proposition that everyone in the group

partially intended that they communicate that proposition.[21] However, as I suggested earlier, common knowledge should not be seen as a necessary condition on collective action. It is not clear that fully fledged common knowledge is *ever* achieved. Moreover, common knowledge is important in the Bratmanian framework primarily in cases where there will be further deliberation or bargaining regarding the group's plan. But no such future bargaining will be taking place in our core case—certainly not bargaining that turns on exactly how the context sensitivity of 'everyone' is to be resolved.[22] So, failure of the common knowledge condition should not worry us too much.

That said, it is not clear to me that *every* proposition intended by the group will fail to be intended by some group member at a nearby or otherwise relevant world. It strikes me as at least plausible that there will typically be some core set of propositions intended by every group member across a reasonably wide sphere of possibilities. If this is the case, then there will be some core set of propositions for which the common knowledge condition is at least approximated.

Putting these pieces together, the group will have partial joint intentions to communicate each of the most obvious available interpretations of 'everyone is stuck on this island'. It will not matter to the group which of these partial intentions is satisfied, as long as one of them is satisfied.[23]

6. Conclusion

To sum up, the partial intentions approach outperforms Buchanan and Abreu Zavaleta's accounts because it is able to handle group assertion. It is also more conservative than these accounts, and that of MacFarlane (2020a; 2020b) because it preserves the assumption that propositions are the objects of speaker mean-

21. Thanks to an anonymous referee for raising this worry. A similar problem is pressed by Peet (2016) who argues that it leads to a limited skeptical result regarding testimonial knowledge.

22. This is one place in which the situation of the collectives such as legislatures or corporations may differ to our small group. There are conceivable situations in which how a group intended context sensitivity to be resolved in a particular case may be important for future deliberation. However, the Bratmanian view is not intended to apply directly to such large structured groups. For an account of group agency in large structured groups that is consistent with the account given here, and that builds upon the Bratmanian picture, see Ekins (2012).

23. This is consistent with there being significant disagreement within the group as to what is intended. As long as there is at least one proposition partially intended by everyone in the group (and also fitting Bratman's other conditions) we'll be able to derive a collective communicative intention. Bratman's approach presupposes what Tan (2021) calls a 'trivial aggregation procedure'. That is, it presupposes that all group members must share an intention in order for the group to intend. If we opted for a picture of collective intention formulated in terms of non-trivial aggregation (i.e., less than 100% agreement) we'd be able to derive a collective communicative intention in cases where there is even less agreement within the group.

ing. And it does all this with partial intentions, a mental state for which there is significant independent support. No exotic resources need be introduced to resolve the puzzle.

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