

Is Joint Attention An Essentially Communicative Relation?

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Abstract: In this paper I provide an elaboration and defence of the claim that joint attention is an essentially communicative relation ('The Communication Claim'). The Communication Claim is typically advanced with the aim of providing an informative characterisation of what makes joint attention 'truly joint' in a way that is not committed to an overly-intellectualistic characterisation of joint attention in early infancy. I argue that existing interpretations of the communication claim fail to live up to this ambition insofar as they succumb either to the charge of over-intellectualism or the charge of under-informativeness. I then argue that this dilemma can be avoided if the communicative relation at play in joint attention is understood minimally, as a form of perceptual interaction that is grounded in our power to capture and direct the attention of others.

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1. Introduction

Joint attention emerges in early infancy at around nine to twelve months of age, and is commonly held to play a role in the development of our capacity to understand the perspectives and mental states of others (Moll 2023). The philosophical challenge raised by joint attention is, in essence, that of providing an informative explanation of what makes joint attention 'truly joint' in a way that does not attribute an overly sophisticated capacity to mindread to twelve month old infants.

An interesting trend in the recent literature on joint attention has it that we can make progress in addressing this challenge if we think of joint attention as an 'essentially communicative relation' (Eilan Forthcoming: 6). I will call this, following Eilan, *The Communication Claim*. The Communication Claim is contrasted with alternative approaches to joint attention which treat it as a form of perceptual experience or common knowledge

that is ‘sandwiched in between’ communicative acts but ‘not itself a communicative phenomenon’ (Eilan Forthcoming: 10).¹

I have two aims in this paper. The first is to argue that an elaboration and defence of The Communication Claim is needed because existing interpretations of it face a version of the very same dilemma that its proponents pose against perceptual accounts of joint attention (§§3-4). The second is to argue that this dilemma can be avoided if we think of the communicative relation at play in The Communication Claim minimally, as a form of perceptual interaction that is grounded in our power to capture and direct the attention of another. This approach, I argue, constitutes a satisfactory synthesis of both perceptual and communicative approaches to joint attention (§5).²

Before I turn to this task, however, some preliminaries are in order.

2. Joint Attention

‘Joint attention’ is not a term of ordinary language. It is a technical term employed by psychologists and philosophers to refer to a relation in which two or more individuals attend to some object together, and where they do so in a way that they are jointly aware of their respective acts of attention and the thing attended to.

This characterisation requires some unpacking. Consider, for instance, the requirement that joint attention essentially involves a kind of joint awareness. On this conception, simply attending to an object, *o*, in proximity with another who is also attending to *o*, is not sufficient for ‘truly joint attention’ (Carpenter & Liebal 2011: 159). Nor would it be sufficient to claim that each agent attends to *o* in a way that tracks the attention of the other. To see why, contrast the following cases:

Covert Attention: John and Jane are in a lecture theatre when John notices a springer spaniel playing excitedly on the lawn outside, playing catch, chasing its shadow, and swimming in the shallows of the campus lake. Jane notices that John is doing this, and begins attending to the dog in a way that monitors John’s attention.

John in turn becomes aware that Jane is doing this but, being a little shy, begins covertly attending to Jane’s attention to his attention. He alternates between watching the dog play and covertly attending to Jane’s attention to his act of watching the dog play.

¹ For other expressions of the communication claim, Carpenter & Liebal 2011, Eilan 2016, Siposova & Carpenter 2019, León 2021, Harder 2022 and Moll 2023.

² To simplify matters I focus on episodes of perceptual joint attention in the visual modality. For discussion of non-visual forms of perceptual joint attention, see Bigelow 2003, Botero 2016, Cochrane 2009 and Núñez 2014; and Hoerl & McCormack 2005, O’Madagain & Tomasello 2019, and Bacharach 2024 for forms of non-perceptual joint attention. I will assume that the claims made of visual joint attention in this paper could be extended, in further work, to non-visual and non-perceptual forms of joint attention.

Jane then becomes aware that John is doing this and, being amused by this little game, begins alternating between watching the dog play and and covertly attending to John's covert attention to her attention to his attention.

Truly Joint Attention: John and Jane are sitting in a lecture theatre when John notices a springer spaniel playing excitedly on the lawn outside the lecture hall, playing catch, chasing its shadow and paddling in the shallows of the campus lake.

He begins attentively watching it. Jane notices that he is doing this and looks over to him, catching his eye. John nods his head towards the dog, and then looks back: they both make eye contact and smile at each other.

In Truly Joint Attention John and Jane seem to 'function as a unit' in a way that they do not in Covert Attention.³ Moreover, they seem to do so in such a way that affords a distinctive form of joint awareness. Naomi Eilan (2005: 1), for example, suggests cases like *Truly Joint Attention* involve a 'meeting of minds' in which each individual's attention and the jointly attended-to scene are 'out in the open' or 'mutually manifest' to each subject. In a similar vein, Christopher Peacocke (2005: 298) says that, in an episode of joint attention, 'everything is in the open, nothing is hidden.' Finally, John Campbell (2005: 417) writes that 'joint attention has an "openness" about it — there's a sense in which the situation is "open" to both attendees in a case of joint attention.'⁴

Each of these authors seeks to identify a rich conception of joint attention by way of a phenomenal contrast between (a) what it is like to attend to a scene in a way that attentively tracks the direction of another person's attention with (b) what it is like to attend to a scene together with another, and they suggest that truly joint attention is characterised by a quality of *mutual openness*. An account of joint attention must therefore answer the question: how should we understand the form of joint awareness which distinguishes Truly Joint Attention from Covert Attention? Or, as Carpenter & Call (2013: 50) ask: 'What makes joint attention joint?'

There are two constraints on a satisfactory answer to this question. The first is *The Informativeness Constraint*: a satisfactory answer to this question must be able to provide an informative explanation of the way in which truly joint attention differs from merely covert attention. The second constraint concerns the place of joint attention in human development. Infants at around nine to twelve months of age begin engaging in joint attention with their caregivers. *The Developmental Constraint* has it that a satisfactory account

³ See Moll 2023: 248 and Schmitz 2024: 272.

⁴ For similar claims, see Carpenter & Liebal 2011: 161, Moll & Meltzoff 2011: 290, Saposova & Carpenter 2019: 263, León 2021: 553, and Harder 2022: 2-3.

of joint attention must be consistent with this fact, and must therefore refrain from analysing joint attention with reference to capacities that are beyond the ken of infants of this age group.

3. A Dilemma For Perceptual Accounts of Joint Attention

Providing an account of joint attention which meets both of these constraints is not as straightforward as it might initially seem. Consider, for example, Michael Tomasello's (2018: 56) suggestion that in joint attention the 'infant is attending not only to the adult's attention to the object, but also to the adult's attention to her attention to the object, and to the adult's attention to her attention to the adult's attention to the object, and so on.'

Two things are salient about this way of thinking about joint attention. The first is that it is far from clear that it could, in principle, constitute a satisfactory characterisation of the difference between *Truly Joint Attention* and *Covert Attention*. Covert Attention, after all, is a case in which John attends to Jane's attention to John, Jane's attention to John's attention to Jane, and so on. More important for present purposes, however, is the fact that this account seems to constitute a clear example of an explanation of joint attention which straightforwardly runs afoul of *The Developmental Constraint*. It is, on the face of it, extremely implausible that one year old infants are able to attend, not merely to the adult's attention to the object and to her (i.e. the infant's) attention to the object, but also to the adult's attention to her attention to the object, and presumably also the adult's attention to her attention to the adult's attention to the object, the adult's attention to her attention to the adult's attention to her attention to the object, and so on. I will call this *The Over-Intellectualism Objection*.

Tomasello seeks to avoid this objection in the sentence immediately following the one just quoted. He writes: 'It is not that the infant engages in this kind of recursive thinking *explicitly*, but that the *underlying structure* of joint attention means that they both *know together* that they both are attending to the same thing.' (Tomasello 2016: 56, my italics). This manoeuvre, however, raises a number of questions. What, for example, would it be to engage in this kind of recursive thinking *implicitly*? What is it about the underlying structure of joint attention which entails that they know together that they are attending to the same thing? And how do we understand the form of knowing together at play here? According to classic approaches to common knowledge, for example, *Truly Joint Attention* might be analysed as follows:

- (1) John is attending to *a*.
- (2) Jane is attending to *a*.
- (3) John knows that Jane is attending to *a*.

- (4) Jane knows that John is attending to o .
- (5) John knows that Jane knows (3).
- (6) Jane knows that John knows (4).⁵

The problem with this suggestion, however, is that it seems to face The Over-Intellectualism Objection (Eilan 2005: 2-3; Carpenter & Liebal 2011: 166). Absent of a further explanation of what it would be for an infant to engage in this kind of recursive thinking implicitly, of the ‘underlying structure’ of joint attention, and of the kind of common knowledge this is supposed to afford, the characterisation offered by Tomasello seems to run afoul of The Informativeness Constraint. In so doing, it faces a version of what I will call *The Under-Informativeness Objection*: it would fail to provide a suitably informative characterisation of the difference between Truly Joint Attention and Covert Attention.

It is in this context that we can see the interest of John Campbell’s (2011: 415) claim that joint attention is ‘fundamentally a phenomenon of sensory experience.’ Campbell offers a non-reductive, relational, account of joint attention which treats it as a primitive triadic relation between an object and two co-attenders, each of whom, Campbell says, is present to the other as a co-attender (Campbell 2005: 288).⁶ Part of what Campbell has in mind in claiming that joint attention is primitive is that it cannot be reduced to the complex iterated states of knowledge or awareness considered above. Joint attention, on Campbell’s view, is an explanatorily basic phenomenon: it can enable us to engage in the kind of recursive thinking and attending described by Tomasello, but it does not itself consist in this kind of recursive thought or awareness.

Proponents of The Communication Claim typically argue that this strategy runs afoul of The Under-Informativeness Objection. It is unsatisfying, in their view, simply to insist that in Truly Joint Attention there is a primitive and unanalysable way in which John and Jane are present to one another as co-attenders which is absent in cases like Covert Attention. What we need, they claim, is a characterisation of what it is like for another to be present to one as a co-attender in joint attention which explains why two people cannot be properly described as being present to one another in this way in cases like Covert Attention (Eilan Forthcoming: 10; Carpenter & Liebal 2011: 166-7).

Peacocke (2005) develops a version of the perceptual approach which seeks to avoid The Under-Informativeness Objection. Like Campbell, he seeks to understand the kind of joint awareness involved in terms of perceptual experience rather than common knowledge. However, he seeks to provide a characterisation of what it would be for two

⁵ For classic studies of common knowledge, see Lewis (1969) and Schiffer (1972).

⁶ See also Campbell 2002, 2005, 2011, 2017 and 2019.

subjects to be present to one another as co-attenders which meets The Informativeness Constraint. On Peacocke's view, John and Jane are attending to *o* if and only if the following conditions are met:

- (a) John and Jane are attending to *o*.
- (b) John and Jane are each aware that their attention (a) has 'mutual open-ended availability'.
- (c) John and Jane are each aware that this whole complex state of awareness (a)-(c) exists.

The property of 'mutual open ended availability' is characterised as follows:

Each perceives that the other perceives that *s* obtains; and if either is occurrently aware that the other is aware that he is aware . . . that *s* obtains, then the state of affairs of his being so occurrently aware is available to the other's occurrent awareness. (Peacocke 2005: 302)

The problem here, however, is that this approach runs into a version of *The Over-Intellectualism Objection* insofar as it implausibly attributes an overly sophisticated capacity to attribute higher order propositional attitudes to twelve month old infants (Carpenter & Liebal 2011, p. 166).⁷

This constitutes the dialectical context in which The Communication Claim is advanced. Proponents of The Communication Claim typically argue that we can offer an account of joint attention which meets both The Developmental Constraint and The Informativeness Constraint if we make reference to the way in which joint attention is an essentially communicative relation. Eilan (Forthcoming: 10), for example, suggests that we can do this if we recognise that there is 'an essentially communicative core to the relations between two subjects when they attend jointly to their environment.' And, in a similar vein, Carpenter & Liebal (2010: 169) write of the 'inherent communicativeness and conversational nature' of joint attention and, in doing so, claim 'not just that joint attentional interactions are in many ways like conversations but that the sharing of attention in "true" joint attention involves communication'.

The pressing question facing a proponent of The Communication Claim is: how should the communicative relation that is essentially at play in joint attention be understood? The answer to this question is far from straightforward, and as I will now argue, presents communicative accounts of joint attention with a version of the very same dilemma which

⁷ See also Campbell 2011: 418-419 and Campbell 2019: 224

its proponents have levelled against perceptual approaches to joint attention (§4). This will provide the dialectical context in which my own preferred version of The Communication Claim can be seen to be attractive (§5).

4. A Dilemma for Communicative Accounts of Joint Attention

4.1. *Communicative Intentions and The Over-Intellectualism Objection*

In an interesting recent paper, Carpenter & Liebal (2011) have sought to develop a version of The Communication Claim by providing a detailed analysis of the different kinds of looks exchanged between infants and their caregivers in joint attention. In doing so, they claim that these looks are no less communicative than ordinary speech acts insofar as ‘they are intentional, they are referential and they have content — they convey a message about the object or event (e.g. “Isn’t that great?!”).’ Moreover, they claim that these looks have the ‘reference and attitude components of speech acts’ (Carpenter & Liebal 2011: 170).

A natural interpretation of this proposal has it that joint attention is essentially communicative, where the relevant conception of communication is understood by way of analogy with Grice’s (1957) analysis of speaker meanings. On such an analysis, the different looks involved in joint attention are guided by the intention to (i) bring about a change in the state of the mind of their addressee and (ii) to achieve this at least partly in virtue of their addressee’s recognition of this very communicative intention.

Consider a ‘top down’ case of joint attention in which the joint attentional episode is initiated by one of the co-attenders. In such a case, the ‘addressor’ begins by casting an ‘initiation look’ towards their addressee. This is a look which serves, as Carpenter & Liebal put it, as an ‘invitation to interaction’. It signals the initiator’s communicative intent, the message they seek to convey being something like ‘I am trying to tell you something’. One way of understanding this is as an instance of an act type I will call ‘Initiation’:

Initiation: To engage in an act of Initiation is to act with the communicative intention to bring it about that one’s addressee (i) attends to one’s attention towards them and (ii) that they do so at least partly in virtue of their recognition of this very communicative intention.

An act of initiation ‘opens the channels of communication’. At this point, the initiator might then make a ‘reference look’ towards the target object. When they do so, the addressor should be understood as trying to make their addressee attend to the target object, where the message conveyed by this communicative act is understood, as being roughly equivalent to “Look at that!” Referential looks could be understood as follows:

Reference: To engage in an act of reference to a target object, *o*, is to act with the communicative intention to bring it about that one's addressee (i) attends to *o* and (ii) that they do so at least partly in virtue of their recognition of this very communicative intention.

The presence of Initiation and Reference does not suffice for an episode of joint attention on Carpenter & Liebal's account. This requires an additional ingredient: a sharing look.

Carpenter & Liebal (2011: 171-2) characterise sharing looks as bidirectional looks in which each participant confirms that their attention is shared and provides a comment on the jointly attended-to object. They claim that these are what turns 'parallel or recursive or not-yet-shared attention into truly joint shared attention.' It is worth quoting Carpenter & Liebal's characterisation of sharing looks at length:

There is a lot packed into a sharing look. It is a confirmation or acknowledgment that attention is shared ("Yes, I see it too!"), as well as a comment on the just-established topic. It is in this comment that most of the communicative content of the look lies. The messages expressed in the comment can vary widely, but in the prototypical case the comment expresses an attitude about the referent that each partner hopes will be shared, in the sense of agreed with, by the other. Whether or not it is successful (since the participants' attitudes might differ), this alignment of attitudes seems to be the goal of much joint attentional interaction. The attitude expressed is typically positive (this look is often accompanied by a smile) and can be glossed as something like "Wow, cool, huh?!" if both participants happen to look at each other simultaneously or, depending on the precise timing of the sharing looks, something like the following (quick—almost simultaneous) conversational sequences:

[initiator:] "Isn't it great?!" [recipient:] "Yeah!"

or

[recipient:] "Wow!" [initiator:] "Yeah, cool, huh?!"

(Carpenter & Liebal 2011: 171-2).

So far I have focused on cases of 'top-down' joint attention in which one of the participants initiates the episode of joint attention. This account will also apply to 'bottom-up' cases of joint attention; cases, that is, in which the object attended to calls attention to itself and therefore obviates any need for an initiation or a reference look. In such a case, a

sharing look might be sufficient for joint attention: two students might jointly attend to the sound of the fire alarm that is going off in the library, for instance, simply by looking up from their laptops, making eye contact and shaking their heads.

The problem with this approach is that it runs into a version of The Over-Intellectualism Objection. In order for infants to engage in this kind of communicative interaction, they must be able to recognise the communicative intentions of the adult who engages them in joint attention. But in order for the infant to be able to do this, she must be able to recognise that the adult intends her to recognise that the adult intends to bring about some change in her mind (to attend to an object, for example) and to do so because of her recognition of this intention.

It would be extremely surprising, however, if one year olds were capable of grasping the complex communicative intentions required by this kind of account. There are two reasons for this. The first is that the question of whether one year old infants are capable of attributing representational states of mind to others is a matter of vexed debate in developmental psychology.⁸ It should therefore be all the more controversial whether they are capable of attributing the kind of complex metarepresentations required by the Gricean account. The second is that although there is comparatively little empirical work on the infant's capacity to represent recursive psychological states, the little evidence that there is suggests that they only master the ability to attribute beliefs about beliefs to others by the age of around six. If what holds of beliefs also holds of the attribution of intentions, then we will also have empirical reasons for doubting that infants are capable of recognising complex metarepresentations and keeping track of them in the heat of the moment. This is supported by work which suggests that children older than one year of age have trouble understanding intentions, not to mention the kind of iterated communicative intentions involved in the Gricean account of communication.⁹

4.2. Communication-as-Connection and The Under-Informativeness Objection

Naomi Eilan has recently developed a different version of the communication claim. Eilan writes:

⁸ For affirmative answers, see Onishi & Baillargeon 2005 and Liszkowski, Carpenter, Striano & Tomasello 2006, and for negative ones, see Apperly & Butterfill 2009 and Butterfill & Apperly 2013. The crucial point of disagreement is whether the experimental evidence provides grounds for attributing a capacity to represent propositional attitudes as opposed to a capacity to merely track them.

⁹ See, for instance, Astington 1991, Breheny 2006, Butterfill 2011, and Moore 2017. This objection has force against the suggestion of Tomasello et al (2007: 715) that two year old infants 'operate with' and are capable of 'comprehending' a 'primordial version of communicative intentions in the sense that they understand when a communicator intends an act "for" someone else's benefit, and intends that both she and the recipient know this together'.

The sense of ‘communication’ we need for making good the Communication Claim is the etymologically older, and more diffuse notion, on which to communicate is to be in touch, to connect, or ‘commune.’....There are many ways of achieving connection—dancing or playing music together, holding a conversation (in the course of which one might exchange information), sharing a joke and so forth; and there is much to be learned about the nature of connection by investigating these different ways of achieving it. But however it is thus filled out, the proposal I want to have before us says that we should treat ‘communication-as-connection’ as a basic psychological concept, which cannot be reductively analysed. (Eilan Forthcoming: 13).

Eilan then suggests that ‘a necessary condition for someone to be experientially present to me as a co-attender is that I feel connected to her in virtue of standing in a communicative relation to her.’

At this stage, we might wonder if appeal to an irreducible relation of communication-as-connection constitutes genuine progress over Campbell’s appeal to a conception of joint attention as a primitive triadic relation, at least as far as The Under-Informativeness Objection is concerned. Eilan’s response to this worry, I take it, would be to insist that her account affords a more informative characterisation of what it is to be present to another as a co-attender. More specifically, Eilan suggests that a necessary condition on standing in a relation of communication-as-connection is that each individual takes up an ‘attitude of address’ towards the other. ‘There are two points here’, she writes:

First, the adoption of an attitude of address, in the form of an expression or gesture, is immediately recognized, in a smile, a wave, a touch or a glance and enters as such into the experience one has of one’s co-attender. The second point is that the distinguishing feature of the capacity to experience an expression of address within the framework of a communicative exchange is that its recognition entails experiencing it as an invitation, directed at oneself, to respond in kind. It is this that sets it apart from purely perceptual awareness...(Eilan Forthcoming: 13).

On Eilan’s view, I experience another as a co-attender when I stand in a relation of communication-as-connection with them, and this involves me taking up an attitude of address towards them, and experiencing them as taking up an attitude of address towards me. Whether Eilan’s account succeeds depends on how the notion of an ‘attitude of address’ is understood, and how we understand the idea that experiencing another as taking up such an attitude involves an ‘invitation, directed at oneself, to respond in kind.’

One risk facing us at this point is that of seeking to avoid The Under-Informativeness Objection only to run into The Over-Intellectualism Objection. For example, unless more is said about the concept of address at play in this account, it is natural to interpret it in broadly Gricean terms. Salje (2017: 832), for example, writes: ‘To address someone is to act with an intention to bring it about that (i) they notice...one’s attention directed towards them, and (ii) they do so partly in virtue of recognizing that very intention.’ Similarly, on a natural interpretation of what it is to take another to be inviting one to respond, one must recognise their communicative intention to make one respond on the basis of one’s recognition of this very intention. Understanding these notions, in this way, however, would constitute no progress over the Gricean account rejected in §4.1.

But perhaps there is a more minimal characterisation of these notions open to Eilan. Elsewhere, Eilan writes of ‘a particular kind of relational self-conscious activity by two subjects, the primary, initial aim of which for both just is to establish a communicative relation between them’ (Eilan Forthcoming: 9). Drawing on this idea, we might suggest an elaboration of what it is to take up an ‘attitude of address’ towards another as follows: A takes up an attitude of address towards B if and only if they intentionally seek to connect with B. It might then be suggested that what it is for A to experience B as inviting her to respond is to experience B as engaging (or attempting to engage) A in a relation of communication-as-connection.

But now we face the opposite risk: the risk, that is, of avoiding The Over-Intellectualism Objection in a way that makes us vulnerable to The Under-Informativeness Objection. The source of this problem is that we have not been offered a sufficiently detailed characterisation of the notion of communication-as-connection to sustain the explanatory weight that is now being placed upon it.

This problem can be expressed in a way that mirrors Eilan’s own objection to Campbell. In response to Campbell’s claim that in a primitive triadic relation of joint attention each participant is present to the other as a co-attender, Eilan (Forthcoming: 10) complains that we have not been given a suitably robust and informative characterisation of what it is for someone to be present to another as a co-attender to explain why those involved in a case like Covert Attention are not present to one another as co-attenders in the relevant sense.

Eilan, by contrast, claims (i) that if two agents are present to each other as co-attenders, then each experiences the other as taking up an attitude of address towards them; and (ii) that this consists in each experiencing the other as intentionally seeking to engage them in a relation of communication-as-connection. But since we haven’t been given a suitably informative characterisation of what it is to stand in a relation of communication as connection with another, we might wonder why two people who are covertly attending to each other cannot each be present to the other in this way. Consider the following example:

Covert Connection: John and Jane are sat at opposite ends of a dimly lit cocktail lounge. John notices Jane, begins covertly attending to her and is moved by her charming manner. Let's suppose, moreover, that Jane notices John, begins covertly attending to him, and is moved by his good looks. John then becomes aware that Jane is moved by his good looks, and Jane becomes aware that John is moved by her charming manner. And so on.¹⁰

If this does constitute a relation of covert communication-as-connection, then each of these agents might be experienced by the other as taking up an 'attitude of address' towards them. In order to rule this out, we would need a sufficiently robust and informative characterisation of the notion of communication-as-connection which explains why Eilan's examples of connection—of singing, dancing, playing music together, sharing a joke, and engaging in a conversation—count as cases of connection but why *Covert Connection* does not. If this is right, then Eilan is faced with a version of the very same objection—The Under-Informativeness Objection—which she herself levels against Campbell.

Another reason we need a more robust and informative characterisation of the notion of communication-as-connection is to justify Eilan's claim that 'it is a necessary condition on someone's being present to me as a co-attender that I feel connected to her in virtue of standing in a communicative relation to her.' (Eilan Forthcoming, p. 13).

Note the strength of this claim: it is not the plausible claim that joint attention is *typically* pursued by infants and adults alike out of a prosocial motivation for emotional connection. Rather, it is the claim that this kind of emotional connection is a necessary condition for any form of genuine joint attention. It is not, however, immediately obvious that there are no cases of joint attention which do not involve a feeling of emotional connection shared by each co-attender. Consider the case, for example, of two security guards watching a regular shoplifter together on CCTV with the aim of catching them redhanded. What grounds do we have for insisting that cases like this *must* involve some kind of communicative emotional relation if they are to count as cases of genuine joint attention? In order to so much as begin addressing this question, we would need a more robust and informative characterisation of the relation of communication-as-connection than has been offered by Eilan.

One response for the proponent of The Communication Claim would be to seek to offer an account of the notion of communication-as-connection which is sufficiently robust to address these challenges. Although I am sympathetic to this strategy, I will not

¹⁰ Compare Nagel 1969: 10-11.

pursue it here. Instead, I will offer an alternative characterisation of the communicative relation at play in joint attention which is compatible with, but which is not committed to, the claim that joint attention essentially involves a kind of emotional connection.

5. A Minimal Communicative Account

5.1. *A Response to the Dilemma*

In this section I will offer a communicative account of joint attention which is able to meet both *The Informativeness Constraint* and *The Developmental Constraint*. According to this account, the communicative relation at play in joint attention should be understood minimally, as a form of perceptual interaction that is grounded in a basic power we possess to capture and direct the attention of others. In foregrounding the notion of perceptual interaction, this approach has the merit of vindicating both the communicative and perceptual approaches to joint attention.

The details of this kind of perceptual interaction are outlined in §5.2. Then in §5.3 I explain why this kind of interaction deserves to be considered a form of communicative interaction. Finally, I end by explaining how this approach avoids both *The Over-Intellectualism Objection* and *The Under-Informativeness Objection* (§5.4).

5.2. *Joint Attention as Perceptual Interaction*

To illustrate this account, I will focus on a basic form of joint attention to a visually present object which is sustained by the kind of communicative looks discussed in §4: initiation looks, reference looks, and sharing looks.

The problem with the Gricean-style interpretation of these looks considered in §4.2 derives from the fact that it seeks to understand their communicative character in a way that makes reference to quite sophisticated communicative intentions. The looker, on this conception, has a communicative intention to bring about a specific change in the mind of the person they are looking at, and intends to do so on the basis of the latter's recognition of this very intention. Although there are communicative looks which operate in this way, they do not constitute the most fundamental form of communicative looking involved in joint attention.

A more fundamental form of communicative looking can be appreciated if we pay attention to the way in which looking at a person can be a way of acting upon them. We have the power to capture another's attention simply by looking at them, and can do so in a way which makes some kind of response, on their part, unavoidable for them. This is easiest to appreciate when we ourselves are the object of another's gaze. When I become aware of someone looking at me, I cannot proceed as I might have been doing up to that

point, attentively absorbed in whatever it was that I was up to. I can look back and respond to my observer, or I can studiously avoid their gaze, resisting the magnetic force that their gaze is exerting upon me.¹¹

We can draw on this capacity to give a minimalist interpretation of initiation looks. When A performs an initiation look directed at B, A intentionally exercises their power to capture B's attention and does so insofar as it is a way of initiating a joint attentional interaction with B. But although A does this intentionally, B does not need to recognise A's communicative intention for her attention to be captured in the way intended by A. Rather, human beings are automatically disposed to look at anyone who is visibly looking at them.

We can call this a 'one-way transaction' since it involves an agent acting upon a patient who is not themselves an agent in this transaction.¹² This leaves open the possibility that I may stand as an agent to you in a one-way transaction and you may stand as an agent to me in a different one-way transaction. This is like the case in which I touch your right hand with my left hand as you touch my head with your left hand. In the first of these transactions I am the agent and you are the patient; in the second, I am the patient and you are the agent.

Contrast this with a case in which we shake hands. In such a case, we are both agent and patient in a single mutual transaction: what I am doing to you and undergoing at your hands are interdependent with what you are doing to me and undergoing at my hands. Our respective actions cannot be disentangled: I can only do what I am doing to you in this way if you are doing to me what you are doing in that way. When you resist my shaking of your hand, there is a dramatic change in what I'm doing: I am shaking a limp hand, and therefore am engaging in a one-way rather than a mutual-transaction.

Here, then, is the source of the difference between Covert Attention and Genuinely Joint Attention. When two individuals make eye contact, they stand together in a mutual-transaction: the attention of each towards the other absorbs the others attention as the other's attention absorbs theirs. But, in this case, we have an instance of mutual-absorption which cannot be reductively analysed in terms of two one-way transactions.

Insofar as eye contact involves the mutual absorption of attention, it constitutes a basic form of perceptual common ground. This form of basic perceptual common ground will play a role in my explanation (offered in §5.3) of the way in which this kind of perceptual interaction can constitute a kind of communicative relation. Whatever either individual does when they are making eye contact will be 'out in the open between them', assuming neither of them looks away.¹³ In Covert Attention, by contrast, eye contact is absent. John

¹¹ This characterisation of the phenomenology of the gaze draws upon ideas from Korsgaard (1996) and Sartre (1943/2021).

¹² I borrow the term 'transaction' from Ford (2014)

¹³ Compare Campbell 2017: 124 and 2019: 225.

attends to Jane, Jane attends to John's attention to Jane, John attends to Jane's attention to John, and so forth. In these cases, insofar as each is aware that they are the object of the other's attention, they will each experience the other as acting upon them by magnetically capturing their attention in the way described above. In this case, however, each individual actively and attentively resists meeting the other's gaze head-on, by making eye contact. In doing so, they each avoid a state of affairs in which their attentive awareness of the other is common ground between them.

The mutual transaction involved in episodes of eye contact is a dyadic relation which constitutes a basic form of mutual openness. This may ground an episode of joint attention in two ways, depending on whether we have in mind a case of 'top-down' or 'bottom-up' joint attention. In a case of top-down joint attention, for example, we may move from an episode of eye contact to an episode of joint attention when one of the co-attenders points or makes a referential look towards some object in their shared environment. Our power to capture another's attention by looking at them also enables us to direct their attention towards objects by looking or pointing at these objects. However, like the characterisation of initiation looks just offered, this interpretation of a referential look does not require the recognition of a communicative intention on the other's part. Rather, when someone who was making eye contact with us visibly looks elsewhere, we have a basic tendency to look where they are looking, just as we have a basic tendency to look at the object that another is pointing at.¹⁴ Once reference has been achieved, the joint attentional triangle is 'closed' with an exchange of eye contact and 'sharing looks' in which each co-attender expresses their reaction to the object. When they do so the object, and their respective reactions to it, are brought within their shared perceptual common ground. In a case of 'bottom-up' joint attention, by contrast, there is no need for an initiation look or a reference look because the stimulus draws attention to itself. All two individuals need do in this kind of case is make eye contact and exchange the kind of 'sharing look' described above.

5.3 Perceptual Interaction as Communicative Interaction

Episodes of joint attention, on the view proposed here, are temporally extended episodes in which two or more people attend to some object together, where their doing this together consists in the fact some object is brought within their basic perceptual common ground through a process which exploits the kinds of communicative looks just described. Suppose this is granted, in what sense would it vindicate the suggestion that joint attention is an essentially communicative relation?

¹⁴ For an account of pointing along these lines, see O'Madagain Forthcoming.

I think this form of perceptual interaction deserves to be called a form of communicative interaction, albeit of a minimal sort. According to Breheny (2006: 96), we can think of a central kind of communication as involving the act, performed by one person, of drawing another's attention to some aspect of their shared situation, and, in doing so, of bringing it (and, in many cases, their respective reactions to it) within their common ground. One way of doing this might be to engage in Gricean communication. As, for example, when I say to you 'look over there, a deer!' with the intention of directing your attention to the deer, and doing so in virtue of your recognition of this communicative intention. The kind of perceptual interaction described in §5.2 is another way of doing this. In cases of top-down joint attention, this would involve one person capturing the attention of another (through an initiation look) and guiding it to some object (through a reference look). By making eye contact and a 'sharing look', they thereby bring the object and their respective reactions (which we can think of as 'proto-comments') to it within their basic perceptual common ground.' This relation is then maintained for as long as they are engaged in the activity of alternating between looking at the object together and engaging in both eye contact and 'sharing looks' with one another.

This form of perceptual interaction is a *minimal* form of communicative interaction since, unlike more sophisticated forms of Gricean communication, it does not require reference to the recognition of the kinds of complex communicative intentions that are typical of Gricean communication. Nor does the kind of perceptual common ground alluded to here require reference to the kind of infinitary common knowledge in the way, for example, proposed by Stalnaker (2002). Rather, as I have said above in §5.2, the experience of eye contact constitutes a basic form of perceptual common ground. For this reason, an adult can make use of their power to capture and direct the attention of an infant to some object and, by making eye contact, bring it within their perceptual common ground without the infant having to recognise any communicative intention on the part of the adult, or share any kind of infinitary common knowledge with them.

If it is granted that this form of perceptual interaction, which exploits our power to capture and direct the attention of others, is a genuine form of communicative interaction, then a minimalist interpretation of The Communication Claim becomes available. This is the claim that joint attention essentially involves the kind of perceptual interaction just described, and that reference to this kind of communicative interaction is necessary to characterise the way in which each agent is conscious of the other as a co-attender in joint attention. More specifically we can suggest, echoing Eilan (Forthcoming: 13), that each participant in an episode of joint attention is aware of the other as one who takes up an *attitude of proto-address* towards them, where experiencing another in this way involves experiencing them, in some sense, as one with whom one is engaged in this kind of

perceptual interaction. It can then be suggested that this is what distinguishes our awareness of another as a co-attender from detached, spectatorial forms of perceptual observation.¹⁵

Before moving on, it is worth commenting on how this notion of ‘communication-as-perceptual-interaction’ is related to Eilan’s notion of ‘communication-as-connection’. Like Eilan, I think this kind of perceptual interaction is typically pursued insofar as it can be a way of achieving some kind of emotional connection with others, however exactly the relevant notion of emotional connection is understood. With that said, I am agnostic on the question of whether joint attention necessarily involves some kind of emotional connection, and the account of communication-as-perceptual-interaction developed here has the advantage of enabling us to maintain The Communication Claim alongside this agnosticism: it neither entails the claim that joint attention essentially involves emotional connection, nor does it rule it out.

5.4. The Dilemma Revisited

This account is a synthesis of perceptual and communicative approaches to joint attention. With defenders of the perceptual approach, it embraces the idea that joint attention is ‘fundamentally a phenomenon of sensory experience’ (Campbell 2011: 415). With defenders of the communicative approach, it insists that joint attention is ‘an essentially communicative relation’ (Eilan Forthcoming: 6). As such, it is well positioned to chart a middle course between The Under-Informativeness Objection and The Over-Intellectualism Objection.

It is able to provide an informative characterisation of the difference between Truly Joint Attention and Covert Attention by making reference to the process of perceptual interaction described in §5.2-5.3. In cases like Truly Joint Attention, two people engage in a form of perceptual interaction in which some perceived object is brought within their basic perceptual common ground. In the purely visual case, this is brought about when two people make eye contact. And since neither subject makes eye contact in Covert Attention, nothing is brought within their perceptual common ground. Indeed, cases like Covert Attention often involve the *avoidance* of eye contact, and thus of the kind of minimal communicative interaction described in §5.2. Because of this, neither party is experienced by the other as taking up an attitude of proto-address to them, and, as such, neither party is experienced by the other as a co-attender in the sense described in §5.3. If this is right, then the minimalist account offered here can avoid The Under-Informativeness Objection.

¹⁵ The claim I have defended in this section, that there is a minimal form of communicative interaction which exploits our power to capture and direct another’s gaze, is not committed to the claim that *all* exercises of this power are communicative. Similarly, our power to communicate, vocally, in conversation exploits our power to vocalise, but this does not entail that *all* exercises of this power are communicative.

It can also avoid The Over-Intellectualism Objection. As I have been at pains to emphasise above, engaging in this kind of communicative interaction does not require the capacity to recognise Gricean communicative intentions. All it requires is that infants are sensitive to the gaze of adults in the way described in §5.2 and that they can experience adults as engaging them in this kind of perceptual interaction. That this is so is reflected in the developmental literature. For example, infants are sensitive to the presence of human eyes from birth, and prefer to look at faces with eyes that are open (Batki et al 2000). Similarly, Farroni et al (2002) found that three day old infants preferred to look at faces that are oriented as if to make eye contact with them. As Csibra (2007: 153) notes, summarising this research, an onlooker's gaze evokes 'orientation towards the source of the cue'. Csibra (2007: 160) interprets these and related findings as evidence for the thought that infants have a basic concept of a communicative intention which they then attribute to others in the manner of the Gricean proposal of §4.1. But we can see this is a non-sequitur once we recognise that these findings can be more straightforwardly interpreted with reference to the minimalist form of perceptual interaction just described.

6. Conclusion

The philosophical challenge raised by joint attention is the challenge of providing an explanation of how cases like Truly Joint Attention are to be distinguished from cases like Covert Attention, and do so in a way that can meet both The Informativeness Constraint and The Developmental Constraint. Like other proponents of The Communication Claim, I have suggested that progress can be made in addressing this question by providing an elaboration and defense of the idea that joint attention is an essentially communicative relation. Unlike fellow proponents of The Communication Claim, however, I think existing developments of The Communication Claim fail to live up to this promise.

In light of this, I have sought to offer a minimalist interpretation of The Communication Claim, which treats the communicative relation at play in joint attention in terms of a specific kind of perceptual interaction. If this is right, then it is a mistake to think of perceptual and communicative approaches to joint attention as necessarily opposed. Rather, the best development of the perceptual approach is one which makes reference to a form of perceptual activity which is, itself, a form of communicative interaction. This minimalist communicative account is thereby able to provide a vindication of The Communication Claim which retains the guiding insight of the perceptual approach to joint attention: the idea, that is, that joint attention is more basic than, and plays a role in the development of, our understanding of the perspectives (Moll & Meltzoff 2011) and

communicative intentions (O'Madagain Forthcoming) of others.¹⁶ As such, this account is consistent with the idea that joint attention is, as Henrike Moll (2023: 250) puts it, 'the birthplace of perspectival knowledge and "a theory of mind."¹⁷

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¹⁶ See Campbell (2017) for a defence of the perceptual approach which embraces this idea.

¹⁷ Thanks to audiences at the Oxford Philosophy of Mind Seminar and the 'Interaction, Communication and Deep Disagreements' conference at St Hilda's College, Oxford, to two anonymous reviewers at this journal, and to the British Academy for funding this research.

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