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### Perceptual Experience and Psycho-Ontology

*(This is a working draft. Apologies if it's rough in places.)*

#### *Abstract*

I start from the assumption that the following are amongst the explanatory demands that a comprehensive account of perception has to meet: it has to explain how perception puts the perceiver in a position to manipulate the environment to her advantage, and it has to explain how perception makes possible success in the communicative use of perceptual demonstratives. Delivering these explanations is an exercise in psycho-ontology. The label is appropriate because the two tasks can only be tackled by drawing on both ontological and psychological considerations. I suggest that doing so requires you to assign a foundational explanatory role to perceptual experience. I explain why Tyler Burge's anti-individualism cannot meet the demands of psycho-ontology and argue that a relational account of perceptual experience such as John Campbell's can provide the explanatory resources on which the psycho-ontologist might draw. However, in order to provide these resources, the relational view of perceptual experience has to operate with a triadic conception of the epistemic relation between perceiver (or perceivers) and perceptual object.

## *Introduction*

A plausible account of perception has to explain how success in demonstrative reference is possible. In order to accomplish this, it has to take seriously the following two considerations, amongst others. First, it has to take seriously the thought that the foundational role of perception is to relate perceiver and environment so as to put the perceiving creature in a position to manipulate its surroundings to its advantage. This consideration might strike you as committed to some kind of pragmatism about perception; for the purposes of this paper, I take it as a starting point. Secondly, it has to take seriously the thought that for creatures like us (humans and, arguably, non human primates (Leavens (2004), Leavens & Bard (2011)), perceptual events enable their subjects to point things out to others. This is so because success in demonstrative reference depends, in part, on the relation between perception and environment which is established through the perceptual event: demonstrative expressions such as ‘this’ or ‘that’ refer because of a perceptual event that establishes an epistemic connection between speaker and environment.

These considerations support two ideas. The first is that the perceptual event in question must be experiential. I don’t know how to define ‘experiential event’, but I can give a sufficient condition.<sup>1</sup> The condition is that the perceiver must be in a position to attend to the object of demonstrative reference. He must be able, to use a controversial term, to ‘highlight’ it in his perceptual field (however you want to spell this out). The obvious presupposition here, which I am unable to defend in this paper, is that perceptual attention is an experiential notion<sup>2</sup>. On this picture, there is a necessary connection between experience and demonstrative reference.

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<sup>1</sup> I leave open the question of whether it is also a necessary condition. See Jesse Prinz (2010) for an argument to this effect and Christopher Mole (2008) for an argument against it.

<sup>2</sup> For an argument against this idea, see DeBrigard (2010).

Success in demonstrative reference is explained by the speaker's experiential connection to what there is. Demonstrative reference could not succeed if the speaker was not standing in a perceptual relation to the object of reference. And the speaker would not be in a position to refer demonstratively if he didn't have experience of this object; if he could not single it out in his perceptual field. This train of thought is familiar from John Campbell's (2002) work on demonstrative reference and has a forerunner in Bertrand Russell's view on demonstratives.

The second idea is as follows. The experience of a creature capable of successful performance of demonstrative utterances must be such that it equips the creature with a perspective-independent grasp of the perceived scene. This is so because one main point of demonstrative reference is that it enables speakers (or pointers) to draw others' attention to the demonstrated thing. A speaker who employs demonstratives for communicative purposes aims at pointing out the object of reference to an audience. So a speaker who employs demonstratives communicatively is working on the assumption that the demonstrative act occurs in, or creates, a perceptual context that equips the audience with knowledge of just which object the speaker is referring to. This knowledge is based on the audience's perceptual experience. You talk about 'this thing', you point at the thing, the audience follows your gesture and understands which perceptually present object you have in mind. You are justified in your use of the perceptual demonstrative only if you have a perspective-independent grasp of the object of perception. And the most plausible way of grounding this grasp is in the perceptual experience itself. At any rate, it cannot be the consequence of a creature's possession of a sophisticated conceptual repertoire. Creatures that cannot be credited with the kinds of conceptual capacities which may lead to a reflective grasp of the metaphysics of objects of reference, such as human infants of less than a year of age (Tomasello et al. (2007)) and, arguably, non-human primates (Tanner et al. (2006)),

point and demonstrate. On the present line of thought, such creatures must be operating with an understanding of the objects of their pointing and demonstrative gestures as mind-independent.

The point I want to make is this. A plausible account of perception has to explain how success in communicative uses of demonstrative reference is possible. In order to accomplish this, it has to explain, first, how perception relates the perceiver to the environment. And it has to explain, secondly, how perception equips the perceiver with a perspective-independent grasp of the perceived object. These requirements can only be met, I think, if you are willing to assign a constitutive role to perceptual experience. No account of perception that endorses, or is compatible with, the idea that experience has no foundational role to play in a creature's perceptual relation to its surroundings will be able to accommodate them. Experience is what explains a creature's success in demonstrative reference. And experience is at least a strong candidate for explaining a creature's understanding of the objects of experience as mind-independent. So a plausible account of perception will be such that whatever else it is committed to, its commitments will be compatible with the assignment of a constitutive role to experience in its explanation of how perception relates a creature to its environment. A plausible account of perception will thus need to take up the question of how it is that a creature's internal perceptual processes can put the creature in a position to carry out acts of demonstrative reference. It cannot remain content with a functional description or individuation of such processes, perhaps in terms of their success in profitably relating the creature to its environment. The point is not that a plausible account of perception has to deny that such a functional approach can be useful. The point is, rather, that such an approach cannot deliver a comprehensive account of perception.

Consider, for a moment, just what the task at hand amounts to. It amounts to the need for a conception of perception that allows the perceiver to explain and justify her communicative use

of perceptual demonstratives. And it amounts to the need for a conception of perception that explains the perceiver's perspective-independent grasp of her surroundings. If the train of thought sketched above is on the right track, these two explanatory demands can be met only if you ascribe a constitutive explanatory role to perceptual experience in your account of perception. The consideration is that experience plays a constitutive role in explaining what entitles the perceiver to justify her communicative use of perceptual demonstratives, and that experience plays a constitutive role in explaining the perceiver's perspective-independent grasp of her surroundings.

There is an ontological and a psychological aspect to this role. Its ontological aspect is that experience is what explains perceivers' entitlement to operate with a conception of the objects of experience as mind-independent. It is ontological because it is concerned with the justification of a certain ontological position that you might call 'naïve realism'. The psychological aspect is that experience entitles the perceiver to explain and justify her use of perceptual demonstratives for communicative purposes. It is psychological because it is concerned with the explanatory power of a psychological notion, the notion of experience. The ontological and psychological aspects of the consideration are mutually dependent. It is because experience enables perceivers to explain and justify their communicative use of perceptual demonstratives that a reflection of the nature of experience yields a justification of naïve realism. And it is because experience justifies naïve realism that experience enables perceivers to explain and justify their communicative use of perceptual demonstratives.

Fleshing out the role of experience in a satisfactory account of perception, then, may be called a psycho-ontological task. It is a task with both ontological and psychological dimensions; and these dimensions are intertwined in such a way that saying something useful about the

ontology of the objects of perception requires you to consider the phenomenal character of the perceiver's experience, and saying something useful about the phenomenal character of the perceiver's experience requires you to consider the ontology of the objects of perception. In this paper, I ask how we ought to think about the role of experience in a satisfactory account of perception. So you may say that the following is an exercise in psycho-ontology.

The structure of the paper is as follows. I will start by considering Tyler Burge's (2005) 'perceptual anti-individualism' to see whether it can address the tasks of psycho-ontology. I am going to reach a sceptical conclusion. I will then consider John Campbell's (2002) relational view of perceptual experience. Unsurprisingly, I will conclude that this account is better placed to address these tasks. I will argue, however, that only a version of the relational view which takes a three-place perceptual relation as basic will be successful in this enterprise. I will hence end by suggesting that the role of joint attention needs to be taken seriously when thinking about the role of perception in perceptual demonstrative reference.

### *Perceptual Anti-Individualism*

In this section, I am focusing on Tyler Burge's (2005) account of perception. I am doing so partly because his is a prominent version of perceptual externalism, and partly because he explicitly compares his account to the relational view of perceptual experience that I will be interested in later on. Burge starts from a functional consideration: the function of perception, he says, is to represent particulars; successful perception represents them veridically. The consideration that perception has this role to play is of relevance, Burge suggests, for the question of how to correctly individuate perceptual states: '(t)he correct individuation of

perceptual states centers on their representational function' (4). This idea is what I am going to be mainly concerned with in the present section. It should be noted, however, that Burge is not committed to the view that the individuation of perceptual states is determined exclusively by their relation to the environment. Rather, the individuation of a perceptual state is also determined, in parts, by its connection to other representations and by its role in forming a perspective on the object or property for the perceiver. This consideration needs to be borne in mind as a backdrop to the following discussion; it will, however, not play a direct role in my argument. The question of the present section is whether Burge's anti-individualism can be put to use for the tasks facing the psycho-ontologist. And so the question is whether the theory can account for the relation between perceiver and environment that is necessary to explain success in the communicative use of perceptual demonstratives. To address this question, the key issue is what role the environment plays in the individuation of a state of mind. It is this issue I will be focusing on.

#### **a. Summary of the Theory**

On Burge's account, the environment has an important explanatory role to play with regard to the representational function of the perceptual system: the environmental properties that (partly) individuate a type of perceptual state explain the system's representational function. In order to explain what constitutes a correctly functioning representational system, you have to make reference to the environment. In order to account for the veridicality of a kind of perceptual state, you have to say what its 'formation conditions' are. And in order for all of this to be possible, Burge says, you have to take the following to be true:

A constitutively necessary condition on perceptual representation by an individual is that any such representation be associated with a background of some *veridical* perceptual representation. (1)

In order for you to be in a position to (partly) individuate a kind of perceptual state in terms of its environmental properties, and in order for you to be in a position to explain what constitutes success for types of such states, you have to presuppose that a connection obtains between any token of the state at issue and other veridical representational states. So the environment has a double role to play on the anti-individualist account: it plays a constitutive role in the individuation of perceptual state types *and* grounds explanation of the representational function of the perceptual system. You have to invoke the environment if you want to say what individuates mental state types, and you have to invoke it if you want to explain how a creature's perceptual system can function successfully, where success is defined as veridical representation. And for the environment to be able to this double role, you have to start from the assumption that some connection obtains between any given perceptual state and other veridical perceptual representations.

It is crucial for the representationalist that the individuation of representational states in terms of environmental properties be an individuation of types, not tokens. This feature is so important because it is needed to satisfy a key requirement of any plausible representational account. The requirement is that misrepresentation must be possible. Whatever your thoughts are on how to adequately characterise mental representation, the minimal common denominator has to be that representations are truth-apt and that token representations can hence fail to represent accurately. If you discard this idea, the very notion of representation cannot be made sense of. On Burge's account, types of representational states are individuated (in parts) in terms of their relation to the environment, but no individual, token such state is so individuated. It is precisely

the fact that types of representational states are so individuated that makes it possible for token states to misrepresent. It follows that you can be in the same (partly environmentally individuated) type of perceptual state regardless of whether or not your token state is veridical. You can be in the same type of perceptual state regardless of whether or not you are subject to an illusion, for instance. This consideration is vital for what Burge calls the ‘proximity principle’:

Holding constant the antecedent psychological set of the perceiver, a given type of proximal stimulation (over the whole body), together with associated afferent and efferent input into the perceptual system, will produce a given type of perceptual state, assuming that there is no malfunctioning in the system and no interference with the system. (22)

The principle reflects Burge’s consideration, mentioned at the beginning of this section, that environmental properties only partly individuate a type of perceptual state. However, the relevant thought is, for present purposes, that if you hold constant psychological antecedents and other kinds of input into a creature’s perceptual system, the same kind of proximal stimulation, such as the registration of light arrays on the retina, suffices to produce the same type of perceptual state. This is so *quite regardless of what the distal cause of that state is*. A variety of distal causes may lead to the same type of proximal stimulation. This gives rise to what Burge calls the ‘fundamental question of the psychology of vision’: since the visual system’s task is to represent the distal cause of the proximal stimulation, and since proximal stimulation under-determines the distal cause, how does the system give rise to accurate representations of what there is?

It follows from the proximity principle that experience does not allow you to distinguish between two states with different proximal causes if the experience is in both cases produced by the same type of proximal and internal systemic input, for creatures with identical previous psychological states. This is a direct consequence of the proximity principle. It holds

even if you don't assume, as Burge doesn't, that phenomenological indiscernibility suffices for sameness of perceptual state type (25). On Burge's account, you cannot distinguish, on the basis of your experience, between a perceptual state which meets the conditions stipulated by the proximity principle and is caused by some given object, another state meeting these conditions that is caused by another, type-identical object, and a third state meeting those conditions with no distal object at all.

### **b. Anti-Individualism and Psycho-Ontology**

Can Burge's account address the tasks of psycho-ontology? The psycho-ontologist's task, remember, is twofold: the first thing that's needed is a conception of perception that allows the perceiver to explain and justify her communicative use of perceptual demonstratives. The second thing that's needed is a conception of perception that explains the perceiver's perspective-independent grasp of his surroundings. To comment on the question of what kind of grasp of the objects of perception is available to the perceiver on the basis of Burge's theory is beyond the scope of this paper. I will hence focus on the first task. Since I am going to conclude that anti-individualism cannot explain what justifies a speaker's use of perceptual demonstratives, this second question, for the purposes of the present paper, is moot.

On Burge's account, two token perceptual states may have all of their experiential characteristics in common even though one state is veridical and the other is not. So experience does not provide you with a handle on whether or not you are perceptually connected to your surroundings in the right way. And so there is no way, for the anti-individualist, to substantiate the idea that you can explain and justify your communicative use of perceptual demonstratives

by reference to experience. You could not, for instance, demonstratively point out an object to an audience with a view of getting its members to accept some inference whose soundness turns on the success of your demonstrative reference. Suppose you are enjoying a visual experience of a red object. You could not, on the anti-individualist account, justify your use of the perceptual demonstrative whose referent is the object of your experience in the following inference:

This object is red

To reach for a red thing, reach for this object.

The soundness of the inference depends on your success in referring to the object of the perceptual demonstrative. In order to explain the soundness of your inference, you have to justify your use of the perceptual demonstrative. But you can only justify your use of the demonstrative if you can explain why your perceptual experience puts you in a position to demonstratively refer to the object. On the anti-individualist account, no such explanation is available because experience does not entitle you to take it that you are connected, in experience, to the object of experience. The problem facing the anti-individualist is not that the phenomenal character of perceptual experience under-determines its veridicality. The problem is, rather, that you can't explain how token perceptual demonstratives refer. And therefore you can't justify the pattern of use of demonstrative terms in your reasoning. This, of course, is Campbell's (2002; 2010) objection to Burge's account.

The externalist has a way of resisting the challenge, however. After all, Burge's anti-individualism starts from the presupposition that any perceptual representation be 'associated with' some background of veridical representation. What is ruled out, in other words, is the possibility of a representational system that, though coherent, is not in any way related in its

content to what there is. By taking it as a necessary precondition of a successful anti-individualist theory of perception that any perceptual state be in some way connected to a veridical such state, there is a necessary connection of the system to what there is. And you may well think that such a stipulation is legitimate. Any plausible account of perception has to leave room for the possibility of illusion – of perceptual states about whose veridicality the subject is mistaken. To allow for this possibility is to set up the theory in such a way that the veridicality of representation isn't determined by experience. So you have to preserve overall veridicality in another way. And stipulating, for any perceptual state, association with some background of veridical representation is simply one (and, arguably, the only) way of doing that. It is open to you to suppose that the objects of perception enter causal relations which help set the conditions under which perceptual representations are individuated (4). So you might try to meet the above challenge by saying that the reference of *types* of perceptual states that allow for the referential use of perceptual demonstratives is guaranteed by their standing in the right causal relation to the environment. What guarantees the veridicality of types of utterances such as 'this object' isn't experience at all. It is the type of perceptual state that is connected to the environment in the right way.

The problem with this proposal is that the distinction between (success-oriented) types of perceptual states which are individuated in terms of their veridicality and token such states that may or may fail to represent accurately makes it impossible to justify use of a demonstrative referential expression in an inference whose soundness turns on the expression's referential success. Demonstrative referential success depends on the veridicality of the experience that puts the speaker in a position to accurately employ a demonstrative referential term. It is no good pointing out that *no* theory of perception can supply knowledge of demonstrative referential

success through perceptual experience. That reply would be missing the point. The point is that the subject of a *particular* perceptual experience has to be entitled to suppose that the experience acquaints him with what there is, because that is what puts him in a position to justify his use of the perceptual demonstrative in his reasoning. And the anti-individualist just doesn't have the resources to explain what should entitle the subject of a particular perceptual state to suppose this.

I don't think it follows from this observation that a representational description of the cognitive processes of perception may not have its uses. Certainly I don't think it follows that one ought to discard the representational paradigm entirely on the grounds of this observation. I do think, however, that Burge's anti-individualism, and externalist conceptions of perception quite generally, face significant problems with regard to the demands of psycho-ontology.

### *The Relational View of Perceptual Experience*

In this section, I am going to focus on John Campbell's (2002) 'relational' view of perceptual experience. The relational view is often taken to embrace a kind of disjunctivism about perception (Burge 2005, Soteriou 2009). Disjunctivism takes it, according to Burge (25), that thinking about the individuation of a type of perceptual state has to pay tribute to whether or not the type of state is veridical or illusory; an illusory state is of a different kind than its veridical counterpart, even if the fact that one of the states is illusory is perceptually indiscernible to the perceiver. The disjunctivist thinks this because it is otherwise not clear how perceptual experience could explain our grasp of substantial objects. It could not explain how we come to operate with a conception of the objects of demonstrative reference as mind-independent.

Campbell, however, resists the interpretation of the relational account he is promoting as a kind of disjunctivism along the lines of McDowell (1994) or Snowdon (1990). The mistake of the disjunctivist is, he thinks, his subscription to the claim that experience involves the grasping of demonstrative thoughts about objects, where these demonstrative thoughts are object-dependent (122). This move deprives perceptual experience of its explanatory role: experience then simply presupposes, and thus cannot explain, our ability to think about objects. The mistake of the disjunctivist, Campbell thinks, is his subscription to an intentionalist conception of perceptual experience. Once you think of experience as object-directed, you have already assumed that it is experience that puts you in a position to think about perceptual objects. What is needed is an account of experience that is more basic than the disjunctivist proposal; an account that does not conceive of perceptual experience as intentional (122).

Campbell's 'relational' view is meant to deliver just such a non-intentionalist alternative. Its key stance is that experience is not individuated in terms of intentional content. Perceptual experience is individuated in terms of a relation between perceptual object and perceiver. There thus exists a direct connection between the qualitative character of the perceived object and the thing itself: on Campbell's view, the qualitative character of the experience is constituted by the qualitative character of the scene perceived (114f.). Experience is thus not to be thought of in representational terms; it isn't a kind of 'state'. It is a different kind of thing entirely.

On such a view, Burge's charge that disjunctivist accounts, including Campbell's, conflate tokens and types of perceptual states is misguided, simply because the defender of the relational view dismisses the idea that experience is to be conceived as a state of a cognitive system. The relevant distinction is not between types of perceptual states which are individuated functionally in terms of their success conditions, and tokens of such states which may fail to

represent accurately. The relevant distinction is between experiences that involve objects of experience and experiences that don't.

How does this view fare with regard to the tasks of psycho-ontology in a satisfactory account of perception? I said that this task had two components. The psycho-ontologist needs a conception of perception that allows the perceiver to explain and justify her communicative use of perceptual demonstratives. And she needs an argument in favour of the idea that perception equips the perceiver with a perspective-independent grasp of her surroundings. Delivering these arguments, I suggested, is possible only if you take seriously the role of experience in perception. A good account of perceptual experience will put you in a position to make these two arguments.

**a) The Relational View and Communicative Use of Perceptual Demonstratives**

The relational view seems well suited to address the first task. If experience is individuated in terms of a relation between perceiver and perceived object, it follows immediately that success in demonstrative reference is explained by experience. If your perceptual experience acquaints you directly with the object of your experience, then that acquaintance can be invoked to explain, and justify, your use of the demonstrative. You use a perceptual demonstrative term, you are asked what entitles you to make use of the term in the way you do, perhaps in making certain inferences, and you justify your use of the term and explain why your inference should be regarded as sound by means of reference to your experience. What entitles me to use the term in the way I do, you might say – what entitles me to employ it to point things out to you, or to carry

out logical operations whose soundness turns on the referential success of the demonstrative – is plainly that I see the thing: that the thing is demonstrably *there*.

There is an immediate objection to this line of thought. Surely it is undeniable that perceptual illusions are possible. You can enjoy an experience that you think is of an object while really it is not. It may be that the proximal stimulation of your retina is such that it is compatible with the presence of the distal object that you think the experience is about, but that there is no such object. Or it may be that, when you blinked, the object of your experience was replaced with another, perceptually indistinguishable one.<sup>3</sup> So you cannot tell whether you are, in fact, standing in the right causal relation to the distal object you think your experience is about, or whether you are standing in a causal relation to any distal object at all. And so the relational view pushes the role of experience too hard: the phenomenal character of an experience cannot tell you whether the experience involves an object. The anti-individualist has no problem with this observation, since he only individuates types of perceptual states in terms of their success conditions, which leaves room for the possibility that token such states may be non-veridical. But the supporter of the relational view, who individuates perceptual experiences in terms of their relation to actual objects, and who thus has no use for the type-token distinction, is vulnerable to the objection. Perceptual experience does not tell you whether you are, in fact, standing in the kind of relation to the environment that enables you to justify your referential practices.

If you take the psycho-ontological project seriously, this objection need not worry you unduly. The crucial consideration is that the role of perceptual experience cannot be to provide the perceiver with knowledge about the experience's veridicality. It cannot be to deliver an answer to the radical sceptic. The anti-individualist worry is misplaced because it is effectively a

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<sup>3</sup> See Kelly (2004) for several other relevant scenarios.

version of the question of how the perceiver can know that she is enjoying an experience of what there is. But in order to explain, and justify, your use of perceptual demonstratives in your reasoning you don't need to possess this kind of knowledge. All you need is a conception of experience that directly relates you to the objects of experience and thus allows you to explain and justify your use of perceptual demonstratives by reference to your experience of these objects. Not every demonstrative referential expression is underwritten by a relation between perceiver and object of experience; some are not. It isn't that every demonstrative reference has to succeed in order for it to be the case that experience explains and justifies your pattern of use of demonstratives, as referring to mind-independent objects, in your reasoning. It is, rather, that experience of objects plays this justificatory role. The defender of the relational view need make merely an existential claim: for his argument to succeed, it only needs to be the case that there are experiences which acquaint the perceiver with her surroundings.

#### **b) The Relational View and the Perspective –Independence Requirement**

Can the relational view cope with the second task? This task was, remember, to deliver an argument in favour of the idea that perception equips the perceiver with a perspective-independent grasp of his surroundings. Such a grasp is needed, so I suggested, in order to entitle the user of perceptual demonstratives to suppose that demonstrative expressions can succeed in communication; that the object of your referential practices can be pointed out to the addressee of your communicative act, even though she is looking at the thing from a different angle than you are.

It is this second task that constitutes a real problem for the defender of the relational view. It constitutes a problem because of the very idea that perceptual experience is individuated in terms of a relation between perceiver and the object of experience. This relation, you may think, is always perspective-dependent. You occupy one position in space, and the object of your experience occupies another. So your relation to the thing is perspectival: your experience of the object is constituted by the position you occupy in relation to the thing. And so it is mysterious how a perspective-independent understanding of the thing could result from the experience.

The relational view has the resources needed to address this problem, I think, but in order to do so one core assumption needs to be abandoned. The assumption is that the perceptual relation that puts the perceiver in a position to explain and justify the use of perceptual demonstratives in her reasoning is of a two-place kind. On this assumption, it really seems that the second psycho-ontological task cannot be addressed by drawing on the relational view. Things look different, however, if one takes it that the perceptual relation which explains and justifies the communicative use of perceptual demonstratives has three places. If you think that the relation that individuates perceptual experience is to be conceived in terms of three constituents – perceiver, object, and addressee of the demonstrative referential utterance – then you can explain how the experience enables the perceiver to justify his communicative use of the demonstrative. You can explain this because you are then not committed to the idea that the perceptual relation at issue is perspective-dependent.

How do you make sense of the notion of a three-place epistemic relation? The natural way of doing so is by drawing on the notion of joint attention. Joint attention is a capacity that humans develop at around nine months of age and that is thought to be crucial for the development of a range of cognitive and socio-cognitive abilities. In order to jointly attend to an

object with another, at least two conditions have to be met. First, you have to be attending to the same object as the other creature. Secondly, each of you has to be aware that she is attending to the same object as the other. So much is uncontroversial.<sup>4</sup> What is hotly contested, by contrast, is how to best characterise the second condition. There are two fundamentally distinct ways of approaching the issue. You can either try to meet the second condition by analysing the jointly involved creatures' awareness in reductive terms. That is, you can try to analyse each creature's awareness of the other's focus in terms of her attention to the other's attention, or in terms of her adoption of the other's perspective on the perceived object. The first of these approaches is marshalled by Simon Baron-Cohen's (1995) Theory theory-based account of joint attention; the second approach is defended, in several versions, by the various subscribers to simulationist accounts (Gallese (2005), Goldman (2005), Stueber (2011)). Alternatively, you can deny the viability of such reductivist approaches and suggest that the three-place relation obtaining in joint perceptual episodes should not be conceived, reductively, as a set of two-place such relations which are somehow interlinked. Rather, the three-place relation is basic. On such an account, the kind of awareness that has to be in place for two creatures to be jointly attending to an object is *sui generis*. It is awareness of a different kind.

Of course, it is just such an account of joint attention that Campbell (2002, 2011) proposes. I think there are independent reasons for preferring the relational view of joint attention over its reductivist alternatives (Seemann 2010, 2011), but I am not going to pursue this argument now. My present point is that the relational account offers one way of substantiating the notion of a three-place epistemic relation, and that it thus provides an answer to the question

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<sup>4</sup> Writers who otherwise differ quite radically in their views on joint attention all (explicitly or at least implicitly) agree on this (Baron-Cohen (1995), Tomasello (1999), Campbell (2005), Hobson (2005), Pacherie (2011), Stueber (2011)). Not everyone agrees that these two conditions provide a comprehensive characterization of the phenomenon (Peacocke (2005)).

of how it can be that perceptual experience provides the perceiver with a perspective-independent grasp of the perceptual object. It thus offers one way of accomplishing the second task facing the psycho-ontologist. Explaining in any detail how the relational view accomplishes this task requires a significant amount of argument that will detract from the overall point of the present paper. I will thus merely introduce a recent experiment by Henrike Moll and Andrew Meltzoff (2011) whose results support the view that joint engagements with objects equip children with a perspective-independent understanding of these objects prior to their ability to differentiate between perspectives on the thing. In the appendix, I develop a way of making sense of this result in terms of a relational take on joint attention.

In Moll and Meltzoff's experiment, children of two years of age are sharing two objects with an adult. They are jointly attending to and interacting with these objects. They are then presented with a new object that the adult cannot see. In different scenarios, the adult is either absent (she had left the room before the new object was presented), or remains present but is unable to see the new object (because of a barrier that, visibly to the child, blocks her visual access to the thing). The adult then requests the "one she has not seen before". The task for the child is to identify the correct object. The result is that children are not able to identify the correct object in cases in which the adult is co-present, but that they can correctly identify the object if the adult was not present when the new object was introduced. Moll and Meltzoff conclude that "...somewhat counterintuitively, children learn what others have or have not become acquainted with *before* they come to determine what they can see from their specific viewpoint... This developmental order, with a broad distinction of others' familiarity versus ignorance of things being in place before the ability to determine what others can see in the here

and now, is remarkable as it turns the view that perception is somehow fundamental or primary on its head." (399)

The experiment provides evidence that children of two years of age are operating with a grasp of objects to which they are jointly attending with others that isn't dependent upon their particular perspective. In the experiment, children are able to correctly judge that another has not seen an object they are attending to if the other person isn't present while the object was being shown, but not whether or not the other has seen an object if she is present while being unable to see the thing. So the child's ability to judge what the other sees cannot be dependent upon his capacity for perspective taking. Moll and Meltzoff suggest that "...an understanding of "mere visual perception" needs some time to develop and follows richer forms of engagement with something." (400)

What, then, is this "something"? Moll and Meltzoff speculate that children start out with what they call a „holistic grasp of engagement" that becomes differentiated over time and eventually enables children to distinguish between different modes of perception and the role they play in knowledge formation. If the argument of the present paper is on the right track, this holistic grasp of engagement – or, you might say, 'acquaintance' - is due to the primitive triadic relation that obtains in episodes of joint attention and that equips the jointly engaged creatures with a perspective-independent grasp of the objects of attention. Of course, much more needs to be said to substantiate this view (for a sketch of an argument, see the appendix below). But it lends support to the idea that a relational view, if specified in triadic terms, can explain how perceivers, through a particular kind of experience, come to acquire the kind of perspective-independent grasp of an object of attention that makes success in perceptual demonstrative reference possible. If so, it addresses the second psycho-ontological task for a theory of perception.

## *Appendix*

The aim of this appendix is to sketch an argument in favour of the idea that a relational account of joint attention can explain perceivers' grasp of the objects of experience as mind-independent. Despite the length of the appendix, it is, unfortunately, a rather rough sketch. It relies on a number of presuppositions that I don't justify further. I have tried to make it clear what these presuppositions are.

I start by making two assumptions. The first assumption is that the relational account of joint attention is correct, and that jointly engaged creatures thus are part of a non-reducible three-place epistemic relation whose other constituents are their co-attenders and the object of their attention. The second assumption is that such a relation obtains for creatures that successfully employ perceptual demonstratives for communicative purposes. For an act of perceptual demonstrative reference to succeed, the involved creatures have to be jointly attending to the thing. This assumption might strike you as problematic. After all, demonstrative speech acts, and even more so acts of pointing, often *direct* an audience's attention to a thing. They create, rather than build on, a triadic epistemic constellation. I think that this criticism rests on an unduly narrow conception of joint attention which individuates joint events in terms of perceptual states rather than dynamic, temporally extended processes. This is an argument I have made elsewhere (Seemann 2010, 2011), and for reasons of space I will not rehearse here.

To begin with, consider what I said was the fundamental role of perception on the pragmatist account I adopted for the purposes of this paper. The role of perception is to relate the perceiver to her surroundings so as to enable her to manipulate these surroundings to her advantage. And that is to say, the role of perception is to equip the perceiver with a grasp of the

perceived object's action-relevant causal properties. In order to be in a position to reach the perceived glass so as to raise it to my lips, I have to know, in some unproblematic sense, that the glass is resistant to my touch (it won't break), that it is light enough for me to lift, and so on. Perception, on the pragmatist account, equips you with this grasp.

How can perception play this role? One plausible answer is that perception amounts to more than a passive kind of information-processing. It amounts to some kind of activity itself. This train of thought is familiar from enactivist accounts of perception such as Alva Noe's (2002). The idea is that the paradigmatic model of perception is not vision but touch. A blind person who is perceiving an object through touch will interact with the thing; she may probe, poke, and follow its contours. The attractive, though highly contested (Adams and Aizawa (2009)), suggestion is that even visual perception ought to be conceived along those lines. I think the enactivist account is a natural fit for the general pragmatism I adopted at the outset of this paper. It is less clear whether it is a fit for the relational account of perception. The worry is that enactivism can only be made coherent if you take it to entail an intentionalistic view on the nature of perception – if you take it to entail the view that perception ought to be conceived in terms of representations with truth-apt content. Even more problematically, you may take it to entail that the kind of activity that perception consists in relies on the perceiving creature's motor intentions. And the idea that motor intentions are involved in perception, so the worry, is simply incompatible with the idea that perceptual experience ought to be conceived as a relation between perceiver and object.

This worry can be deflated by pointing out that the relational view says nothing about the cognitive processes involved in generating perceptual experience. Certainly it doesn't deny that such processes play a constitutive role in generating experience. The point is that a study of the

cognitive processes that are involved in generating experience cannot exhaust a satisfactory account of perception. It cannot exhaustively account for perception because it leaves open the questions raised by the psycho-ontologist. So it isn't self-contradictory to suppose that motor intentionality plays a role in the cognitive processes that give rise to a creature's perception of its environment and to also hold that perceptual experience is to be thought of as a relation between perceiver and object. One needs to distinguish between what perception *is* and how it comes about. This thought is really a version of what I said earlier about the explanatory role of the notion of representation in the study of the cognitive processes involved in perception: the relational view, as far as I can see, does not require you to discard the idea that motor intentions may be involved in generating perceptual experience (of course, it doesn't entail endorsement of such a view either). It is just that this idea cannot be taken to deliver a comprehensive account of perception, since it does not have the resources to address the questions of the psycho-ontologist.

How can the idea that perception equips you with a grasp of the action-relevant causal properties of the objects of experience be substantiated for joint scenarios? On the face of it, this seems rather a tall order. What is needed is a defence of the idea that the grasp of the causal properties of the object of attention is the result of a primitive three-place relation between perceiver, co-attender, and object of attention. The relation is what gives rise to this grasp. This idea seems unproblematic for a standard two-place epistemic relation. Since the object features directly in my experience, it follows immediately that my interaction with it equips me with a grasp of the thing's causal properties. I see a tennis ball, I squeeze it, I bounce it, and this is what explains how I come to know how heavy it is, what it is going to do when thrown onto the ground, and so on. I am now in a position to make use of it. My grasp of the thing's causal

properties has resulted from my interaction with it. And on an enactivist account of perception, such interactions are part and parcel of perceptual processes.

How do you substantiate this picture for three-place epistemic relations? The idea must be that each creature's grasp of the causal properties of the object of perception is the result of such a relation. The experience which gives rise to such a grasp, for each creature, is to be individuated in terms of a relation that involves both the object and the other creature. You can't say, on the relational view, that each involved creature's grasp of the causal properties of the object is the summative result of an understanding of how your own actions affect the thing, and how the other's doings affect it. You can't simply say, for instance, that your perception of the other person's interaction with the ball shapes your understanding of the thing's causal properties. This, of course, may independently be the case also. But it doesn't serve as a characterization of your understanding of the thing's causal properties that results from your *joint* engagement with it.

Here is a scenario in which a joint engagement with a thing does give rise to each of the involved creatures' understanding of the causal properties of the thing. Suppose we are playing a game in which we jointly have to maneuver a ball on a square board into a hole. The board is suspended in such a way that we can move each of the four edges up or down. Where the ball rolls thus depends on what edge is being manipulated. Suppose each of us is in charge of two edges; each of us is holding on to one edge of the board with each hand. As we are playing the game, we will both be attending to the ball and to its movements on the board, and we each will be manipulating our respective edges accordingly. Where the ball goes thus depends *both* on what edge I am operating *and* on what edge you are working on. This dependency is such that the ball's movement is a joint consequence of both what I and what you do. Further, what you do

will have an immediate impact on me: if you lift one of your edges, this affects the position of my arm, and vice versa. And lastly, the movement of the ball has an immediate impact on what you and I are doing; depending on where it is rolling, we will adapt the angle of the board so as to get it to fall into the hole.

The experience you enjoy when playing this game gives rise to an understanding of the ball's causal properties. You now know how the thing reacts when you lift up one of your edges. But your understanding of the ball's causal properties is also shaped by what your fellow player does: you now know how the thing reacts when she lifts up one of her edges. And how the ball reacts is mutually dependent on what your fellow player does and on what you do. This experience, I think, is paradigmatic for the phenomenology of joint attention. It is an experience that equips you with a grasp of the object's causal properties. And this experience is such that it can only be enjoyed if you, the other person, and the object are constitutively linked in your perceptual experience of the thing.

Suppose you accept that this scenario really is a case in which your understanding of the object's causal properties is shaped by a joint engagement with the thing. You may still think that this is a highly specific, artificial case that is not at all representative of ordinary joint engagements. Ordinary cases of looking at some object together, or even of manipulating it together, just aren't like this ball game. They aren't like this game because ordinary joint constellations don't feature the complex intertwined causal dependencies between the constituents of the triadic relation that characterise the game. If you and I are looking at a picture together, neither your attention to the picture nor mine has any impact on the thing. And, you may think, my attention to the thing doesn't have any causal impact on you, or vice versa. So the example seems to show the opposite of what it is intended to demonstrate: it makes vivid the

consideration that in ordinary joint engagements, the relation between the jointly engaged creatures and their object of attention doesn't give rise to a grasp of the causal properties of the thing that results from the jointness of the relation.

This is an important objection, a detailed response to which is beyond the scope of the present paper. But the response would have to pursue two lines of argument. The first line of argument is concerned with the causal consequences of the relation between jointly involved creatures. That there are such consequences is uncontroversial. A number of studies show that creatures in joint constellations are uniquely sensitive to the other's direction of gaze and bodily posture.<sup>5</sup> In a joint constellation, my shift of gaze will affect yours in a different way than it would otherwise, and our bodily movements will be attuned to each other in ways in which they wouldn't be otherwise. So an argument can be made that the relation between jointly engaged creatures has causal consequences, and that these consequences are significant for the way in which the object is experienced.

The second line of argument is concerned with the causal consequences of the relation between perceiver (or, in the joint case, perceivers) and object of attention. That there should be such consequences is crucial for the success of the example of the board game: it is because our joint manipulation of the edges of the board has consequences for how things are with the ball that we acquire an understanding of its causal properties. This seems evidently not the case if we are merely looking at a picture: whether or not we are looking at it has no consequences for the picture itself. I think the way to address this objection is to point to the most fundamental characteristic of the relational account: the object enters the individuation of the experience. It is a relation between perceiver and object. So the relation can be affected in two ways: it is affected

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<sup>5</sup> Campbell (2002, p. 161) takes seriously this feature of joint attention. Naomi Eilan (2005) takes it that "There is a causal connection of some kind between the two subjects' acts of attending to the object" (p. 5). Evidence of gaze monitoring is found in children from about nine months of age onward (Scaife & Bruner, 1975; Butterworth, 1991).

by changes in how things are with the object, and by changes in how things are with the perceiver. Just as your experience of the object is affected if the object changes shape, or colour, or spatial position, so your experience of the object is affected if you move about, or if your state of mind changes (your perceptual experience of an edible thing will be affected by whether or not you are hungry, for instance). On this line of thought, it follows that your grasp of the causal properties of the thing that results from your experiential relation to it is a consequence not only of how things are with the object, but also of how things are with you. So you cannot think about a creature's understanding of the perceived item's causal role independently of the creature's relevant characteristics. And hence you must take it that a perceptual event in which you attend to the object, where attention is thought of as an activity of some kind, gives rise to a grasp of the causal properties of the object even if nothing about it changes as a result of your attending to it. What changes is how things are with you in relation to the object, and this explains how your grasp of the object's causal properties comes about.

Naturally, these two lines of argument need to be fleshed out in much greater detail. But they may serve to show why it is not absurd to suppose that the role of the phenomenology of joint attention is of the same kind as the players' experience of the ball in the board game. In that case, the example can be used to argue in favour of the idea that joint experience provides creatures with the kind of perspective-independent grasp of the object of attention that makes success in communicative uses of perceptual demonstratives possible. The thought is that in joint scenarios, perceivers come to enjoy a grasp of the causal properties of the object that is not relative to their individual standpoint vis-à-vis the object. If you understand, through a perceptual interaction with an object, how the later stages of the objects depend on its earlier ones, then you have acquired a perspective-independent grasp of the thing. It is this kind of grasp that is needed

to explain how communicative use of perceptual demonstratives is possible. I said that the second psycho-ontological task facing the relational account was to explain how it could be that perceivers come to operate with an understanding of the perceived object as mind-independent. The explanation I have been sketching is that the employment of perceptual demonstratives for communicative purposes occurs in joint perceptual contexts, that in these contexts the epistemic relation obtaining between perceiver, co-attender, and object of attention ought to be thought of as irreducibly triadic, and that the experience individuated in triadic terms gives rise to an understanding of the causal properties of the perceived object that is not relative to the position of the perceiver.

This explanation can be put to use to account for the results of Moll and Meltzoff (2011). The two-year olds in the experiment seem to operate with an understanding of the object of their joint attention that is not perspective-dependent, despite the puzzling fact that they are not in a position to take the other person's perspective. It is a perspective-independent understanding because they are able to tell that the other person can't see an object that was present when she was not in the room. But they can't tell what the other person is or is not able to see when she is in the room. So they can't take the other person's perspective. The experiment shows, Moll and Meltzoff argue, that a perspective-independent grasp of the object precedes the capacity for perspective-taking. This point seems independently plausible: in order to take perspectives, you have to have an independent grasp of the object. But as long as you don't start from a triadic relational account, it seems mysterious how such a grasp can result from a perceptual event, since such an event is necessarily perspective-dependent.

Building on what they take to be Stephen Schiffer's (1972) consideration that physical presence is a main indicator of joint attention in young children, Moll and Meltzoff suggest that

the children in the experiment may be taking the physically present adult to be jointly attending to the object with them, even if a barrier blocks her sight. If this is correct, it makes available an intriguing interpretation of the experiment. It could be that children cannot tell which object the adult hasn't seen, if she is physically present but unable to see the object, because they mistakenly assume the adult to have jointly attended to the thing with them. On this interpretation, the picture that emerges is as follows. Joint attention makes available a perspective-independent grasp of the object of attention. And this grasp has direct consequences for the creature's judgement about others' understanding of the object. It makes available the judgement that a partner in joint attention sees the same thing as the creature herself, and that someone who isn't jointly engaged with the subject doesn't. But, so the hypothesis, children of two years of age aren't good at telling whether another person is jointly engaged with them. They take physical co-presence to be a reliable indicator of joint attention. So they mistakenly think that the other person can see the same thing as they do. This is what explains why children, in the experiment, pick at chance which object the adult hasn't seen: they are simply taking a guess, since they are working on the presupposition that the physically co-present adult *has* seen all the toys.

This interpretation of the experiment accounts for the explanatory role of joint attention. It explains jointly engaged creatures' presupposition of the sameness of the object of perceptual demonstratives in communicative reference. It explains what entitles communicative users of perceptual demonstratives to suppose that the object of reference is mind-independent. What explains this is the joint perceptual context in which the reference occurs. Joint attention, conceived as a basic, irreducible triadic epistemic relation between perceiver, co-attender, and

object of attention, explains perceivers' grasp of the object of reference that justifies their use of perceptual demonstratives in communication.

### References

- Adams, F. & K. Aizawa (2010). *The Bounds of Cognition*. Oxford: Wiley-Blackwell.
- Barresi, J., & C. Moore (1993). "Sharing a perspective precedes the understanding of that perspective". *Behavioral and Brain Sciences*, 16, 513–514.
- Baron-Cohen, S. (1995). *Mindblindness: An Essay on Autism and Theory of Mind*. Cambridge MA: MIT Press.
- Butterworth, G. (1991). The ontogeny and phylogeny of joint visual attention. In A. Whiten (Ed.), *Natural theories of mind* (pp. 223–232). Oxford: Blackwell.
- Brinck, I. ((2005). Critical Review of John Campbell: Reference and Consciousness. *Theoria* 3:266-276.
- Burge, T. (2005). "Disjunctivism and Perceptual Psychology." *Philosophical Topics* 33 (1), 1 – 78.
- Campbell, J. (2002). *Reference and Consciousness*. Oxford: Oxford University Press.
- Campbell, J. (2010). "Demonstrative Reference, the Relational View of Experience and the Proximity Principle", in Robin Jeshion (ed.), *New Essays on Singular Thought* (Oxford: Oxford University Press, 2010), 193-212.
- Campbell, J. (2011). "An Object-Dependent Perspective on Joint Attention". In: A. Seemann (ed.), *Joint Attention: New Developments in Psychology, Philosophy of Mind, and Social Neuroscience*. Cambridge, MA: MIT Press, 415 – 430, forthcoming.
- DeBrigard, F., *Consciousness, Attention, and Commonsense*, *Journal of Consciousness Studies*, 17, No. 9–10, 2010, pp. 189–201.
- Eilan, N., Hoerl, C., McCormack, T., & Roessler, J. (Eds.) (2005), *Joint attention: Communication and other minds*. Oxford: Oxford University Press.
- Gallese, V. (2005). "Embodied Simulation: From Neurons to Phenomenal Experience". *Phenomenology and the Cognitive Sciences* 4, 23 – 48.
- Goldman, A. (2005). *Simulating Minds: The Philosophy, Psychology, and Neuroscience of Mindreading*. Oxford: Oxford University Press.

- Hobson, Peter (2005). "What Puts the Jointness into Joint Attention?" In: N. Eilan, C. Hoerl, T. McCormack, & J. Roessler (eds). *Joint Attention: Communication and Other Minds*, Oxford: Oxford University Press, 185 - 204.
- Kelly, S. (2004). "Reference and Attention: A Difficult Connection." *Philosophical Studies* 120, 277 – 286.
- Leavens, D. A. (2004). "Manual Deixis in Apes and Humans." *Interaction Studies: Social Behaviour and Communication in Biological and Artificial Systems* 5, 387 – 408.
- Leavens, D. A., & Bard, K. A. (2011). "Environmental Influences on Joint Attention in Great Apes: Implications for Human Cognition." *Journal of Cognitive Education and Psychology* 10, 9 – 31.
- McDowell, J. 1994, *Mind and World*, Cambridge, Mass.: Harvard University Press.
- Mole, C. (2008). "Attention and Consciousness." *Journal of Consciousness Studies* 15(4), 86 – 104.
- Moll, H., and A. Meltzoff (2011): "Joint Attention as the Fundamental Basis of Understanding Perspectives". In: A. Seemann (ed.), *Joint Attention: New Developments in Psychology, Philosophy of Mind, and Social Neuroscience*. Cambridge, MA: MIT Press, 393 – 414.
- Noe, A. (2004). *Action in Perception*. Cambridge, MA: MIT Press.
- Pacherie, E. (2011). "The Phenomenology of Joint Action: Self-Agency versus Joint Agency". In: A. Seemann, (ed.), *Joint Attention: New Developments in Psychology, Philosophy of Mind, and Social Neuroscience*. Cambridge MA: MIT Press, 343 – 390, forthcoming.
- Peacocke, C. (2005). "Joint Attention: Its Nature, Reflexivity, and Relation to Common Knowledge". In: N. Eilan, C. Hoerl, T. McCormack, & J. Roessler (eds.), *Joint Attention: Communication and Other Minds*. Oxford: Oxford University Press, 298 – 332.
- Prinz, J. (forthcoming). Is Attention Necessary and Sufficient for Consciousness? In Christopher Mole, Declan Smithies & Wayne Wu (eds.), *Attention: Philosophical and Psychological Essays*. Oxford University Press.
- Scaife, M., & Bruner, J. (1975). The capacity for joint visual attention in the infant. *Nature*, 253, 265–266.
- Schiffer, S. (1972). *Meaning*. Oxford: Clarendon Press.
- Seemann, A. (2010). "The Other Person in Joint Attention: A Relational Approach", *Journal of Consciousness Studies* 17 (5-6), 161 – 182.

- Seemann, A. (ed.) (2011). *Joint Attention: New Developments in Developmental and Comparative Psychology, Philosophy of Mind, and Social Neuroscience*. Cambridge MA: MIT Press, forthcoming.
- Siegel, S. (2004). "Review of 'Reference and Consciousness.'" *Philosophical Review* 113 (3), 427 – 431.
- Snowdon, P. 1990, "The Objects of Perceptual Experience", *Proceedings of the Aristotelian Society Supplementary Volumes*, 64: 121–150.
- Soteriou, M. (2009), "The Disjunctive Theory of Perception", *Stanford Encyclopedia of Philosophy*.
- Stueber, K. (2011). "Social Cognition and the Allure of the Second-Person Perspective: In Defense of Empathy and Simulation". In: A. Seemann (ed.), *Joint Attention: New Developments in Psychology, Philosophy of Mind, and Social Neuroscience*. Cambridge, MA: MIT Press, 265 – 292, forthcoming.
- Tanner, J. E., Patterson, F. G., & Byrne, R. W. (2006). "The development of spontaneous gestures in zoo-living gorillas and sign-taught gorillas: From action and location to object representation". *Journal of Developmental Processes*, 1, 69–102.
- Tomasello, M. (1999). *The Cultural Origins of Human Cognition*, Cambridge MA: Harvard University Press.
- Tomasello, M., Carpenter, M., & Liszkowski, U. (2007). "A new look at infant pointing". *Child Development*, 78, 705–722.