

Social understanding through direct perception? Yes, by interacting

Dr Hanne De Jaegher

*Department of General Psychiatry, University of Heidelberg, Germany
Centre for Computational Neuroscience and Robotics, University of Sussex, UK*

Abstract

This paper comments on Gallagher's recently published direct perception proposal about social cognition (Gallagher 2008). I show that direct perception is in danger of being appropriated by the very cognitivist accounts criticised by Gallagher (theory theory and simulation theory). Then I argue that the experiential directness of perception in social situations can be understood only in the context of the role of *social interaction* in social cognition. I elaborate on the role of social interaction with a discussion of *participatory sense-making* to show that direct perception, rather than being a perception enriched by mainly individual capacities, can be best understood as an interactional phenomenon.

Keywords

social cognition, theory of mind, simulation theory, direct perception, interaction process, coordination, participatory sense-making, intersubjectivity

Introduction

Is there no problem of other minds? In a recent paper, Shaun Gallagher proposes that we understand each other partly through *direct perception*. Direct perception is the phenomenological notion of a rich, ‘smart’ perception. When we encounter an other we “have a direct perceptual grasp of the other person’s intentions, feelings, etc.” (Gallagher, 2008, p. 535). Gallagher contrasts this notion with traditional, cognitivist approaches to social cognition such as theory theory (TT) and simulation theory (ST), which start from a ‘dumb’ perception that needs to be supplemented with interpretation sustained by inferential or simulation processes before an individual can figure out an other’s emotions and intentions.

In this short commentary, I intend to show first that Gallagher’s direct perception proposal may not be able to withstand a potential cognitivist hijack into an inferencing/simulating account in which social perception builds on fast and behind-the-scenes cognitive processing. Yes, we have the experience of a direct grasp of others’ intentions and feelings, the cognitivist can say, and this is because of the very fast processing going on inside the head. Gallagher’s claim that mirror neurons are not a mechanism of simulation but one of perception does not help because it does not dispel the idea that social cognition is something done in the individual head. In order to safeguard direct perception, I propose that the experiential directness of social perception can be understood only in the context of the role of *social interaction* in social cognition. In contrast to the majority of current perspectives on social understanding, an account that takes interaction as central involves focusing on engaged participants and not mainly on the individual cognizer. I have argued before that understanding the social interaction process should be the central task of any account of intersubjectivity. This paper is dedicated to showing how an interactive approach to social cognition can account for direct perception – one of many intersubjective phenomena – and how such an account avoids giving in to cognitivist temptations. The general point of the criticism is 1) to extend and complement Gallagher’s picture and 2) to move the debate into a properly social domain that involves understanding participants in the act of interacting.

From dumb to smart perception?

According to Gallagher, direct perception is an aspect of social understanding that gives us an insight into what is going on with another person. In explaining what direct perception is, Gallagher seems to want to go two ways. In some places, he approaches direct perception in a Gibsonian kind of way:

“Practically speaking, direct perception, etc. delivers what I need to interact with others most of the time. In the broad range of normal circumstances there is already so much available in the person’s movements, gestures, facial expressions, and so on, as well as in the pragmatic or social context, that I can grasp everything I need for understanding in what is perceptually available” (Gallagher 2008, p. 540).

Here, all the information we need to understand an other is out there, in her comportment. Gallagher proposes that rather than being opaque, for purposes of ongoing interaction we are transparent to each other most of the time. We see others' emotions and intentions – mental states are not hidden, they are in plain view for all who want to see. On this take, there is little explaining to do with regard to how direct perception works – we just do it. But this is not satisfactory, and Gallagher also provides an account of how it works.

He contrasts direct perception with the kind of perception ostensibly at play in the traditional theory theory (TT) and simulation theory (ST) accounts. This is done by conceiving of perception as ranging from dumb to clever. The kind of perception at play in TT and ST, according to Gallagher, is dumb; it – crucially – needs to be supplemented by cognitive efforts such as mindreading or simulation in order for there to be full interpersonal understanding. Even though these approaches are generally not clear about what notion of perception they use in the first place, it is evident that if it wasn't supplemented by whatever “cognitive machinery” advocated, our mere perception of an other would not make us any the wiser about their intentions and feelings (Gallagher 2008, p. 536). Perception alone is supposedly not enough. We must infer and/or simulate in order to understand each other. This reveals the problem of other minds that these approaches start from: we are opaque to each other, and so we need to figure each other out – literally, by exercising a cognitive faculty.

This is what Gallagher reacts to, based on the phenomenology of everyday social understanding. He wants to avoid postulating high-level cognitive mechanisms at the core of our intersubjective skills. He offers a kind of social perception, *direct perception*, which is “smart”. Unlike the perception of ST and TT, direct perception does not need cognitive supplementation. Gallagher illustrates this with the example of seeing his car. He does not first see a red blob and then discern that this is his car – he immediately sees his car. This kind of perception already ‘understands’ the stimuli before it. But how does perception get so clever?

In answering this question Gallagher lists a series of ‘enrichers’ of perception. One such source of perception's intelligence is experience, which “can tune our sensory-motor neuronal systems” (Gallagher 2008, p. 538). Not all perception is enriched by experience however, for even creatures who do not have (much) experience – infants for example – show skills that reveal a smart perception according to Gallagher. Infants show a preference for certain stimuli such as the human voice or their caregiver's mother tongue, they can imitate gestures very soon after birth, and they have a different kind of interest in biological movement than they have in non-animated movement. These findings lead Gallagher to propose an inborn drive to communicate (Gallagher, 2005), in accordance with Trevarthen's ideas (see e.g. Trevarthen & Aitken, 2001). Later in development, perception is informed by the language and concepts we learn. Another enricher of perception is context: according to Gallagher the context of what we perceive informs our understanding of others. Perception is also clever because of the work done by the brain: “[t]he visual cortex is processing information about shape and color” and “more processing in the inferior temporal cortex, and ‘top-down’ processes may focus and integrate the sensory information” (Gallagher 2008, p. 537).

Each of these suggestions about how perception is informed or enriched needs to be expanded to see how they can work, and they can each be critically discussed in their own right. For instance with regard to infant imitation it is not quite clear how infants achieve it. Is it really a matter of internally mapping visual and proprioceptive elements onto each other, or could another, perhaps more parsimonious explanation be given? Is declaring the innateness of a certain skill or trait not often a way of saying ‘we do not really know where it comes from’? We could also ask how context itself is perceived, and so on.

However, a more pertinent question is this: To what extent does this account present us with something new and to what extent do some of the underlying assumptions of cognitivism remain part of this proposal? Conceiving of direct perception as clever or informed inevitably raises the issue of how perception gets like this. As we have seen, Gallagher’s approach to answering this question is to list several ‘enrichers’ of perception. This does not avoid that which he holds against the notion of perception employed in TT and ST: it being a perception+, perception+cognitive efforts – except that in his proposal what comes after the + does not happen *alongside* or *after* the perceiving, it happens *within it*. Even if what is added into perception is not mindreading or simulation and it takes place somehow within it rather than alongside or at the tail end, what Gallagher does is to bring to the table more and more ingredients for enriching perception, as if it were a sauce in need of flavouring. The ingredients may be sourced from better pastures (more local and organic perhaps), there may be more of them, but the recipe has not changed much. This does not mean that the recipe is one to stick with. In whatever way perception is enriched, whether by inference, simulation, enactive exploration, context, or innate drives, it remains an ‘enriched’ perception. The notion of direct perception is therefore not radically different from that of supplemented dumb perception. The fact that it makes us ask how perception gets *informed* points to an underlying assumption: that this perception was also dumb to start with. The proposal Gallagher puts forward here does not move the debate away from the idea that perception is something that needs to be filled in, added to or complemented in some way in order to allow interpersonal understanding, it merely relocates the sources of enrichment of perception.

Gallagher is arguing against TT and ST but by staying on their turf he risks facing problems very similar to the ones they face, as I have shown here. However, there is another, bigger problem: in these approaches to social cognition, and in Gallagher’s too, the interaction process is all but neglected.

Where is the interaction?

The discussion of where social perception gets its cleverness from has almost made us forget that the main question we are dealing with here is one of *intersubjectivity*, i.e. of social, *interpersonal* understanding – it is telling in this regard that most of the discussion of the ‘enrichers’ of perception could have been applied to Gallagher’s own example of perceiving his car. Direct perception is not the kind of process in which some form of *social skilfulness* already inheres and does not need to be added. Or is it? In a few places in his article, Gallagher points to the importance of the interaction process: e.g. “What we call social cognition is often nothing more than that social

interaction” (Gallagher 2008, p. 540). This is a clear claim to the effect that social interaction often *is* social understanding. Taken literally it could be the aim of an interesting research project: Work out *how* social interaction *is* social understanding. But such elaboration is a much neglected task. An in-depth investigation of interacting and its role in interpersonal understanding is mostly lacking in social cognition research. Some researchers, Gallagher included, hold the role of the interaction in high regard and emphasise its importance (Gallagher, 2004; Gallagher & Hutto, 2008; Ratcliffe, 2007) and this is very valuable. But behind acknowledging the importance of something lurks the potential danger of taking that something for granted. This is exactly what happens with regard to the interaction process. Nobody denies its importance and nobody explains its role. Gallagher himself has proposed an alternative to TT and ST in the form of Interaction Theory (Gallagher, 2004, in press; Gallagher & Hutto, 2008), but interaction-wise it does not do much more than state *that* the interaction is important.

We *can* understand social perception as the rich process Gallagher makes it out to be – if we confront the more general question of what processes ground meaning and get a grip on the role of interacting in social cognition.

Sense-making and participatory sense-making

Di Paolo and I have recently sketched an approach to the role of the interaction process in social cognition (2008; De Jaegher & Di Paolo, 2007). Here, rather than reintroduce the proposal, I will highlight some of our main points, and then elaborate on some issues that will bring the possibility of a direct perception in the social realm into sharper focus. In Gallagher’s work there seems to be an assumption that “direct perception . . . delivers what [we] need to interact with others most of the time” (Gallagher 2008, p. 540). What I am arguing here is exactly the opposite: we may experience an other’s feelings and intentions directly, but direct perception builds on something, namely on the capacity to skilfully interact with others. In other words, the capacity for social interaction is not derivative, but constitutive of the process of social understanding and also of direct social perception. Therefore, working out a detailed account of social interaction’s role in interpersonal understanding is the central element of the story of social cognition. It will allow the issue to move away from the terms of the debate set by TT and ST and followed by direct perception (by the way, none of these approaches have even defined what they mean by ‘social’)¹ and towards a story that explicitly connects meaning and social interaction.

Focusing on the interaction is a radical step. It grounds the study of intersubjectivity and social cognition on two new foundations. First, rather than starting from the idea that social cognition happens within an individual – whether brain or whole body – it makes the investigation of the role of the interaction process in social cognition imperative and possible. Second, it permits us to think of how intentions emerge and are transformed in and through social interaction. The radical step lies in moving away from seeing social phenomena as events external to the perceiver that must be appropriately interpreted. Instead, we see interacting as a

¹ For a definition of ‘the social’, see De Jaegher and Di Paolo (2007).

process in which an interactor is immersed and as a process that in itself may play a cognitive role.²

To begin with the question where meaning comes from, we characterise cognition in general as *sense-making*. This means that “[e]xchanges with the world are inherently significant *for* the cognizer and this is the definitional property of a cognitive system: the creation and appreciation of meaning or *sense-making* in short” (E. Di Paolo, Rohde, & De Jaegher, 2008). Understanding cognition as sense-making means to ground meaning in aliveness. Different thinkers and schools of thought have expressed this in different ways. Enactivists ground cognition or sense-making in the self-producing, self-organising and self-distinguishing organisation of living beings (E. Di Paolo, 2005; Maturana & Varela, 1980; Thompson, 2007; Varela, 1991; Varela, Thompson, & Rosch, 1991; Weber & Varela, 2002). A cogniser is a ‘*centre of activity*’ in the world and this entails that she has a perspective, based in her structure, history and needs. Similarly, Maxine Sheets-Johnstone (1999) characterises sense-making as rooted in animateness and self-movement.³

Sense-making is the active engagement of a cogniser with her environment.⁴ This activeness of sense-making is elaborated wonderfully in Sheets-Johnstone’s account of the primacy of movement. According to her, “Our bodies, *through movement*, [are] the very condition of our constituting the world” (Sheets-Johnstone, 1999, p. 148-149, emphasis in original). If we were not able to move, we would only be able to perceive whatever happened to drift past us: “the world would reduce to random events which, in the absence of active exploration, could hardly give rise to the idea of full-fledged objects, let alone full-fledged subjects” (p. 148).⁵ In sum, “[o]nly through movement can and does . . . our knowledge of ourselves and the world . . . take root” (p. 228).

² Perhaps what lies behind the prevalence of the individualist position is the idea that such a skill is simpler than fully engaged interaction – both to explain and to achieve. Like several similar issues in embodied cognition research, the case is exactly the opposite: the apparently more complex situation points much more directly to the nature of the problem and to its solution.

³ The notion of ‘sense-making’ is very different from the everyday expression of ‘making sense of something’. It does not carry the latter’s connotation of very high level cognitive activity involving reasoning and inference. We use ‘sense-making’ similarly to the way Weber and Varela (Weber & Varela, 2002), Thompson (Thompson, 2007) and Sheets-Johnstone (Sheets-Johnstone, 1999) use the term to refer to the generation and transformation of meaning in the most general sense, *not* a high-level cognitive process. Meaning, on this account, is grounded in the biology of living beings. Accordingly, the processes involved in sustaining life themselves introduce a normativity through which an organism appreciates the value or meaning of events and interactions with the environment (E. Di Paolo, 2005; Thompson, 2007; Weber & Varela, 2002). The distinction with the everyday word is indicated by the use of the hyphen: sense-making, making-sense.

⁴ This does not mean that there is no receptivity in cognition. Receptivity is part of cognition, but it is not passive. It is also an active engagement, think of attention, focus and openness for instance.

⁵ In fact, even this presupposes that we have experience, which on Sheets-Johnstone’s account – which includes an original developmental illumination – we also can only gain through movement.

Sense-makers enact or constitute their world in and through their movement.⁶ This is in contrast to significance or meaning happening exclusively in certain neural activity.

Starting from this characterisation of the roots of meaning and cognition in aliveness,⁷ we can move into the domain of intersubjectivity. In order to do this, it is necessary first to make a brief stop at the phenomenon of coordination. Coordination is a ubiquitous and measurable reality of physical and biological systems. We characterise it as “the non-accidental correlation between the behaviours of two or more systems that are in sustained coupling or have been coupled in the past or have been coupled to another, common, system” (De Jaegher & Di Paolo, 2007, p. 490). An example of physical coordination is the synchronisation of the pendulums of grandfather clocks when they are placed in each other’s vicinity. Here, coordination is achieved by mechanical means. Even in biological or cognitive systems the source of coordination is often mechanical, and it is therefore not necessary to postulate high-level cognitive mechanisms at its basis when it happens in a cognitive system.

In social science, analyses of interactions and conversations show that people interindividually coordinate their movements (Bavelas, Coates, & Johnson, 2002; Condon & Ogston, 1971; Gill, Kawamori, Katagiri, & Shimojima, 2000; Kendon, 1982; Warner, 1996). The coordination found in this domain is variable both in kind and in strength: among other things, people mirror each others’ movements, anticipate them, temporally synchronise or desynchronise and so on. A feature specific of social coordination is that patterns of coordination can influence the continuing disposition of the individuals involved in the encounter to sustain, modify or end it (De Jaegher & Di Paolo, 2007). A good example of this is an interaction that carries on even though none of the participants wishes to continue it. Think of the perhaps familiar situation where you encounter someone coming from the opposite direction on a narrow footpath. In attempting to walk past each other, you both step towards the same side. This may happen a few times before you are finally able to bypass each other. Here, the coordination of movements (a temporally synchronised mirroring of sideways steps) ensures (for a brief while) that the interaction process is sustained despite the fact that you both want to stop interacting in this way. This example illustrates how the interpersonal coordination of movements endows the interaction process with a form of autonomy. We can even go so far as to say that the interaction process itself influences the interactors. This insight is one of the consequences of taking the interaction process seriously. What does it buy us in the area of social understanding?

If movements are foundational to sense-making, as seen above, and people’s movements can be inter-individually coordinated to such an extent that patterns of coordination may take on a ‘life of their own’, we have a way of conceiving of a sense-making that is truly intersubjective. When movements fundamentally intertwined with

⁶ To clarify, I do not mean that sense-making is *mapped onto* certain movements in a body language kind of way where certain body movements or postures mean one thing (e.g. arms crossed across chest = disagreement), but rather that sense-making *is in* movement, happens through movement. This has nothing to do with mapping.

⁷ I can only provide an extremely brief statement of these ideas here. My task in this paper is not to argue for them, but I refer the reader to the relevant literature mentioned in the text for their argumentation.

sense-making can interindividually coordinate, this means that *sense-making activities can coordinate interindividually*. This opens up a range of socially cognitive phenomena. At the least, interpersonal movement coordination can influence individual sense-making. This happens for instance when someone points to something for you to see. Following the pointing gesture makes you attentive to an aspect of your environment that you were previously not aware of. This also goes for the more metaphorical meaning of ‘pointing something out to someone’.

More intricate possibilities are also opened up: we can now think about how intentions can be transformed – even generated – in social interaction. Let us continue with the pointing example. If it is not immediately clear what your partner is trying to point out to you, you may refer back to his gaze and look where he is looking. This can prompt him to look in his intended direction with more emphasis. ‘Pointing’ here is then interactionally achieved. Once you know what he is pointing out to you, let us assume for the sake of the example that the thing he points out is ambiguous. You can now start to make sense of the so established object of attention together. If he was pointing to someone’s gestures for instance, you may come to a mutual understanding of them based on an intricate to-and-fro of glances, utterances, gestures and so – eventually reaching an understanding that was not there for either of you before your interaction.

In other words, we are no longer tied to thinking of intentions as individually formed and then brought into a social situation to be interpreted, simulated, or directly perceived. Instead, we now have the opportunity to gain an insight into *intersubjectivity* in the most literal sense of the word.

Sense-making in the social realm is then best characterised as *participatory sense-making*. As we have seen, this is a cognising that ranges from individual thoughts and feelings being influenced by an other’s or by interacting with him, all the way to the truly intersubjective, joint transformation and generation of meaning.

Transparent interaction

Di Paolo and I have put forward this account as an alternative departure point for the investigation and understanding of social cognition. I now explain its relevance for Gallagher’s direct perception account. We have seen that Gallagher’s proposal runs into difficulties when it comes to explaining how direct perception works. It is in danger of being reinterpreted as a cognitivist, individualist conception of cognition.

I propose that perception in the social realm acquires the richness and feels as direct as it does because of the *mediated immediacy* of social understanding through the interaction process. We are so proficient at social interaction that the process gains a transparency that makes perception in the social realm feel direct.⁸ This proficiency

⁸ By the use of the word ‘transparent’ I do not mean to indicate that the interaction is like a window through which I see an other – that would lend the whole too much of a snapshot air. On the contrary, the interaction process is transparent while being also a *process*. The transparency can perhaps be better illustrated by the way a blind person’s cane can be transparent: this instrument is only ‘transparent’ as long as it is being used. It is not a means of perception and the blind person does not see anything ‘through’ it when he simply holds it in his hand. It is only when he uses it, actively and skilfully explores his surroundings with it, that

builds on years of extensive experience throughout development, starting at the earliest stage with infant-caregiver interactions, and continuing throughout life in our daily encounters with others.⁹

But – and this is a crucial point – *it isn't always like this*. An other's intentions are not always transparent to me. Sometimes it is unclear what is going on with someone. In Gallagher's words: "the other person may in some circumstances be a real puzzle" (Gallagher 2008, p. 540). It is in his discussion of this issue that the question whether Gallagher's proposal remains observational or not can be answered: it is observational. Gallagher says that we gain our understanding from directly perceiving the other. We have already wondered how that could work and found that the nature of this starting point lends itself too easily to cognitivist answers and makes us lose sight of the fact that we are dealing with the conundrum of *interpersonal* understanding. With regard to misunderstanding an other, cognitivist accounts of social cognition as well as perceptual accounts that are in danger of being annexed by cognitivist ones treat breakdown of social understanding as due to individual faults (hampered inferencing, faulty simulating, lack of perceptual grasp or ways to reduce ambiguity). Ways out of such breakdowns are also restricted to individual efforts. Gallagher himself seems quickly seduced again by the old solutions when he says that in such cases he "would not hesitate to say that we might then turn to other means (narrative or even theory or simulation)" (Gallagher 2008, p. 540).

Even though Gallagher is referring to exceptional situations where his proposed mechanisms would break down, we are prompted by these situations to ask ourselves how does this account deal with failures in everyday social understanding. Such failures in understanding an other's behaviour are not exceptional. On the contrary, they form part and parcel of the ongoing process of social understanding. More even, misunderstandings are the pivots around which the really interesting stuff of social understanding revolves. In these instances where coordination is lost, we have the potential to gain a lot of understanding. More often than not I feel myself disagreeing or questioning when my interaction partner has already reacted accordingly before he or I even formulate that disagreement or questioning for ourselves. Loss and recovery of coordination are mediated through the interaction itself – a coordination which, as we have seen above, is not a constant attunement, but rather a variable, sometimes even discontinuous process. It is when the flow of movement across me and my interaction partner grinds to a halt, that my sense-making activity can and often does change direction. Where the ongoing flow of interacting and coordinating breaks, opportunities for redirecting sense-making open up.

the kerb or a crack in the pavement become 'visible' 'through' it. And even this does not do justice to the intricacies of the interaction process of course, because as a social agent involved in a social interaction, I am at once prodder and prodded, and so is my interaction partner. Each of us is capable both of perceiving the other and of changing through the interaction process.

⁹ This proficiency is interactional too: with some people we have it, with others we do not. Social skill is an interactional phenomenon as much as social understanding is (De Jaegher, H. (2006). *Social Interaction Rhythm and Participatory Sense-Making: An embodied, interactional approach to social understanding, with implications for autism*, Unpublished D.Phil. Thesis: University of Sussex, Brighton, UK).

With regard to direct perception, breakdowns are the place where social perception can be ‘enriched’ the most – and ‘on the fly’: in breakdown the other is opaque to me, but its recovery can lead to a better, richer understanding of the other, and to a change in the ongoing course of the interaction. Gallagher himself advocates an account of social cognition based on interaction in several places (see e.g. Gallagher, 2004; Gallagher & Hutto, 2007). However, as I have said above, without an in-depth account of the role of the interaction process in social cognition the opportunity for a real change of perspective in social cognition research would be hopelessly lost.

This paper offers a way in which Gallagher’s account can be extended so as to definitively break away from the individualist terms of the debate set by cognitivist approaches. In doing so, it is also advocating such a break as the path to follow for a properly social, not a merely spectatorial, approach to interpersonal understanding.

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