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DO GREAT APES SWITCH PERSPECTIVES? HUSSERL, TOMASELLO, AND OPERATIVE INTENTIONALITY

abstract

In Becoming Human *(2021), evolutionary psychologist Michael Tomasello provides a comprehensive account of the social intentionality which makes us human. One of the many themes discussed is the intentionality required for switching between perspectives. A number of interesting claims are made in these parts, including that great apes (and young infants) have no sense of perspective, no understanding of false beliefs, and do not know they could be wrong about how they experience things. While I am sympathetic to the general purport of Tomasello's theory of switching perspectives, I believe his theory mispresents the intentional skills that are involved in various pre-conceptual forms of switching perspectives, to the extent that it is worth a brief commentary. I first outline Tomasello's theory of perspectivalness, and subsequently develop an alternative, based on the phenomenological distinction between operative and thematic intentionality.*

keywords

intentionality, primate cognition, theory of mind, phenomenology, Tomasello

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1. Introduction

Becoming Human: A Theory of Ontogeny (2021, references to this work are with page numbers only) is the latest monograph of Michael Tomasello, one of the leading developmental and evolutionary psychologists of our time. The work draws on decades of empirical studies on the social-cognitive skills of primates and infants. By and large, it defends the same social intentionality framework found in earlier works such as *Origins of Human Communication* (2010) and *A Natural History of Human Thinking* (2014), based on the central concepts of joint attention and collective intentionality. *Becoming Human* is notably wider in scope, however, spanning diverse themes such as communication, a sense of perspective and reality, normativity, and morality.

One of the many themes Tomasello discusses concerns the cognitive-intentional skills involved in switching between different perspectives, and through that, acquiring a sense of conflict, false belief, and ultimately, objective reality. According to Tomasello, being able to understand the perspective of another is a necessary step in coming to an understanding of objective reality: "participants must come to understand that the two of us are sharing attention to one and the same thing, but at the same time we each have our own perspective on it" (45). An individual can then come to construct "an 'objective' world independent of their own or anyone else's way of construing it" (46).

A number of interesting claims regarding the cognitive-intentional basis of this kind of perspective switching are made in the relevant sections of the book (mostly Chapter 3). Among these are the claims that non-human great apes (throughout: great apes) have no sense of perspective, no understanding of false beliefs, and do not know they could be wrong about how they experience things. All these claims depend on the more fundamental suggestion that there is an absence of perspectivalness in great ape intentionality. A brief explanation of this general pronouncement, as well as of the empirical data on which it is based, is therefore required in order to understand his other claims.

In what follows, I first outline Tomasello's account of the mindreading behavior of great apes, which involves no sense of perspectivalness from the ape's viewpoint. I then introduce the concept of operative intentionality, which I derive from the works of Edmund Husserl (1859-1938). In the following sections, I demonstrate how this concept can be used to better account for second and first order intentionality in great ape behavior, without thereby implying the sort of executive functioning involved in actively comparing different perspectives. I conclude that Tomasello's account would benefit from this concept of operative

intentionality, as it allows of a better interpretation of great ape intentionality, and the ability to relate various viewpoints prior to making active comparisons.

2. Perspectivalness in third order intentionality

Great apes, and likewise infants in their first two years of life, possess quite remarkable skills of mindreading. Whereas wild apes do not naturally perform pointing gestures, they follow "the gaze direction of others and understand [...] intentional states of others" (52). They can perfectly well "imagine the actual psychological content of what others are seeing, hearing, knowing, and inferring" (49), and they make use of this information in deciding upon their own courses of action (104). Moreover, it is likely that great apes also perform second order gestures. This shows in the fact that apes can track whether their audience has perceived them, as well as whether they grasped their intentions – usually to make another do something –, meaning they are aware of the intentional states of the other in relevant respects (e.g. Byrne et al. 2017; Tomasello and Call 2019; Tomasello 2021).

Consequently, it seems reasonable to suggest that there is a sense in which great apes grasp the perspective of another as one distinct of their own. After all, they understand the intentional states of others, even when they are different from their own (they understand their own signal, but the other does not), and they are capable of acting upon perceived differences. Tomasello (2021), however, resists this interpretation, at least in his latest monograph. In his view, the way they switch perspectives is essentially nonperspectivally. As he explains it, "what we have called 'imagining what another sees and knows' does not involve different perspectives". Indeed, there is here "no sense of perspective", not even of "a single perspective" (64). This is because, when "the subject is imagining the other's experience, [...] her own experience is not part of her mental processing" (64). The participant is "seeing 'through' his perceptual experience, not examining or comparing it with something else"; "their own perception of the situation is not an object of attention at all" (64).

A lot depends on what it means for someone's experience to be "part of [one's] mental processing" (64). What is lacking in ape cognition, according to Tomasello, is "an executive level of functioning in which the two perspectives may be compared in the same representational format" (66). Apes, then, do not reflect on the different perspectives; they do not get into the business of "comparing them to their own knowledge states or to the objective situation" (72-73).

This is all very well. However, we should ask whether such an active comparing of multiple perspectives is the only way in which perspectives can be a part of one's mental processing. As I see it, any kind of third order intentional act – as of the sort "I see that you want to show me X", which is the structure of basic cooperative acts such as pointing – requires some form of perspectivalness in and of itself, even if there is no executive functioning involved. This is, arguably, the common sense viewpoint on the matter. For instance, when I aim to show something to someone by pointing, I need to navigate between my own and the other's perspective. If their gaze does not follow the direction of my pointing, then the communicative act fails, and I will be forced to acknowledge a discrepancy between my viewpoint and that of the other. All basic third order intentional acts which seek to align perspectives in joint attention therefore include at least some sense of perspectivalness. We might characterize this as a *passive* perspectival understanding, which may or may not motivate a subsequent *active* comparison, for instance in an attempt to resolve a perspectival conflict.

Note that such a passive form of perspectivalness does not necessarily presuppose that different ways of seeing the same thing are involved, nor that an active comparison of different intentional states takes place. Great apes lack the cognitive-intentional skills needed for actively comparing various perspectives and resolving any conflict between them. But

do they also lack the skills for basic third order intentional acts? This is of interest here, as it seem difficult to deny that these acts inherently include some grasp of perspectivalness, even when the more complex executive skills required for actively resolving perspectival conflict are absent. It is worth noting that great apes do, according to Tomasello and others, possess the relevant cognitive-intentional infrastructure to understand third order intentional acts (95), although this is hardly used in the wild. This means they are, at least in controlled environments with human interaction, in which they are appropriately motivated by cooperative (human) subjects, capable of some form of perspectivalness. They are just not capable of thematically reflecting upon these perspectives to actively resolve conflict.

I have just drawn a distinction between two ways in which a multiplicity of perspectives may figure in one's intentional states. This distinction is one between passive and active intentionality, which might alternatively be addressed as thematic and operative intentionality. This distinction is well-known among phenomenologists. While it is often associated with Merleau-Ponty, it derives from various works of Husserl, on which I base my account here. Husserl used this distinction throughout his oeuvre, albeit in different terms. For instance, in *Ideas I* from 1913 Husserl distinguishes intentionality "in the pregnant sense" (Husserl 1983, 68, 72, 77), also called the "egoical mental processes", and "mental processes that compel a broadening of [that] concept" (Husserl 1983, 68), also called "operative experience" (Husserl 1983, 52). The distinction is found more explicitly in *Experience and Judgment* (1938), between pre-predicative (also called passive) and predicative (active) experience.

In my view, active or thematic intentionality is involved when something becomes an explicit theme for consciousness. Perspectives, for instance, become themes when they are actively compared in what Tomasello would call executive functioning. But an understanding of perspectives can also function in intentionality passively or operatively, as when I aim to show something to someone else by pointing. This involves an intentional relation to the intentional states of the other, which currently do not align with mine, in an attempt to achieve such alignment. If successful, I understand that we are both directed at the same thing; if unsuccessful, I understand that we are not. This understanding does not involve me actively contemplating their differences by making them thematic, nor that different ways of seeing the same thing are involved, but it is an understanding of different perspectives and their alignment nonetheless.

It seems to me that, without speaking of a passive or operative understanding of perspectivalness, third order intentional acts such as pointing cannot be adequately accounted for. This is for the simple reason that a cooperative act like pointing by definition includes the attempt to align two or more perspectives on a certain matter. Likewise, knowing whether this attempt has been successful or not includes some form of awareness of how these perspectives relate to each other. The concept of operative intentionality should allow us to account for this.

3. Switching perspectives in second order intentionality

It is worth asking whether a similar sort of perspectivalness – one which does not yet include an active comparison of perspectives in executive functioning – shows in other examples of great ape behavior, perhaps even those involving only second order intentionality. There are various studies of ape behavior which indicate second order intentionality, of which gaze following is the most typical case ("I see that you see X"). Such more basic acts of mindreading do not presuppose third order intentionality, as is typical of cooperative acts such as pointing ("I see that you want me to see X"). Second order intentional acts seem to figure frequently in ape social behavior, especially in competitive settings, and this is widely supported by the literature (e.g. Hare and Tomasello 2004; Tomasello et al. 2005; Zuberbühler 2008).

What exactly happens in gaze following? In following another's gaze, I am directed at that which another is directed at. Moreover, and crucially, I grasp at the same time that the other is directed at this as well. Put differently, I have, simultaneously, the acts "I see X" (after following the other's gaze) and "I grasp that you see X". There is, then, a definite sense in which I grasp that I *and* the other are directed at that something. Our two perspectives are not, then, completely distinct, such that there would be "no sense of perspective" (64) at all, as Tomasello suggests. Admittedly, gaze following does not include that "we" are "together" directed at that something. Also, it does not imply my capacity to actively reflect upon differences between both perspectives. Yet, even without third order acts, there is here a certain joining of perspectives on the side of the gaze follower, albeit without the other's intention of sharing mental states.

To give a more concrete example of this, a chimpanzee might track head directions of another to determine where the other presumably thinks food is hidden, and subsequently pursue it themselves (104). The question is whether we can address this kind of second order intentionality without invoking an understanding of perspectivalness. If there were indeed at any point only single viewpoints in the ape's mind, as Tomasello appears to suggest on multiple occasions, then the ape's behavior becomes puzzling. For in that case, the two viewpoints and their respective intentionalities would have to be firmly distinct in the ape's mind. This would make it impossible for the ape to relate the other's perspective to their own, in order to subsequently act upon the differences and quickly pursue the food themselves. Naturally, we do not want to invoke the idea of an active reflection on mental contents where there is no indication that this takes place. But this should not prevent us from adequately characterizing the sense in which there is perspectivalness in the ape's mind.

The ape, in the example given, does not ponder over the differences between both perspectives, in order to determine the most fitting course of action. In this regard, Tomasello's theory accommodates all the relevant facts. However, the absence of a thematic or active understanding cannot be taken to mean that the ape has no understanding of the different perspectives whatsoever, as its intentional life includes operative or passive intentionality as well. The situation in second order acts is therefore structurally similar to the earlier example of an act of pointing. While there is no thematic understanding of perspectivalness in either case, there is an operative understanding of it.

Part of the reason, I suspect, why Tomasello is brought to his conclusion that there is "no sense of perspective", not even of "a single perspective" (64) at the level of second order intentionality, is that he does not work explicitly and consistently with a conceptual distinction between operative and thematic intentionality. Only in the sort of executive functioning of actively comparing perspectives does a multiplicity of perspectives become thematically available to me. It is deceptively easy to mistake this type of thematic intentionality for intentionality as such, and to then conclude that great apes lack a sense of perspective altogether. In my view, while they indeed do not actively scrutinize the differences between various perspectives to come up with creative solutions to incongruities, perspectival differences do figure "passively" in their intentionality, which is why they can act upon them.

It would be unfair to represent Tomasello's account as completely ignorant of the notion of operative intentionality. Something akin to it figures in certain parts of the text, for instance, in speaking of an "'implicit' understanding" (49) of ape false belief states, and of the non-linguistic experiences children have of false belief (79). The distinction between operative and thematic intentionality is thus itself operative in Tomasello's works. It is not, however, explicitly drawn to the fore. Doing so, I suggest, would benefit his analysis, and our understanding of non-thematic perspective switching in general.

4. Operative intentionality

The distinction drawn between operative and thematic intentionality is not just applicable to social intentionality, i.e. second order mindreading and third order cooperative acts. It even works on the level of individual intentionality, and indeed in a variety of ways. Take, for instance, the concept of false belief. According to Tomasello, apes and young infants are not capable of understanding false beliefs. As Tomasello himself duly notes, "[c]hildren have nonlinguistic experience all day every day in which they believe something to be the case which turns out not to be" (79). However, for him, this does not imply an understanding of false belief. In his view, apes and infants, when things turn out differently than expected, "just update their thinking and move on" (74). There is here no sense of an incongruity of perspectives, of any form of conflict between doxic intentional states. The situation runs parallel to the switching of perspectives in second order acts, in which case young infants and apes would "simply track the knowledge states of others – full stop" (72), thus without any sense of a multiplicity of perspectives in a single representational format. In effect, apes and young infants are perpetually experiencing the truth, as they don't have any sense of perspective at all – an interpretation which strikes me as unsatisfactory.

I introduced earlier the idea that there are two fundamentally different ways in which we can speak of intentional operations, namely as thematic intentionality and as operative intentionality. Thematic intentionality simply means that something becomes a "theme" for the mind. In social intentionality, we speak of thematic intentionality for instance when actively comparing my and another's perspectives on a certain matter. In individual (non-social) intentionality, we can use it when speaking of any type of active reasoning about things or concepts.

Operative or passive intentionality, on the other hand, generally involves the same categories, predicative structures, and logical operators that are actively explicated in predicative-thematic acts – such as the "less than" (<) and "greater than" (>) operators, or negation (¬) –, but only as passively operating. They here appear not in thematic intentionality, but function in operative intentionality. To give an example, a chimpanzee might pursue a bigger plate of bananas instead of a smaller one. This choice is not motivated by an active comparison of the two plates, but the understanding that one plate is bigger than the other does figure in passive intentionality.

A similar analysis in terms of operative intentionality can be given of false belief states, again in mere individual intentionality. The phenomenologist Edmund Husserl provided a detailed and intriguing account of this already in the 1930s (Husserl 1997, 87-101; see also discussions in van Mazijk 2016; 2020). On his account, any ordinary perception involves tacit anticipations, which serve to provide a sense of the object's unperceived sides. In normal, unobstructed perception, these "protentional anticipations" (Husserl 1997, 87) are constantly "fulfilled", as the object gets more precisely determined in the course of movement and perception.

However, a perceptual negation – in operative intentionality – may occur when these anticipations are obstructed. For instance, in the progress of perception, a ball may have been anticipatorily apprehended as being uniformly red, on the basis of sides already perceived. On further exploration, there "emerges a consciousness of otherness which disappoints the anticipation: "'not red but green'" (Husserl 1997, 88). As Husserl notes, a "uniform framework of sense thus maintains itself", as a certain part of the experiential content acquires "the character 'not so, but otherwise'" (Husserl 1997, 88). In this way, Husserl continues, "a conflict arises between the still living intentions [of the ball as red] and the [new] content of sense which appears in the originality which has just been established" (Husserl 1997, 88).

Husserl's account unambiguously invokes an operative "uniform framework", functionally similar to what Tomasello calls a "representational format" (66), but which he took to be

altogether absent in false belief states at the level of the individual intentionality of young infants and apes. In Husserl's view, in the moment of perceptual negation, there is an actual conflict between two doxic states: two perspectives on one thing are entertained simultaneously in a single framework. As Husserl writes, there is a "*doubling in the total sense-content of the perception*"; the "certitude which has been overcome is still present to consciousness, although with the character of 'null'"; "the old sense is still present to consciousness, but it is overlaid by the new" (Husserl 1997, 89-90). He concludes that it "thus appears that *negation is not first the business of the act of predicative judgment [as it] already appears in the prepredicative [operative or passive] sphere of receptive experience*" (Husserl 1997, 90).

The interpretation Husserl provided in *Experience and Judgment* is clearly one of operative or passive intentionality. It seems to me that it can do perfect justice to the observable behavior of apes and young infants, in such cases where second order mindreading is involved, and different perspectives are processed and acted upon, as well as in conflicts in individual intentionality, prior to any executive skills required for an active comparison. This contrasts with Tomasello's account, which restricts talk of perspectives and false belief states entirely to the sphere of thematic intentionality, and therefore cannot provide a satisfactory account of simpler, passive understandings of perspectivalness.

5. Closing remarks

The concept of operative or passive intentionality allows us to better address the complex cognitive processes involved in various intentional acts which lack thematic intentionality. We may, I suggested, speak of a certain simultaneity of perspectives in a single cognitive framework in certain third order intentional acts, second order acts, and even in individual intentionality. I further suggested that Tomasello's account of switching between perspectives falls short in this regard, as it does not include an operative sense of perspectivalness, and inadequately characterizes such states as involving no sense of perspective whatsoever.

I do not know why Tomasello has not developed an account of operative or passive intentionality. The concept seems absent in other recent literature as well. Nevertheless, it seems important to introduce it, especially when it comes to addressing second order and higher acts, as these always include two or more perspectives, which makes it odd to describe them as lacking perspectivalness altogether.

When reading Tomasello's latest monograph, it struck me that his account is in fact somewhat negligent of second order intentionality in general. This led me to wonder whether this might partially explain why he overlook passive or operative intentionality. The central concepts of Tomasello's cognitive-intentional framework – those of joint attention and collective intentionality – do not seem to enable him to refer specifically to second order intentional acts; both concepts appear to require third order intentionality on his account. Relatedly, second order acts are usually not considered by him as forming a distinct step in the transition from individual to collective intentionality (for instance, 56). Whereas "joint attention" refers to "shared experience, common cultural knowledge" (Tomasello 2010, 5), thus to third order intentional acts, "collective intentionality" enables the formation of shared norms and an objective viewpoint, which is developed on the basis of third order intentionality. There is, then, or so it seems, no particular concept to refer to the peculiar joining of perspectives in second order intentional acts.

In summary, I argued that the concept of passive or operative intentionality could be useful in today's debates on primate cognition. I have not contested any of the empirical data, but only discussed the application of a different concept of "perspectivalness" to acts more basic than the ones Tomasello assesses. More philosophical engagement with recent primatological and psychological literature might reveal many more useful applications of phenomenological concepts, as I have tried to demonstrate elsewhere (van Mazijk 2024a; 2024b; 2024c; 2024d).

LITERATURE

Byrne, R. W., Genty, C. E., Graham, K. E., Hobaiter, C., Tanner, J. (2017). "Great ape gestures: intentional communication with a rich set of innate signals", *Animal Cognition,* volume 20, 755–769;

Corballis, M. C. (2002). *From Hand to Mouth: The Origins of Language.* Princeton: Princeton University Press;

Corballis, M. C. (2003). "From mouth to hand: Gesture, speech, and the evolution of right-handedness", *Behavioral and Brain Sciences,* 26, 199-260;

Hare, B., Tomasello, M. (2004). "Chimpanzees are more skillful in competitive than in cooperative cognitive tasks", *Animal Behaviour,* 68, 571-581;

Husserl, E. (1983). *Ideas Pertaining to a Pure Phenomenology and to a Phenomenological Philosophy: First Book: General Introduction to a Pure Phenomenology.* F. Kersten (transl.). The Hague: Martinus Nijhoff Publishers;

Husserl, E. (1997). *Experience and Judgment*: *Investigations in a Genealogy of Logic.* Evanston: Northwestern University Press;

Planer, R. J., Sterelny, K. (2021). *From Signal to Symbol: The Evolution of Language.* Cambridge, Massachusetts: MIT Press;

Pollick, A. S., de Waal, F. B. M. (2007). "Ape gestures and language evolution", *PNAS,* 104 (19), 8184-8189, https://doi.org/10.1073/pnas.0702624104;

Tomasello, M., Carpenter, M., Call, J., Behne, T., Moll, T. (2005). "Understanding and sharing intentions: The origins of cultural cognition", *Behavioral and Brain Sciences*, Vol. 28, 675-735;

Tomasello, M. (2010). *Origins of Human Communication.* Cambridge, Massachusetts: MIT Press;

Tomasello, M. (2014). *A Natural History of Human Thinking.* Cambridge, Massachusetts: Harvard University Press;

Tomasello, M. (2021). *Becoming Human: A Theory of Ontogeny.* Cambridge, Massachusetts: Belknap Harvard;

Van Mazijk, C. (2016). "Kant and Husserl on bringing perception to judgment", *MetaJournal: Research in Hermeneutics, Phenomenology, and Practical Philosophy,* Vol. 8, No. 2, 419-441;

Van Mazijk, C. (2020). *Perception and Reality in Kant, Husserl, and McDowell.* London, New York: Routledge;

Van Mazijk, C. (2023). "Symbolism in the Middle Paleolithic: a phenomenological account of practice-embedded symbolic behavior", in: *The Oxford Handbook of Cognitive Archaeology,* T. Wynn, F. Coolidge, L. Overmann (eds.), Oxford: Oxford University Press, https://doi.org/10.1093/oxfordhb/9780192895950.013.55;

Van Mazijk, C. (2024a). "Iconic origins of language? An essay review of Steven Mithen's *The Language Puzzle*", *Biology and Philosophy*, DOI: 10.1007/s10539-024-09952-2;

Van Mazijk, C. (2024b). "Intentionality, pointing, and early symbolic cognition", *Human Studies*, https://doi.org/10.1007/s10746-024-09713-w;

Van Mazijk, C. (2024c). "Prehistory, anti-Cartesianism, and the first-person viewpoint", *Phenomenology and the Cognitive Sciences*, special issue *Philosophy and Prehistory: New Perspectives on Minds, Art, and Culture*, eds. C. van Mazijk, A. Killin, K. A. Overmann, https://doi.org/10.1007/s11097-024-09982-x;

Van Mazijk, C. (2024d). "Symbolism in the Middle Paleolithic: A phenomenological account of practice-embedded symbolic behavior", in: *The Oxford Handbook of Cognitive Archaeology*, T. Wynn, K. A. Overmann, F. L. Coolidge (eds.), Oxford: Oxford University Press, https://doi.org/10.1093/oxfordhb/9780192895950.013.55;

Zuberbühler, K. (2008). "Gaze following", *Current Biology,* Vol. 18, No. 11, 453-455.