University of Reading

What do we know when we learn the meaning of words?

Article

Published Version

Creative Commons: Attribution 3.0 (CC-BY)

Open Access

Scarafone, A. (2018) What do we know when we learn the meaning of words? Rivista Italiana di Filosofia del Linguaggio, 12 (2). pp. 111-123. ISSN 2036-6728 doi: 10.4396/20180205 Available at https://centaur.reading.ac.uk/81984/

It is advisable to refer to the publisher's version if you intend to cite from the work. See Guidance on citing.

To link to this article DOI: http://dx.doi.org/10.4396/20180205

Publisher: Italian Society for the Philosophy of Language

All outputs in CentAUR are protected by Intellectual Property Rights law, including copyright law. Copyright and IPR is retained by the creators or other copyright holders. Terms and conditions for use of this material are defined in the End User Agreement.

www.reading.ac.uk/centaur

CentAUR

Central Archive at the University of Reading

Reading's research outputs online

RIFL (2018) Vol. 13, n. 2: 111-123
DOI: 10.4396/20180205

What do we know when we learn the meanings of words?

Antonio Scarafone
University of Reading
a.scarafone@pgr.reading.ac.uk

Abstract In this paper I will argue that, contrary to what most scholars are inclined to believe, there are important tensions between the later Wittgenstein's views on language and Michael Tomasello's usage-based theory of language acquisition. On one hand, Wittgenstein characterises the first steps into the acquisition of a first language as a matter of acquiring practical abilities, which, in an anti-intellectualistic vein, do not require any kind of knowledge. On the other hand, Tomasello employs a Gricean model of communication to describe pre-linguistic children's communicative interactions, thus taking an intellectualist stance. According to this model, children are supposed to acquire the meanings of words because they are able to infer communicators' intentions on the basis of the common ground (mutual knowledge) they establish with them. Eliciting this tension is of uttermost importance because: (i) it bears crucial implications for the explanatory relationships between language and thought; (ii) it is central to the heart of Tomasello's project of explaining linguistic competency as based on communicative abilities. In the conclusion, I will argue that there are ways to ease the main tension if, following Richard Moore, basic communicative acts are conceived of as Minimally Gricean.

Keywords: Wittgenstein, Tomasello, linguistic competency, practical abilities, knowledge

Received 24 June 2018; accepted 09 November 2018.

0. Introduction[1]

Over the last three decades, researchers in linguistics and psychology have developed a usage-based approach to the study of language. Usage-based approaches reject one of the most fundamental assumptions of modern linguistics, first laid down by Ferdinand de Saussure and subsequently adopted by generative linguistics, namely, that the study of a language as a system (*langue*) should be independent of the study of a language as it is used (*parole*). More explicitly and in more direct opposition to the Chomskyan tradition, usage-based approaches see both linguistic expressions and linguistic

[1] I am indebted to John Preston, Severin Schroeder, Harry Tappenden and my colleagues for having commented on an early draft of this work. I am especially grateful to Emma Borg for her invaluable help along the way. I am also grateful to Carolyn Wilde, for her understanding and encouragement, and to Richard Gipps, Constantine Sandis and Danièle Moyal-Sharrock, for helpful discussions on these topics. What is valuable in this work is dedicated to Eva Picardi.

constructions as essentially serving communicative purposes, and they take communicative functions as explanatorily prior to the grammatical dimension of language.

While the poverty of the stimulus argument[2] lead Chomsky and his fellow travellers to a conception of language as an organ, and to the postulation of an innate Universal Grammar, usage-based linguists and psychologists follow a different strategy. They propose to re-conceptualize linguistic abilities in a less demanding way, while at the same time offering a more generous account of children's domain-general cognitive skills, so to meet the challenge of giving a better explanation of how language might have evolved in phylogeny, and of how children come to master a language in ontogeny.

Among the most eminent advocates of a usage-based approach, Michael Tomasello championed a usage-based theory of the grammatical dimension of language (2003), and provided a psychological account of language ontogenetic development and phylogenetic emergence (2008), without neglecting to enquire the cognitive underpinnings of the evolution and development of linguistic abilities (2014).

Tomasello is clearly aware that the very expression 'usage-based' makes more than a philosophical bell ring. Almost every chapter in his most extensive treatments of the subject is introduced by a quote from Ludwig Wittgenstein's *Nachlass*, and he explicitly presents his theory of language acquisition as inspired by, and in an important sense based on, the later Wittgenstein's conception of meaning as use:

> The usage-based approach to linguistic communication may be summarized in the two aphorisms:
>
> - meaning is use
> - structure emerges from use
>
> 'Meaning is use' represents an approach to the functional or semantic dimension of linguistic communication. It originated with Wittgenstein (1953) and other pragmatically based philosophers of language, who wanted to combat the idea that meanings are things and instead focus on how people use linguistic conventions to achieve social ends (Tomasello 2009: 1).

Wittgenstein's influence over Tomasello's work has not been extensively studied, but researchers in the fields of psychology and linguistics,[3] as well as most (though not all) Wittgenstein scholars acquainted with language acquisition studies,[4] do not seem to find the association between Wittgenstein and Tomasello problematic. On the contrary, I will argue that while there are recognizably Wittgensteinian strands in Tomasello's theorizing, in an important sense the core of his views on linguistic abilities and linguistic development are in sharp contrast with Wittgenstein's later reflections on language and language acquisition.

I will argue that the most important tension springs from a different conception of linguistic competency and the kind of knowledge required to master a language. On the one hand, Wittgenstein, at least from the *Philosophical Investigations* up to *On Certainty*,

[2] The argument is, roughly, that children's exposure to the uses of language vastly underdetermines the grammar of the language that they nonetheless acquire. The first incarnation of this argument is to be found in Chomsky (1959).

[3] Nelson (2009); Kern & Moll (2017); Moore (2014: 101).

[4] Huemer (2006: 214 fn. 12); Moyal-Sharrock (2016: 10-11; 2017: 586, 595); more problematically, Ground (2015: 317).

considers first-language acquisition as a matter of acquiring, at least initially, primitive practical abilities. According to Wittgenstein, these abilities are irreducibly practical because their acquisition does not presuppose, nor entail, the acquisition of any piece of (propositional) knowledge (Section 1). On the other hand, Tomasello describes pre-linguistic children's communicative interactions as instances of Gricean communication: children produce and understand communicative acts because they infer communicative intentions on the background of the common ground they are able to establish with others (Section 2).

In other words, while Wittgenstein has an anti-intellectualist stance on the epistemic nature of our most basic linguistic abilities, Tomasello's adoption of a Gricean model of communication seems to commit him to an intellectualist position.[5] This contrast, rather than being shallow, is radical. On the one hand, Tomasello assigns a pivotal explanatory role to pre-linguistic communicative interactions in his theory of linguistic development. On the other hand, Wittgenstein's conception of basic linguistic competency as the possession of practical abilities bears important implications for some of the main tenets of his later philosophy, especially with respect to the explanatory priority of language over thought.[6]

However, in the conclusion I will suggest that there are ways to ease some of the tensions between Wittgenstein's philosophy and Tomasello's scientific theory if, following Richard Moore, one conceives of a certain class of communicative acts as 'Minimally Gricean' (Section 3).

1. «In the beginning was the deed»

At least since he laid down the final draft of the first part of the *Philosophical Investigations* and up to the time in which he wrote the last pages of *On Certainty*, Wittgenstein thought that the acquisition of a first language is achieved, at least initially, by means of a *training:*

> A child uses such primitive forms of language when he learns to talk. Here the teaching [*Lehren*] of language is not explaining [*Erklären*], but training [*Abrichten*] (PI: §5b).

The English word 'training' here is used to translate the German 'Abrichtung', a word that is correctly used only to talk about the training of non-human animals.[7] A natural way to understand Wittgenstein's wording would be to take 'Abrichtung' to refer to a form of conditioning.[8] Even if this reading can find non-negligible textual evidence, it is better to avoid it, because, as a plain matter of fact, we do not train children to

[5] This way of phrasing the point echoes Gilbert Ryle's (1946) seminal distinction between knowing how and knowing that. Ryle's distinction does not equate to Wittgenstein's talk of practical abilities and knowledge. For instance, think about a swimming teacher who has lost the ability to swim (say, by injury), but is still able to teach others how to swim, thus showing the possession of the relevant know how. However, the distinction between knowing how to do something and possessing the corresponding ability can be ignored for the purposes of this paper, since the problematic cases do not arise in the context of first language acquisition. John Preston helped me achieve some clarity on this point.

[6] Michael Dummett (e.g., 1993: 166-187) made these connections clearly and insightfully and placed them at the very heart of his philosophy. Ian Ground (2015) addresses the problem of how to frame phenomena of ontogenetic ritualization with similar worries in mind.

[7] Huemer (2006: 207-208).

[8] Bakhurst (2015: 469); Williams (2010: 97); Huemer (2006: 208). It is interesting to notice, as Bakhurst does (2015: 470), that Quine thought of language acquisition in these terms.

mastering language-games in the same sense in which we train dogs and horses.[9] More interestingly, even if we did train children by way of reinforcing stimulus-response linkages, this would not lead them to acquire a language.[10]
My exegetical claim is that Wittgenstein's phrasing is best read as hyperbolic and serving a specific rhetorical function, namely, to state emphatically that the initial steps into the acquisition of a first language do not presuppose, nor entail, the acquisition of any kind of knowledge, but only the possession of (irreducibly) practical abilities. This anti-intellectualist stance becomes fully explicit in *On Certainty*:

> But is it wrong to say: "A child that has mastered a language-game must *know* certain things"?
> If instead of that one said "must be *able to do* certain things", that would be a pleonasm, yet this is just what I want to counter the first sentence with (OC: §534).

Significantly, in these later passages the word 'training' does not occur.[11] However, Wittgenstein's discussion of the Augustinian picture of language can easily be bridged with his later remarks by showing that on both occasions he goes through the same thoughts.
In the *Philosophical Investigations*, an important part of the training is said to take the form of an ostensive teaching:

> An important part of the training will consist in the teacher's pointing to the objects, directing the child's attention to them, and at the same time uttering a word; for instance, the word 'slab' as he displays that shape. (I do not want to call this 'ostensive explanation' or 'definition', because the child cannot as yet ask what the name is. I'll call it 'ostensive teaching of words'. – I say that it will form an important part of the training, because it is so with human beings; not because it could not be imagined otherwise) (PI: §6b).

Ostensive *teaching* is here contrasted with ostensive *explanations* and *definitions*. Understanding ostensive definitions (or explanations) is said to require one to be able to ask (meaningfully) what the name of the *definiendum* (or *explanandum*) is. As it becomes more evident later in the text, the rationale for this requirement seems to be that giving an ostensive definition amounts to giving a name to what is thus defined, and grasping the *name* (knowing what something is called), would be manifest in the very possibility of meaningfully asking it (or correctly giving it if asked).
Indeed, this is the way in which the point is phrased in *On Certainty* §535:

> 535. The child knows what something is called if he can reply correctly to the question "what is that called?"

In the following passages (OC: §§536-7) Wittgenstein suggests that a child who is moving the first steps into the acquisition of a first language cannot indeed know what something is called, since she lacks 'the concept *is called* at all'.

[9] I take this point to be non-controversial. See Rödl (2016) for a sensible description of the reality of infancy.

[10] The most influent rejection of behaviouristic accounts of language acquisition is in Chomsky (1959). It is worth stressing that Tomasello (2003: 3-4) thinks (and provides plenty of empirical evidence to think) that children are able to acquire a language precisely because they have learning abilities that go far beyond those posited by classical behaviourists.

[11] It occurs at OC (§434), but with a different sense.

Indeed, the giving and asking for names is a language-game that can be played only if it is already clear how the word is to be used (PI: §30, and similarly in OC: §527). Understanding how a word is to be used can span from understanding what is the role played by that word in a language (or in a bunch of language-games), to having been exposed to (or having participated in) some basic language-games (PI: §30-31).
In the *Philosophical Investigations,* it is precisely in the discussion of what is required to be able to ask the name of something that Wittgenstein asks the question:

> One has already to know (or be able to do) something before one can ask what something is called. But what does one have to know? (PI: §30a-b).

And it is in the section of *On Certainty* that follows §§534-537 that he explicitly points out:

> 538. The child, I should like to say, learns to react in such-and such a way; and in so reacting it doesn't so far know anything. Knowing only begins at a later level.

The importance of denying the possession of any kind of knowledge to the infant is evident if one recalls Wittgenstein's association between knowing, being able to doubt and thinking. Famously, in a crucial passage of the *Philosophical Investigations* Wittgenstein notices that Augustine (questionably) describes the learning of a first language as the learning of a second language:[12]

> Someone coming to a foreign country will sometime learn the language of the inhabitants from ostensive explanations that they give him; and he will often have to *guess* how to interpret these explanations; and sometimes he will guess right, sometimes wrong.
> And now, I think, we can say: Augustine describes the learning of human language as if the child came into a foreign country; that is, as if he already had a language, only not this one. Or again, as if the child could already think, only not yet speak. And 'think' would here mean something like 'talk to himself' (PI: §32).

In *On Certainty* (§480), Wittgenstein asks whether the possession of knowledge implies the possibility of being able to doubt, and asserts that doubting does involve thinking. Therefore, the possibility of knowing seems to imply the possibility of thinking, even if knowing something does not require one to think about it. Correlatively, according to Wittgenstein, saying that the child is able to doubt can only mean that the child has not yet learned how to play certain language-games (OC: §283): in a sense, doubting would prevent the child from learning the language-game at all.[13] In another crucial section (OC: §91), Wittgenstein argues, more explicitly, that knowing that *p* requires one to have the right grounds for believing that *p*, and this is what makes the child unable to acquire knowledge. These conceptual connections between knowing, doubting and thinking offer deep reasons to deny that the child who is being introduced into a first language has, or is acquiring, (propositional, rather than irreducibly practical) knowledge.
The characterisation of the first steps into language acquisition as a process of training thus amounts to characterizing the bedrock of our linguistic competency as the possession of primitive practical abilities. The significance of this characterization is

[12] The distinction between the different kinds of knowledge involved in knowing a first and a second language has received much of its philosophical light by Michael Dummett (e.g., 1993: 94-105).

[13] I am grateful to an anonymous referee for helpful comments on this point.

closely related to the core of Wittgenstein's later philosophy, since it invests his views on the highly specialized use of epistemic verbs, the nature of our most basic certainties and the relationships between language and thought.

Before proceeding any further, it is worth pausing to notice that the sort of 'training' that Wittgenstein imagines children to undergo, require them to be able to react in certain ways (OC: §538). It is crucial to be clear about what 'being able to react in certain ways' amounts to in this context. According to Wolfgang Huemer (2006: 214, fn. 12), empirical inquiries into first language acquisition will spell out the relevant abilities that pre-linguistic children must possess, and this specification cannot significantly affect Wittgenstein's main point. On the contrary, I think that any specification of these abilities that posits, in some important sense, some kind of knowledge on the side of children, would be at odds with Wittgenstein's remarks on what it is to learn a first language.

In the next section, I will introduce Tomasello's usage-based theory of language acquisition, emphasising that his understanding and application of a Gricean model of (pre-linguistic) communication seems to require children to be able to think (in the relevant sense) before they begin to speak. Correlatively, Tomasello seems to think that basic linguistic abilities are specimen of propositional knowledge. Importantly, the deployment of this particular intentional-inferential model of communication does play a crucial explanatory role in Tomasello's theory of language acquisition.

2. A usage-based theory of language acquisition

Tomasello (2003) conceives of linguistic expressions and constructions as essentially serving communicative purposes, and their acquisition as based on an understanding and ability to produce (or reproduce) their intentionally communicative uses. Communication is said to have a relative priority over language because, from both a phylogenetic and an ontogenetic point of view, children have (and early *hominidis* have had) an ability to communicate that does not hinge on any previously acquired linguistic convention (Tomasello 2008). Notably, Tomasello (2008: 57-60) elaborates this very idea of uniquely human ways of communicating pre-linguistically following Wittgenstein's insights on the (both phylogenetic and ontogenetic) psychological priority of gestural communication over linguistic communication.[14]

The communicative acts considered by Tomasello in this context are acts of pointing and pantomiming used as complete communicative acts, and not used as complements of (or substitutes to) an already acquired language (*ivi*: 60-61). According to Tomasello (*ivi*: 64-66, 117-126) these communicative acts are produced with a referential intention (the intention of directing someone's attention to something) and a social intention (the reason why the communicator wants to direct the recipient's attention to something).[15]

Understanding a communicative act of pointing thus consists in grasping what the speaker is directing the recipient's attention to, and for what reason. The main problem of communicating effectively with acts of pointing consists in the fact that the very same pointing gesture can be used on indefinitely many different occasions to direct someone's attention to indefinitely many things (or events, or aspects of things or events…) for indefinitely many reasons (*ivi*: 3-4).

[14] These insights are to be found in BT (24, 46).

[15] Not every communicative act is produced with a referential intention. Think, for instance, of acts of greeting someone.

It is worth noticing that Tomasello frames this problem in pretty much the same terms in which Wittgenstein frames his discussion about understanding ostensive definitions.[16] However, Tomasello (*ivi*: 154-157) draws a further (and telling) analogy between the position of the pre-linguistic creature and that of someone who visits a foreign country and does not yet know the language (quoting Quine's famous presentation of the problem of radical translation). This analogy reinforces the impression that Tomasello sees the pre-linguistic infant with Augustinian eyes, that is, as already able to think prior to being able to speak.

With respect to his proposed solution, Tomasello's core idea is that the very possibility of communicating pre-linguistically is rooted in a more general ability to cooperate with others. This claim is twofold: first, our cooperative activities form the occasion for the production of communicative acts, as well as forming the circumstances that make our communicative acts intelligible to others. Second, communication is itself conceived as a cooperative activity, along the lines of the analysis originally proposed by Paul Grice. In what follows, I will offer a reconstruction of Tomasello's position that tries to do justice to this interrelation between cooperation and communication.

When we cooperate, we form a shared (joint, collective)[17] intention to do something together. Each of us plays an individual role towards our common goal, and we jointly attend to the relevant situations at hand, each of us from an individual perspective (Tomasello 2014: 38-46). Crucially, when we form a shared intention in this sense, we have *mutual knowledge*[18] of our common goal, individual roles and attentional states, and of our pro-social motivations of helping and sharing with others.[19]

According to Tomasello (2008: 78-82), joint goals and joint attention, together with mutual assumptions of pro-social motivations, create the necessary common ground against which pre-linguistic children understand and produce communicative acts. Imagine that a child and his mother are putting away the toys together, and that she points to a puppet. He recognizes her protruding finger as an act of pointing, hence a communicative act, and understands that she is pointing to the object, and not, say, its shape or colour, because it is in their common ground (they mutually know) that they are putting away the toys together.

The crucial component of this toy-example is that communicative gestures of the relevant kind are produced with a communicative intention that has a Gricean structure: the communicator wants the recipient to retrieve the content of a communicative act by making it mutually manifest that the she is trying to communicate in the first place. Since communicators mutually know that they have pro-social motivations of helping and sharing, communicative acts are recognised as performed intentionally to

[16] *Caveat*: in this context, communicative acts of pointing are not acts of defining or explaining the meaning of a word.

[17] For the purposes of this paper, the stipulated distinctions between shared, joint and collective intentionality can be set aside. Different forms of shared intentionality do play an important explanatory role in Tomasello's latest version of his theory (2014), since joint intentionality (joint intentions formed with particular others) underpins instances of pre-linguistic communication, while collective intentionality (collective intentions formed with a generic other) underpins mastery of linguistic conventions.

[18] Mutual knowledge is not necessary for establishing common ground. However, characterizing common ground with other propositional attitudes similarly apt to play the relevant role (e.g., mutual beliefs about accepted propositions) would not significantly alter the point of the present work.

[19] Tomasello (2014: 38-42) seems to borrow his conception of shared intentionality from Michael Bratman (1999). This is problematic in the context of language acquisition, both from a phylogenetic (Moore 2018) and an ontogenetic (Butterfill 2012) point of view. Further problems in Tomasello's conception of shared intentionality are discussed by Hans Bernhard Schmid (2013).

communicate something that is relevant to the participants of the communicative exchange, in light of the joint activity in which they are engaged. Communicators are thus motivated (and able to) draw the *relevance inferences*[20] that are necessary to understand the referential and social intention of a communicative act (*ivi*: 88-96). Prototypically, then, what grounds our understanding of particular instances of pointing is that we see them as produced in light of the common ground that we establish with others in the context of joint activities.

A common complaint against Gricean models of communication is that they are cognitively too demanding and misrepresent the phenomenology of communication.[21] Suppose, for instance, that we are preparing a coffee together, and I want to inform you that the coffee powder is right behind the coffee machine. The communicative intention with which I produce my communicative act would have the structure of a fourth-order thought:[22] I intend you to believe that I intend you to believe that the coffee powder is behind the coffee machine. The understanding of a communicative act produced with, say, a requestive motive would similarly require one to entertain high-order thoughts.

Moreover, the production and understanding of informative communicative acts seem to require one to ascribe beliefs, and thus to have a mastery of the concept of belief. This is so because, on one hand, if one has an informative intention, one must be able to conceive others as knowledgeable or ignorant, that is, as having or lacking certain beliefs, or as having beliefs that can be true or false. On the other hand, and more generally, if understanding a communicative act implies being able to attribute communicative intentions to others, and the notion of intention is understood as comprising that of belief, understanding communicative intentions implies attributing beliefs to others.

With respect to the first point, according to Tomasello pre-linguistic children do communicate with distinctively informative motives, and they do so in pretty much the same way in which adults do, even if in a far narrower set of circumstances.[23] With respect to the second point, unfortunately Tomasello does not extensively discuss what counts as having an intention and being able to ascribe intentions. The suggestion (2014)[24] seems to be the following: the notion of intention is primarily understood along the lines of the belief-desire model of rational action. Nonetheless, there are weaker forms of intentions that can be characterized with the notions of perception and goal-state, and non-human great apes are (and to some extent understand others as) intentional agents in this weaker sense. In this frame, pre-linguistic children would be

[20] This is the expression that Tomasello (2008: 89, 126, 140, 208) uses to talk about inferences that are drawn according to what is relevant on an occasion.

[21] This issue has been widely discussed in the literature about Grice (see, for instance, Avramides 1989: 69-70). Here, I am very much indebted to Richard Moore (2014) for his excellent overview of this problem in the context of cognitive development.

[22] Even if well received, this is just one (proposed in Sperber & Wilson 1986) among several possible rendering of what it is to have an informative intention.

[23] Tomasello (2008: 109-145) presents the results of several experiments that are meant to show that all the main components of his cooperative model of human communication are in place in pre-linguistic children's communicative interactions. Any alternative proposal about the ontogenetic development of linguistic and communicative abilities should be compatible with the empirical results obtained by Tomasello, even if not with his interpretation of those results.

[24] Tomasello frames his views on the nature of cognition following Barsalou's approach (Barsalou 2008). This move might be the source of a further tension with Wittgenstein, if one takes *On Certainty* as pioneering a radical enactivism. A way out is here again offered by Moore's views on communication and cognition, since they are compatible with non-cognitivist accounts.

intentional agents and would have a rudimentary understanding of others as intentional agents, but it is not clear what this rudimentary intentionality and understanding would consist in, exactly.

Tomasello thus seems to attribute children (a rudimentary) ability to ascribe beliefs, and the mastery of the concept of belief requires one to understand that beliefs can be true or false.[25] This is why success above chance in false belief tasks counts as a benchmark to assess one's mastery of the concept of belief. The problem, here, is that pre-linguistic children typically struggle with false belief tasks, and when they succeed, they seem to be able to ascribe only belief-like states.[26]

At the very heart of Tomasello's theory thus lies a conception of infants' development of linguistic abilities as presupposing some capacity to have high-order thoughts, a considerable degree of conceptual mastery and an ability to draw inferences about communicative intentions against a background of established mutual knowledge. This rendering of Tomasello's theory seems to be in stark contrast to one of the most important tenets of Wittgenstein's later philosophy, namely, that the initial acquisition of a language does not presuppose any form of knowledge, and that thought should not be taken as explanatorily prior to language.

This contrast is especially deep because Tomasello's adoption of an intentional-inferential model of communication to describe children's early communicative interactions plays a key explanatory role in the context of his theory. Indeed, according to Tomasello (2008: 101), the development of linguistic abilities is (partially) grounded on a prior development of communicative abilities precisely because the psychological infrastructure of our understanding and mastery of pre-linguistic intentional communication is (a rudimentary form of) the same psychological infrastructure that underpins our understanding of genuinely linguistic communication.

In the last section, I will present an alternative characterization of communicative acts recently proposed by Richard Moore that, in conjunction with other recently developed conceptual tools, might ease the main tensions between Wittgenstein and Tomasello. Even if Moore does not motivate his proposal by referring to the Wittgensteinian worries I have presented in the first section, his work clearly speaks to them.

3. A functionalist way out?

Richard Moore developed his views on communication and cognition arguing that communicative exchanges do not presuppose an adult-like cognitive sophistication, and can thus play a role in enhancing cognitive development. Moore's strategy consists in isolating a class of basic communicative acts that count as Minimally Gricean, namely, as communicative acts that realize communicative intentions with a Gricean structure, but without presupposing that communicators have:

> (i) mastery of the concept of belief;
> (ii) a capacity to form high-order thoughts;
> (iii) human adult-like means of understanding others' intentional states.[27]

[25] This point can be traced to the works of Donald Davidson (2001: 129).

[26] Moore (2017) offers a useful overview of the literature about Gricean communication and the possession of the concept of belief. What would count as a belief-like state, and the sort of understanding that attributing this kind of states would require, remain highly controversial. For an interesting and influential proposal, see Apperly & Butterfill (2013).

[27] An alternative strategy would be to shift the cognitive burdens to a sub-personal level (Moore presents this option in his 2014 paper). However, shifting the recognition of communicative intentions and the

Minimally Gricean communicative acts can be enacted by a combination of acts that are functionally distinguished (or at least distinguishable). The relevant functions are those of getting someone's attention and directing it to something. Importantly, their being functionally distinguishable implies that both acts can be grasped independently, and thus without necessarily forming high-order thoughts.

On one hand, production and understanding of the attention-soliciting act can be implicit in well-rehearsed schemas of bodily interaction.[28] On the other hand, the appeal to the concept of belief in understanding (and producing) the communicative intention can be substituted by an appeal to (keeping track of) perceptual or recognitional states, neither of which requires an understanding that beliefs can be false.[29]

Finally, recently developed accounts of expressive communication[30] might speak in support of a way of understanding others' goals and states that does not require much conceptual sophistication. Indeed, it has been argued that there is a class of expressive behaviours[31] that give us a direct (i.e., non-inferential)[32] access to others' states of mind, while, at the same time, giving us hints on what those states of mind are about (if they are about something at all).[33] Moore remains largely non-committal on the form of understanding others that is required to engage in minimally Gricean instances of communication. However, he (e.g. 2014: 101-102) explicitly argues in favour of the compatibility between his views on communication and enactivist accounts of cognition.

Here I confined myself in sketching the alternative proposed by Richard Moore and others. The very structure of Minimally Gricean communicative acts, together with what is actually required for their production and understanding from a cognitive and motivational point of view, would require a far more extended development and scrutiny.[34] The important point is that (minimally) Gricean accounts of intentional communication might offer a way to reconcile one of the most promising and innovative theories of language acquisition, namely, Michael Tomasello's, with some of the most important insights that can be found in Wittgenstein's later reflections on language, knowledge and mind.

processing of their content to the sub-personal level would again be at odds with Wittgenstein's later conception of meaning and mind (see, e.g., Moyal-Sharrock 2016).

[28] Moore (2017: 231-232) argues that his characterization of minimally Gricean communicative acts does not require communicators to be able to articulate or even represent mutual knowledge.

[29] On Moore's view (2014: 97, fn. 6) non-human great apes are capable of (minimal) intentional communication. This might partially undermine Tomasello's claim about what is uniquely human.

[30] Moore (2014: 100-101; 2017: 314-317) refers to the theory developed in Bar-On (2013).

[31] Such as gaze behaviour, emotional expressions, emotionally charged body postures and intonations. See Moore (2017: 315).

[32] This strand of expressive behaviour can find an ally in Wittgenstein's later reflection on the philosophy of psychology.

[33] The main problem is that here contents seem to be underdetermined. Perhaps what is needed is a plausible story on how we adapted in producing certain expressive behaviours and in reacting to them in certain ways.

[34] From a psychological point of view, the work of Gomez (e.g. 2004) is of primary importance in this respect.

References

Avramides, A. (1997), *Meaning and Intention*, in Hale, B. & Wright, C. (eds.), *A Companion to the Philosophy of Language*, Blackwell, Oxford.

Apperly, I. & Butterfill, S. (2013), «How to Construct a Minimal Theory of Mind», in *Mind & Language*, 28, 5, pp. 606-637.

Bakhurst, D. (2015), *Training and Transformation*, in Coliva, A., Moyal-Sharrock, D., Munz, V. (2015), *Mind, Language and Action: Proceedings of the 36th International Wittgenstein Symposium*, de Gruyter, Berlin.

Bar-On, D. (2013), «Origins of Meaning: Must We Go Gricean?», in *Mind & Language*, 28, 3, pp. 342-375.

Barsalou, L. W. (2010), «Grounded Cognition: Past, Present and Future», in *Topics in Cognitive Science*, 2, 4, pp. 716-724.

Butterfill, S. (2012), «Joint Action and Development», in *The Philosophical Quarterly*, 62, 246, pp. 23-47.

Bratman, M. (1999), *Faces of Intention: Selected Essays on Intention and Agency*, Cambridge University Press, Cambridge.

Chomsky, N. (1959), «A Review of Skinner's Verbal Behaviour», in *Language*, 35, 1, pp. 26-58.

Davidson, D. (2001), *Subjective, Intersubjective, Objective*, Oxford University Press, Oxford.

Dummett, M. (1993), *The Seas of Language*, Oxford University Press, Oxford.

Gomez, J. C. (2004), *Apes, Monkeys, Children, and the Growth of Mind*, Harvard University Press, Cambridge, MA.

Grice, P. (1989), *Studies in the Way of Words*, Harvard University Press, Cambridge, MA.

Ground, I. (2015), *"The play of Expression": Understanding Ontogenetic Ritualisation*, in A. Coliva, D. Moyal-Sharrock, V. Munz, *Mind, Language and Action: Proceedings of the 36th International Wittgenstein Symposium*, the Gruyter, Berlin.

Huemer, W. (2006), «The Transition from Causes to Norms: The Role of Training», in *Grazer Philosophische Studien*, 71, 1, pp. 205-225.

Kern, A., & Moll, H. (2017), «On the Transformative Character of Collective Intentionality and the Uniqueness of the Human», in *Philosophical Psychology*, 30, 3, pp. 319-337.

Moyal-Sharrock, D. (2017), *Universal Grammar: Wittgenstein versus Chomsky*, in Peters, M. A. & Stickney, J. (2017), *A Companion to Wittgenstein and Philosophy of Education: Pedagogical Investigations*, Springer, Singapore.

Moyal-Sharrock, D. (2016), «Wittgenstein Today», in *Wittgenstein-Studien*, 7, 1, pp. 1-14.

Moore, R. (2014) *Ontogenetic Constraints on Grice's Theory of Communication*, in Matthews, D. (2014), *Pragmatic Development and First Language Acquisition*, John Benjamins, Amsterdam.

Moore, R. (2017), «Gricean Communication and Cognitive Development», in *Philosophical Quarterly*, 67, 267, pp. 303-326.

Moore, R. (2018), «Joint Action, Gricean Communication, and the Evolution of Cooperation», in *Topoi*, 37, 2, pp. 329-341.

Nelson, K. (2009), «Wittgenstein and contemporary theories of world learning», in *New Ideas in Psychology*, 27, 2, pp. 275-287.

Reddy, V. (2008), *How Infants Know Minds*, Harvard University Press, Cambridge, MA.

Ryle, G. (1946), «Knowing How and Knowing That. The Presidential Address», in *Proceedings of the Aristotelian Society*, 46, 1, pp. 1-16.

Rödl, S. (2016), «Education and Autonomy», in *Journal of Philosophy of Education*, 50, 1, pp. 84-97.

Schmid, H. B. (2013), *Shared Intentionality and the Origins of Human Communication*, in Salice, A. (2013), *Intentionality*, Philosophia-Verlag, München.

Sperber, D. & Wilson, D. (1986), *Relevance. Communication and Cognition*, Blackwell, Oxford.

Tomasello, M. (2003) *Constructing a Language: A Usage-Based Theory of Language Acquisition*, Harvard University Press, Cambridge, MA.

Tomasello, M. (2008), *Origins of Human Communication*, Harvard University Press, Harvard.

Tomasello, M. (2009), *The Usage-Based Theory of Language Acquisition*, in Bavin, E. L. (2009), *The Cambridge Handbook of Child Language*, Cambridge University Press., Cambridge.

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

Williams, M. (2010), *Blind Obedience: The Structure and Content of Wittgenstein's Later Philosophy*, Routledge, London.

Wittgenstein, L. (1969), *On Certainty / Über Gewißheit*, transl. by D. Paul and G. E. M. Anscombe, Blackwell, Oxford. [OC]

Wittgenstein, L. (1953), *Philosophical Investigations / Philosophische Untersuchungen*, transl. by G. E. M. Anscombe, P. M. S. Hacker, J. Schulte, Wiley-Blackwell, Oxford, 2009. [PI]

Wittgenstein, L. (2005) *The Big Typescript: TS 213. German-English Scholars' Edition*, transl. by C. G. Luckhardt, and M. E. Aue, Blackwell, Oxford. [BT]