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UNTANGLING THE KNOT OF INTENTIONALITY: BETWEEN DIRECTEDNESS, REFERENCE, AND CONTENT

SUMMARY: The notion of “intentionality” is much invoked in various foundational theories of meaning, being very often equated with “meaning”, “content” and “reference”. In this paper, I propose and develop a basic distinction between two concepts and, more fundamentally, properties of intentionality: intentionality-T (the fact that a state is directed to some object) and intentionality-C (the fact that a state is contentful). Representationalism is then defined as the position according to which intentionality-T can be reduced to intentionality-C, in the form of representational (i.e. contentful) states. Non-representationalism is rejecting this reduction, and argues that intentionality-T is more fundamental than intentionality-C. Non-representationalism allows for a new layered view of the relations between cognitive intentionality and linguistic intentionality; this view is presented at the end of the paper.

KEYWORDS: intentionality, content, mental representation, reference, representationalism, non-representationalism.

“Intentionality” is a much abused word, and it means a variety of different things.
(Fred Dretske, 1994, p. 471)

INTRODUCTION. RECONSIDERING TWO PROBLEMS

Words and sentences of natural languages have meaning or semantic properties. Utterances consist in producing tokens of given sentences whose types be-

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long to a particular language. As is well known, the full meaning of an utterance goes beyond the conventional meaning of the uttered sentence: it is modulated by context-dependence, saliency effects, shared beliefs, and illocutionary force, and is more fundamentally related to what the speaker means when she is using that sentence. Addressees are able to grasp the meaning of utterances, going beyond the literal meaning of sentences. In order to do so, they display various cognitive abilities, including inference and pragmatic processes such as enrichment, loosening and transfer (Recanati, 2003). Mental states and processes are thus both resources and targets of many communicative processes.

According to the Gricean model (Grice, 1989), the meaning of utterances must be understood in terms of speaker's meaning, and speaker's meaning in terms of the intention of the speaker to induce a belief in the audience by an utterance, accompanied by the audience's recognition that the utterance was produced with that very same intention. Understanding the meaning of an utterance is thus a way of figuring out what the speaker's intentions are. Nevertheless, other mental states, such as beliefs and desires, may also be the targets of communication. Speakers might want to communicate thoughts to hearers. Beliefs and desires are not intentions, but they are, along with intentions, intentional, in the sense of being endowed with intentionality. They are contentful.

Another facet of communicative processes is the ability of agents to share attention and reference. It is the case when the speaker's labelling of some specific target is recognized as such by the hearer. What the speaker says succeeds in directing the hearer's attention to the intended referent. More basically, speakers and hearers might have their attention attracted to, for instance, the same perceptually salient features of a situation or object; this shared attention might also be a requisite for successful referring. Shared attention is a case of shared intentionality: both agents are directed to the same properties or objects.

I have deliberately used here the notion of intentionality. As François Recanati noted in 1998 (Recanati, 1998), a characteristic feature of recent work in the Gricean tradition has been the explicit employment of concepts from (and the intention to contribute to) cognitive science. The concept of intentionality is one of them. It now seems obvious that "in order to theorise expression meaning (word/sentence meaning), the basic intentionality of thought needs to be taken into account" (Haugh & Jaszczolt, 2012, pp. 111–112). Nevertheless, as the same authors note, the proliferation of the notion of intentionality can at times "create analytical confusion". Indeed, the term "intentionality" is often used for qualifying both linguistic entities (names, sentences) and mental states, but it remains a very puzzling property. It is often defined by a cluster of other properties. Amongst these properties we can find content, meaning, reference, and representation. For instance, in his seminal paper *The Intentionality All-Stars*, John Haugeland started from an apparent equivalence between intentionality, representation and content:

Intentionality is hard to get a glove on. It is often glossed as that character of some things (items, events, states, ...) that they are "of", are "about" or "represent"

others [...]. In a different terminology, to have intentionality is to have (semantic) content. (Haugeland, 1990, p. 383)

Consider also the opening lines of the entry on “Intentionality” by Alex Byrne in a classic encyclopedia: “Some things are *about*, or are *directed on*, or *represent* other things” (Byrne, 2006, p. 405; author’s emphasis).

Is there an unjustified equation or a basic confusion in the literature¹ between having intentionality, being contentful, and representing or being a representation?² We do not need to endorse such an austere interpretation. These quotations rather express the mundane fact that representation, intentionality and content are often seen as interrelated properties. But how can we untangle these relations between intentionality, content, and representation? This is our first problem.

Our second problem concerns the relations between the intentionality of language and the intentionality of mental states. Or, more exactly, it deals with a classic answer that has been proposed to this problem: the answer according to which mental intentionality is explanatorily and ontologically prior to linguistic intentionality. If one equates intentionality with representation, it is true that mental intentionality and linguistic intentionality are very similar in aspect. As John Searle writes: “Intentional states represent objects and states of affairs in the same sense of ‘represent’ that speech acts represent objects and states of affairs” (Searle, 1983, p. 4).

Nevertheless, the idea that there is an explanatory priority of mental intentionality on linguistic intentionality is a fundamental tenet in contemporary philosophy of language and philosophy of mind (Fodor, 1975; Schiffer, 1972; Loar, 1981). According to this idea, the intentionality of uttered public language sentences ultimately derives from the contents of the beliefs, desires, ... that they express. True, the mental intentionality of the speaker does not fix the meaning of the sentences she uses (this meaning is a matter of linguistic conventions); but it fixes how the utterance of a sentence has to be understood (Montminy, 2010, p. 2911). This idea encompasses the Gricean picture of the communicative process mentioned in the first lines of the paper.

Consider John Searle again: “Words in the sentences of the language have a form of intentionality that is itself derived from the intrinsic or observer-independent intentionality of human agents” (2001, p. 53).

As Searle says, the mind “imposes” intentionality on linguistic expressions: “I impose Intentionality on my utterances by intentionally conferring on them certain conditions of satisfaction which are the conditions of satisfaction of certain psychological states” (1983, p. 28).

¹ For other instances of an apparent conflation between intentionality, representation and/or content, see (Crane, 2003, p. 30; Burge, 1979; Searle, 1983, p. 5).

² “Representation” is also, in itself, an ambiguous term: it can mean a relation—the representation relation, and an entity—as when one speaks of mental representations. More on this later (note 3).

If one substitutes “meaning” or “representation” for “intentionality”, it is even more difficult to ignore the importance of approaches according to which, for instance, linguistic meaning must be explained in terms of mental meaning, or the semantics of external representations must be derived from the semantics of mental representations.

This popular answer to the problem of the relations between mental intentionality and linguistic intentionality generates what Jeffrey Speaks (2006) called the “mentalist picture of intentionality” (MPI), according to which social facts about public language meaning are derived from facts about the thoughts of individuals, and these thoughts have intrinsic (i.e. observer-independent) intentionality.

My objective in this paper is to reconsider MPI in the light of the first problem presented above: many if not all versions of MPI rest on what I will call a representationalist model of intentionality (RMI), according to which mental intentionality supervenes on, or is equated with, mental representations or contentful intracranial structures. There are different ways of rejecting MPI: one can deny the existence of mental intentionality (Chomsky, 2000), but this is a very expensive and debatable solution. One can argue that the intentionality of mental states is constituted by the intentionality of language (Dummett, 1993), but this would entail that non-linguistic beings are unable to be intentionally directed to the environment: this is a costly solution too. An alternative view would be to argue that mental intentionality and linguistic intentionality are interdependent (Davidson, 1984). But as long as one endorses RMI, it seems difficult not to attribute to mental intentionality a foundational or guiding role with respect to language, in virtue of the fact mental intentionality is intrinsically contentful. But, as we will see below, there are good reasons not to endorse RMI: one can acknowledge there is a non-linguistic and basic form of intentionality, but that this basic intentionality is not a matter of mental representations; it is not naturally contentful. The possibility of interdependence between linguistic intentionality and mental intentionality can consequently be reconsidered: linguistic practices (and the intentionality they produce) require intentional creatures; but the intentionality of these creatures is not contentful or content-conferring in itself. On the contrary, contentful (mental) intentionality can only emerge in linguistic practices. This picture requires a distinction between two kinds of intentionality. This distinction already exists today, in an implicit form in emerging works in cognitive science. We need to make it explicit, by clarifying what “intentionality” can mean (this is a way of answering the first question presented above).

The structure of this paper goes as follows. In section I, I define a basic distinction between two kinds of intentionality, and clarify their respective relations with reference, representation and content. In section II, I present the representationalist model on intentionality (RMI) and arguments in its favor. I then present in section III very recent critiques of RMI. Their core is retained for introducing an alternative to MPI in section IV, and sketching a new kind of interdependence between mental intentionality and linguistic intentionality.

I. INTENTIONALITY, REPRESENTATION, CONTENT AND REFERENCE

Let us go back to the first question presented above: how can we untangle the relations between intentionality, content, and representation?

A first answer consists in saying that content and representation are required for intentionality to exist. A physical state can have intentionality—it is “about” or “of” something—only if it has content, and so is a representational state. This is the basic claim of RMI (Cummins, 1989; Morgan & Piccinini, 2018). But in the literature we can also find places in which intentionality can figure in the characterization of what it is for a state to be contentful or representational. For example, according to Tim Crane, “a representation (linguistic, pictorial or mental) is the representation it is partly because of what it is about” (Crane, 2001, p. 317). Intentionality can thus be an essential and individuating property of representations. For Georges Rey (2003, p. 106), it is even in virtue of intentionality that mental states and events can have the contents they do, and be about objects or states of affairs.

From these observations, one might believe that the literature on intentionality is built upon a deep but tacit divide between those who believe that intentionality is prior to content and representation, and those who believe that content and representation are prior to intentionality. But, here too, conceptual distinctions must be considered before the possibility of philosophical confrontations: it might rather be the case that there is *one* notion of intentionality that makes intentionality necessarily dependent on content or representation, and *another* notion of intentionality that makes intentionality only contingently related to content and representation.

Indeed, Jaegwon Kim (1996, p. 21) proposed a distinction between referential intentionality and content intentionality. Referential intentionality denotes the aboutness or reference of thoughts or linguistic states. Content intentionality concerns the fact some states have contents or meanings. Kim’s distinction is precious, and deserves to be further developed. Nevertheless, a caveat must be made concerning the association between “reference” and “intentionality”. As is well known, “reference” is a polysemic term. It can mean the *act* of referring (“what are you referring to?”; “what does ‘Pegasus’ refer to?”; Allan, 2010), but also a relation, the relation of reference. As a relation, reference is a real relation: it is grounded on the existence of both relata (Crane, 2013). Words and thoughts are real entities. Pegasus or the Fountain of Youth do not exist. Hence, “Pegasus” or a thought about the Fountain of Youth are words and thoughts that do not refer, or that fail to refer. Still, these terms are meaningful; they have sense. And they have aboutness; they are directed to some (non-existing) entities. Intentionality and reference are thus very distinct properties (Loar, 2003, pp. 253–254): there can be intentionality without reference. Thoughts that are intentionally directed toward an entity which is taken as existing will refer to the entity in question if and only if there is an actual entity that satisfies the presupposition of its existence (Horgan & Tienson, 2002, p. 528). In order to point to the aboutness or

directedness dimension of intentionality, it is wiser to use the term “target-intentionality” rather than “reference”.

We can now rephrase Kim’s distinction as a distinction between intentionality as being directed, pointing or targeting to some object (what I will call “intentionality-T”), and intentionality as having representational or contentful properties (what I will call here “intentionality-C”). Intentionality-T (object-directedness) and intentionality-C (representation, content) are not two different ways of describing the same property—namely intentionality—when it is instantiated by some states or events. They are two distinct—yet related—properties that may be instantiated (together or not) by the same state, an instantiation in virtue of which we imprecisely use the term “intentionality” for describing that state.

Intentionality-C is the fact an intentional state has content: it means something. But what is content? Classically, content is defined by truth conditions or satisfaction conditions—sometimes, and more minimally, by accuracy and veridicality conditions (Burge, 2010). It may also be identified with abstract semantic entities like meanings, Fregean senses, possible worlds, modes of presentations, intensions, or propositions. This content is what makes the state or event semantically evaluable.

An important debate consists in defining the sources of content: is representational content a natural phenomenon that can be exhibited by material states independently of an observer or of some inclusion in linguistic practices? Or is representational content necessarily related to the possession of linguistic concepts, or to the participation in linguistic and social practices? Some authors can claim that natural forms of intentionality-C are prior to the existence of linguistically articulated intentionality-C (this corresponds to the difference between intrinsic [natural] intentionality and derived [linguistic] intentionality [Searle, 1983; Fodor, 1987; Dretske, 1994]), while other philosophers will argue that natural processes such as co-variation, information or biological functions are not sufficient for providing intentionality-C (Hutto & Myin, 2015).

Intentionality-T is not an object (be it an existing entity, a fictional entity, or an intentional object): it is the fact a state is directed towards, aims at, or is about a specific object, property or states of affairs which is not a component of the state (even though you might need to mention it for describing and individuating the state). Metaphors such as “aiming at”, “targeting” or “pointing” are supposed to suggest the core of intentionality-T, echoing the etymology of the word (cf. the latin verb *intendere*, “aiming at something”). Intentionality-T corresponds to the fact some states are outward-directed. Facts involving intentionality-T are relational facts, in the sense that they do not only concern one agent or one state. But a relational fact does not necessarily entail any real existence for relations as irreducible dyadic properties (Campbell, 1990, p. 97). As in the case of intentionality-C, there is a debate concerning the sources of intentionality-T: is intentionality-T a natural phenomenon that can be exhibited by material states independently of an observer or of some inclusion in linguistic practices? Is

consciousness fundamental for intentionality-T? Some authors can be eliminativist regarding the natural existence of both intentionality-C and intentionality-T (Rosenberg, 2013), whereas others can be eliminativist towards the natural existence of intentionality-C and conservative regarding the natural existence of intentionality-T (Hutto & Myin, 2013; 2017).

One can accept that—by definition—intentionality-C is at bottom contentful or representational, while intentionality-T does not equate with content and representation. Nevertheless, there are also many cases in which both intentionalities may overlap. The same state or event can exhibit both intentionalities. For instance, we typically say of perceptual states, belief states, maps and sentences that they are “directed to” or “refer to” some objects (things, propositions, situations, states of affairs) which may exist or not (hence truth or falsity), but also that they have representational properties or content (possibly conceived as intensions, modes of presentations, propositions or senses)³ which prescribe how their objects are targeted. Linguistic states such as sentences necessarily have intentionality-T and intentionality-C—unlike some mental states as, for instance, emotions, which can be intentionally directed to objects without having content (Voltolini & Calabi, 2009, pp. 9–17). Nevertheless, the intentionality-T of a linguistic state is distinct from its intentionality-C, for two sentences can be about the same object (i.e. have the same extension) and yet exhibit distinct content (i.e. distinct intensions).

Once we have made this distinction between intentionality-C and intentionality-T, another basic question arises: are these two kinds of intentionality directly related?

II. THE REPRESENTATIONALIST MODEL OF INTENTIONALITY

How are intentionality-C and intentionality-T related, in terms of necessary and/or sufficient relations of requirement? The first answer we will consider is the following: intentionality-C is necessary for intentionality-T. There is no intentionality-T of a state without intentionality-C instantiated by that state. This answer exists in at least three different forms: indeed, the dependency may be factual (constrained by laws of nature), logical (proper to the nature of intention-

³ May we say that the distinction between intentionality-T and intentionality-C corresponds to the distinction (mentioned in footnote 2) between representation as a relation (A represents B) and representation as an entity (A is a representation of B)? No, for the following reason: whereas it is part of the concept representation that a representation represents something, we can have cases where having intentionality-C and having intentionality-T are distinct properties: one can instantiate the latter but not the former (and conversely). Still, as we will see, the representational theory of intentionality will basically equate intentionality-T with “representing”, and intentionality-C with “being a representation”. But other theories will see the representation relation as derived from a basic kind of (non-representational) directedness.

ality-T) or metaphysical (involving the supervention of intentionality-T on intentionality-C).

Be it a matter of factual, necessary or essential dependence, why would one believe that intentionality-T is necessarily dependent on intentionality-C? Here is a reconstruction of what I consider to be the main answer of proponents of this approach.

Intentional states are sensitive to the modes under which their objects are presented: one can be intentionally directed to Venus as the Morning Star and not intentionally directed to Venus as the Evening Star even though "The Morning Star" and "The Evening Star" are different ways to describe the same entity. Let us give the name *aspectuality* to the fact every intentional state is a state which is directed on, or about something else under an aspect. Directedness is thus necessary but not sufficient for having intentionality-T: aspectuality is also required. Aspectuality denotes the fact that when an intentional state is directed towards objects, these objects are always presented (or targeted) from a certain perspective. A thing is what it is, regardless of the way it is seen, described, desired or conceived; while an intentional object as being what is thought, described, desired, perceived,... is always individuated from the perspective the agent (or the state, be it linguistic or mental) has on it, for instance under the form of a definite description.

For proponents of the necessary dependence of intentionality-T on intentionality-C, being directed to some object from a perspective requires—or is equated with—"having content" because it is the content of a state which specifies how this state conceives, apprehends or merely *presents* things, in various modes: conceptually, descriptively, propositionally, but also more minimally perceptually and spatially. For instance, according to Alva Noë (2005, p. 189), the fact perceptual experience is intentional amounts to the fact it "presents things as being such and such". This is equivalent, for Noë, to the fact that perceptual experience has content. For Noë and Thompson, the fact perceptual experience has intentional content is equivalent to the fact "it purports to represent the world *as being this way or that*" (2002, p. 11; my emphasis).

More broadly, for Tim Crane: "Every intentional state or episode has a content—the way it represents what it is about or directed on" (Crane, 2013, p. 4).

Under the form of predication (if it is propositional) or more generally of specification, content would provide the aspectuality which is essential to intentionality-T. The intentionality-T of a state is necessarily grounded on that state representing a thing as being a certain way, and thus on that state having representational content or intentionality-C.

RMI currently forms the most important and popular version of the claim that intentionality-T is necessarily dependent on intentionality-C (Cummins, 1989, chap. 1; Morgan & Piccinini, 2018). All versions of RMI consider that intentionality-T is necessarily dependent on intentionality-C, with three additional subtheses:

- (a) In the case of non-mental states (sentences, maps, pictures, ...), the intentionality-C and the intentionality-T of those states are derived from the intentionality-T and intentionality-C of mental states;
- (b) In the case of mental states, the vehicles or material bearers of intentionality-T and intentionality-C are mental representations. For any state exhibiting intentionality-T, this state is a physically realized state that carries or bears content (intentionality-C); it represents things to be a certain way.
- (c) Mental representations have their content (intentionality-C) and intentionality-T naturally: these properties do not require linguistic or social practices for existing.

Mental representations are defined as intracranial contentful structures: something is a mental representation if it is about something else as being a certain way. A physical state can have intentionality-T—it is “about” or “of” something—only if it has content, and so is a representational state. Pointing to or targeting an object or a state of affairs, for a state or organism, is necessarily representing it. In order for *S* to be intentionally related to *O*, there must be a mental representation of *O* in *S* (Field, 1978; Fodor, 1985). Being realist about intentionality-T requires being realist about the existence of mental content and mental representations (see for example Jacob, 1997, chap. 1).

There are, of course, different versions of RMI. Depending on the theoretical framework one considers, mental representations may be complete, inert, propositional, denotational, action and perception-neutral, stable, complex, detailed, discrete, amodal, syntactically structured or symbolic, or proper to a language of thought (Fodor, 1975). But they may also be built and used on the fly; they can be modal (even when they are categorical), minimal (content-sparse), partial, action-oriented, context-dependent, embodied, distributed, or sub-symbolic. Nevertheless, there are more important distinctions inside of RMI than distinctions pertaining to the format of the vehicles of mental representations. An important debate exists concerning the origins of the content (or intentionality-C) of mental representations: according to some theories, the origins of the content of mental representations are to be found in phenomenal consciousness (Kriegel, 2013). For conceptual role theories (Block, 1986; Harman, 1993), the content of mental representations (intentionality-C) is determined by the functional role occupied by these representations in one’s cognitive economy. For tracking theories, the content of mental representations finds its origins in natural tracking relations existing between the representational vehicle and some worldly object or states of affairs: these natural relations can be causal relations, informational relations, resemblance relations, counterfactual dependence relations, or teleological relations. Versions of RMI may thus diverge on the definition of the origins of the content (or intentionality-C) of mental representations.

As said before, the idea that intentionality-T is necessarily dependent on intentionality-C may be declined in several forms, depending on the kind of de-

pendency one sees between intentionality-T and intentionality-C. Accordingly, one can expect that there can be different forms of RMI. For moderate representationalist theories, there is no intentionality-T without intentionality-C, but intentionality-C does not fix all the facts there are concerning intentionality-T. An example of a moderate view is *content-externalism*.

For content externalism, there are cases in which the fact a representational state is directed to an object is not determined by its intentionality-C. Content-externalism underlines the fact some kinds of representational states are directed to, or refer to objects in a way which is not determined by their contents. This is notably the case of indexical thoughts and sentences, or cognitive states about proper names, natural kinds,... What determines intentionality-T here is not the way the object is represented, it is the nature of the relations there are between the thinking/speaking agent and the worldly object she thinks/speaks about. These relations can be direct or causal relations, or indirect relations such as deference or testimony, and also be a matter of context-dependence. Content externalists can also claim that mental or linguistic contents may be individuated by properties of their objects: in this sense, the intentionality-T of a state can play a crucial role in the identification of the intentionality-C of the same state.⁴ More radically, some content externalists can claim that singular thoughts built around demonstratives or proper names directly refer to their objects (Recanati, 1993),⁵ up to the point that these objects can even be seen as constituents of the thought. Reference to these singular objects is not mediated by descriptions in virtue of which one attributes general properties to these objects. Nevertheless, no semantic externalist would deny the claim that intentionality-C is necessary for intentionality-T to occur. She would just insist that intentionality-C is not sufficient for producing and individuating intentionality-T (indexicality and environmental dependence must be taken into account) and that intentionality-T can play a role in the individuation of content (the identity of intentionality-C is partially fixed by the environmental variables that are the objects of intentionality-T).

III. NON-REPRESENTATIONALIST APPROACHES ON INTENTIONALITY

In recent years, there have been a growing number of critiques of RMI (Steiner, 2014a). These critiques do not only reject the claim according to which intentionality-T supervenes on intentionality-C: they more fundamentally reject the claim that any form of intentionality-T necessarily involves intentionality-C, and

⁴ I here leave aside the issue concerning the difference between broad content and narrow content.

⁵ More precisely, Recanati (1993, p. 130) argues that we cannot think about objects without a conceptual mediation, but that in the case of *de re* concepts, the thought in which those concepts occur characterizes the referent itself independently of the fact the referent would satisfy—or not—the concept which is used to think of it.

thus the representationalist claim that any form of intentionality-T necessarily involves natural content and mental representations.

More positively and more precisely, these critiques of representationalist theories of intentionality endorse some of—if not all—the following claims:

- (a) Intentionality-T and intentionality-C may be properties of mental states and of linguistic states, but intentionality-T is more primarily a property of deeds, actions and behaviour; it is a property in virtue of which mental states, linguistic states, deeds, actions and behaviour are directed to objects (events, properties, things, goals,...). Object directedness remains the defining core of intentionality, but it is not exclusive to mental states or linguistic states;
- (b) Organisms can exhibit intentionality-T without harbouring states exhibiting intentionality-C. Mental states and bodily states can have intentionality-T without having intentionality-C.
- (c) Even if there are local cases of intentionality-T supervening upon intentionality-C (for instance descriptive sentences), the basic case of intentionality is intentionality-T as proper to an embodied and engaged organism: it is from this intentionality that other forms of intentionality, such as contentful intentionality, are derived.⁶ Intentionality-T is necessary for intentionality-C to occur, for the intentionality-C of a mental or linguistic state could not exist if the organism harbouring or producing that state did not exhibit intentionality-T. There is a primacy of intentionality-T over intentionality-C;
- (d) The vehicles or material bearers of intentionality-T and intentionality-C may be mental representations; but there are also cases where the vehicles of intentionality-T and intentionality-C merely involve mental representations, or do not even require mental representations. For instance, behavioural states of an organism may exhibit intentionality-T, without being representational or contentful.

In this non-representationalist perspective, intentionality-C can also be named *semantic intentionality*: it is first proper to linguistic or language-like states. Intentionality-T is a *pragmatic intentionality*, since it is primarily related to the way organisms act in their environment, or to the way their mental states have a functional role in relation with action. Nevertheless, it cannot be equated with a mere practical involvement with material things, for we would then lose the objectifying or object-directed central feature of intentionality-

⁶ See for instance the work of Schlicht, proposing to “treat intentionality as a feature of whole embodied agents (paradigmatically organisms) who can be directed at objects and states of affairs in various ways, while representation should be regarded as a feature of mental states (and their respective vehicles or underlying mechanisms)” (2018, p. 1).

ty on which many authors insist (Menary, 2009, p. 36; Rowlands, 2010, p. 196; Thompson, 2007, pp. 22–27; Hutto & Myin, 2013; 2017). Indeed, object-directedness remains here the basic scheme justifying why non-representational intentionality-T *is* intentionality.⁷ Nevertheless, relating to something as an object is not here necessarily supported by a contentful act of specification, predication, representation, or intellectual construction: it is fundamentally related to having a perspective on the world, in virtue of some activity, deeds, goals and purposes. Intentionality-T as object-directedness displayed by a conceptually articulated thought or a linguistic sentence, and intentionality-T as object-directedness displayed by an organism or an action (in the form of practical engagement for instance), are not distinct properties according to non-representationalism: they are one and the same property (object-directedness), having various modes and places of existence, including different relations with intentionality-C. According to this non-representationalist perspective, RMI unduly overgeneralizes to all intentional states what is only and originally proper to some of them, namely linguistic states: (necessarily) having content or meaning.

An important distinction inside of non-representational theories of intentionality concerns the acceptance or the denial of the existence and theoretical relevance of mental representations as naturally contentful states. This debate generates differences inside of claim (d). Some positions will deny that mental representations must be involved in—and be explanatorily relevant when accounting for—any cognitive process. But they will not deny the existence and explanatory relevance of contentful states of mind which are derived from socio-cultural practices (Hutto & Myin, 2013; 2017). Other, more moderate positions, will deny that mental representations must be involved in—and be explanatorily relevant when accounting for—some cognitive processes, but will simultaneously argue that they must be involved when explaining other complex, high-level or “representation-hungry” cognitive tasks. They will not entirely reject the relevance of the property of representation: they will only argue for its dispensability in some cases, including cases of intentionality-T (Rowlands, 2010). In any case, there can be creatures which are intentionally directed to the world without this intentionality being grounded on mental representations in the creature.

Let us consider some examples of non-representationalist theories of intentionality.

Hutto and Myin (2013; 2017) reject the existence of natural mental content, and thus of natural intentionality-C. Hutto and Myin claim that respectable naturalistic theories cannot accommodate naturally contentful cognitive states (also called “mental representations”), so these states should be theoretically eliminated. The mainspring of radical enactivism’s attack on representationalism is its focus on the failures of the project of naturalizing mental content. Since their

⁷ Since Brentano at least, object-directedness is the core property of intentionality (Brentano, 1874, Book II, ch. 1, par. 9).

first book, Hutto and Myin insist that neither informational theories nor teleosemantics are able to provide a satisfactory non-intentional explanation of the emergence of semantic properties: either they beg the question by already coming with intentional notions, or they merely deliver covariation and indication, which are not sufficient for giving semantic or representational content. Unable to be integrated in the naturalistic ontology it claims to be a part of, the representationalist programme would be “plagued with toxic debt, financed by loans it cannot pay back” (Hutto & Myin, 2013, p. 160). Since mental content has no place in a naturalistic ontology, there are good reasons to think it does not exist as an entity conveyed or produced by natural processes, including subpersonal and intracranial ones. In addition, non-representational means and models are already available and plausible for explaining basic cognitive phenomena.

For radical enactivism, basic cognition is a matter of embodied engagements responding to worldly offerings or information in the environment (Hutto & Myin, 2017, p. 130). These responses do not involve contents; but they must be explained, and in particular their connecting properties with the world. Facing this challenge, the explanans of REC is intentionality or more precisely *Ur-intentionality*, the “most primitive form of intentionality” (2017, p. 96)—in my terminology a version of intentionality-T, or a pragmatic intentionality. Non-representational intentionality is for REC the basic operator that will ground an embodied, enactive and extended approach to cognition: “basic minds target, but do not contentfully represent, specific objects and states of affairs” (Hutto & Myin, 2017, p. 130). *Ur-intentionality* is targeted at objects, without meaning, saying or representing them. It is a property of “aiming at” or “pointing towards” worldly offerings (Hutto & Satne, 2015, p. 530, note 7). This intentionality is a real, natural (and naturalizable) and intrinsic property of organisms (and not of mental or physical states inside of these organisms). Organisms display *Ur-intentionality* independently of what one may think or say about them, and independently of their possible inclusion in socio-cultural practices. This intentionality has been shaped through ontogenetic and phylogenetic history (Hutto & Myin, 2013, p. 111; 2017, p. 108, 130). It is naturalizable from the resources of *teleosemiotics*. According to radical enactivism, states or organisms are targeted or directed at F’s because such targeting contributed to the fitness of the organism’s ancestor and is therefore the reason why the state or organism endures: the reference to biological functions is enough for naturalizing intentionality-T and defining differences between aligned and misaligned responses, or appropriate and inappropriate responses, but it does not bring intentionality-C, correctness conditions, representation or misrepresentation (Hutto & Myin, 2017, pp. 104–115).

I take Hutto and Myin’s radical enactivism as being a clear (and thought-provoking) example of an important trend of many recent critiques of representationalism in the philosophy of cognitive science: criticizing the existence of mental representations (or natural forms of intentionality-C) is first and foremost a way to gesture at the existence and importance of a (non-representational, non-theoretical) variety of intentionality-T. Sometimes inspired by phenomenology

(Merleau-Ponty, Heidegger) or by Deweyan pragmatism, many authors now speak of “motor intentionality” (Dreyfus, 2002; Hudin, 2006), “somatic intentionality” (Sachs, 2014), “Ur-intentionality” (Hutto & Myin, 2013), “autopoietic intentionality” (Varela, 1992) “skilled intentionality” (Kiverstein & Rietveld, 2015), or “enactive intentionality” (Gallagher, 2017), different varieties of intentionality-T that are independent of, and prior to, conceptual, discursive or linguistic forms of intentionality-C. As seen above, there is an important displacement of intentionality-T: as object-directedness, it is now a property of embodied and engaged organisms, and not of mental or physical states inside of these organisms. In virtue of intentionality-T, organisms are smoothly coupled with their environment; behaviours, deeds, and gestures are directed towards the world, but without representing it or without passing by contentful thoughts or propositional contents (except when the coupling process meets important perturbations, and fosters the need for reflective cognition).

The topological distinction between intentionality-T and intentionality-C allows for a layered model of the mind. Intentionality-C exists at the level of linguistic states and linguistically contentful mental events, while intentionality-T is first and foremost a property at the level of behaviours (and only derivatively a property of linguistic states and mental events). Intentionality-C would be derived from this primary form of intentionality. Here is, for instance, Robert Brandom, talking about practical intentionality where we speak here of intentionality-T as a pragmatic intentionality, and about discursive intentionality where we speak here of intentionality-C as a semantic intentionality:

We might distinguish between two grades of intentionality: practical and discursive. Practical intentionality is the kind of attunement to their environment that intelligent nonlinguistic animals display—the way they can practically take or treat things as prey or predator, food, sexual partner or rival and cope with them accordingly. Discursive intentionality is using concepts in judgment and intentional action, being able explicitly to take things to be thus-and-so, to entertain and evaluate propositions, formulate rules and principles. [...] One might claim [...] that discursive activity, from everyday thought to the cogitations of the theoretical physicist, is a species of practical intentionality (or a determination of that determinable), and indeed, one that is intelligible as having developed out of nondiscursive practical intentionality, while still maintaining that it is a wholly distinctive variety. (Brandom, 2011, p. 10)

Intentionality-T becomes the genus from which intentionality-C is just a kind. Of course, various questions arise: is there intentionality-C without language and culture, for instance? Should the road from intentionality-T to linguistic intentionality-C pass by intermediaries which are forms of non-linguistic intentionality-C? Classical challenges are also addressed to non-representational theories of intentionality, and especially the challenge of accounting for the aspectuality of intentionality-T without appealing to content, representation or intentionality-C (Steiner, 2019).

IV. RECONSIDERING THE RELATIONS BETWEEN LANGUAGE, MIND AND INTENTIONALITIES

As said before, from the perspective of non-representationalism, the confusion or conflation between intentionality, representation and content arises from the fact one overgeneralizes to all intentional states what is only and originally proper to some of them, namely linguistic states: having content or meaning. This conflation attributes content to all intentional states, and turns mental states into foundations of linguistic states: hence the mentalist picture of intentionality presented in the introduction. But this picture appears to be dispensable once we make a distinction between two kinds of intentionality, namely intentionality-C (or semantic intentionality) and intentionality-T (or pragmatic intentionality). Armed with this distinction, one may understand how language and mind are mutually interdependent. The interdependence between language and thought is ensured by the articulation between intentionality-T and intentionality-C.

Language, from an ontogenetic and phylogenetic point of view, does not come from nowhere (Tomasello, 2003; 2008). Linguistic intentionality - the fact sentences and utterances have intentionality-C and intentionality-T - requires intentional agents for being instituted and effective, but the intentionality-T of those agents does not require intentionality-C for existing and instituting the possibility of language. The intentionality-T of those agents is exercised in various cognitive skills and activities which are involved in the acquisition, transmission and use of language. Notably, these cognitive skills and activities display the object-directedness which is proper to intentionality-T, and without which it would be impossible for linguistic episodes (utterances, thoughts, speech acts, written symbols) to be referentially and pragmatically anchored in a shared environment:

- Perceiving events, properties and affordances of objects;
- Sensitivity to natural signs (pointing to events, associating distinct events);
- Sensitivity to gestures and facial expressions, and responses-detection;
- Shared and joint attention (as in pointing gestures);
- Imitation (imitating actions, but also norm-governed patterns of behaviour);
- Anticipation;
- Motor control;
- Coordination of action;
- Normativity, as exemplified in the ability to produce norm-governed behaviour, including normative use of artifacts.

These skills display intentionality-T, but not necessarily the sharing or attributions of intentions as distinct psychological states, in virtue of mindreading or a theory of mind. Some of these skills may be involved in communicational practices. But communication is not necessarily linguistic communication. And it is doubtful communication practices pass by the manufacture, the interpretation or the exchange of contents (and intentionality-C), especially in the form of naturally contentful mental representations. Those communicational practices allow for continuity between basic intentionality-T activities, and linguistically articulated contentful activities. As a way to coordinate and regulate action on the basis of signals, communication requires intentionality-T and the skills mentioned above, but it also establishes the possibility of social and cultural practices from which language (and intentionality-C) appears. It is at this linguistic level that reference, concepts, truth conditions, contextual detachability and objectivity emerge. In these previously mentioned basic intentionality-T skills, there are objects and objectivation, but not objectivity as a property of representations. Objectivity only appears with language, in relation with the ability to have thoughts having objective content, or a content independent of what we do when we think it (Davidson, 2001, chap. 9). There, it makes sense to speak about the world being contentfully presented to agents in certain ways, ways we can describe and predict with the use of concepts such as beliefs, intentions or thoughts (Steiner, 2014b).

There is another primary way by which language both arises from a framework of cognitive skills and reconfigures cognitive experience, not only adding one more function to this framework (speaking, talking, languaging). Since at least Vygotsky, much has been said about the effects of the acquisition of natural language for the development of new cognitive abilities, and for the reconfiguration of former abilities: reflexivity, memory, metapresentation, systematic reasoning, attention, and so on (Clark, 1998; Carruthers, 2002; Millikan, 2004, chap. 19). But one can also underline how much natural language (and especially linguistic concepts) is a condition for the development of intentionality-C and also new forms of intentionality-T.

Indeed, according to the non-representationalist perspective, intentionality-C is primarily a discursive intentionality: it is exhibited by linguistic states and by language users, and by agents that use linguistic representations for producing thoughts. It is only in virtue of linguistic competences and in virtue of the existence of linguistic practices that agents can have mental states exhibiting intentionality-C. But from this perspective, intentionality-C provides us with the possibility to be directed to new events and possibilities. In this sense, the possibility for an agent to produce some cognitive attitudes exhibiting intentionality-T may depend on mental intentionality-C, itself dependent on concepts and referential practices proper to language and its material inscriptions.⁸

⁸ As Frege already remarked in 1882, “without symbols we would further hardly raise ourselves to the level of conceptual thought. In giving the same symbol to similar but

For instance, without the concept “electron”, one cannot think about electrons, and entertain contentful thoughts about them. As Ruth Millikan claims, “merely having a word can be enough to have a thought of its referent” (Millikan, 2017, p. 35). Our ability to produce contentful thoughts exhibiting intentionality-T about electrons is enabled by our mastery of the concept “electron”: what this concept means and refers to is not fixed by our thoughts, but by linguistic practices. Words express concepts which are public entities, shared by the members of a linguistic community. The referential anchoring of the concepts is ensured by the community (Kripke, 1980; Putnam, 1975; Burge, 1980), not by intrinsically contentful mental states of individuals. As David Kaplan remarked, words often come to us prepackaged with a semantic value. Typically, we are more consumers than creators of language and its intentionality. This is not a cognitive defect; on the contrary. For Kaplan, this fact allows us

to broaden the realm of what can be expressed and to broaden the horizons of thought itself. On my view, our connection with a linguistic community in which names and other meaning-bearing elements are passed down to us enables us to entertain thoughts through the language that would not otherwise be accessible to us. Call this the Instrumental Thesis. [...] It urges us to see language, and in particular semantics, as more autonomous, more independent of the thought of individual users, and to see our powers of apprehension as less autonomous and more dependent on our vocabulary. Contrary to Russell, I think we succeed in thinking about things in the world not only through the mental residue of that which we ourselves experience, but also vicariously, through the symbolic resources that come to us through our language. It is the latter vocabulary power that gives us our apprehensive advantage over the nonlinguistic animals. My dog, being color-blind, cannot entertain the thought that I am wearing a red shirt. But my color-blind colleague can entertain even the thought that Aristotle wore a red shirt. (Kaplan, 1989, p. 602)

Kaplan agrees that “to use language as language, to express something, requires an intentional act. But the intention that is required involves the typical consumer’s attitude of compliance, not the producer’s assertiveness” (1989, p. 602). By “compliance”, Kaplan here notably refers to the important phenomenon of linguistic *d e f e r e n c e*, by which the division of linguistic labour allows one to defer to experts the ability to define the reference of some terms. However, I think we can go further than Kaplan in order to point to the foundational importance of another kind of (non-linguistic) intentionality for explaining language use. Not intentionality-C of course, for we have just seen that it is a by-product of language, just like some versions of intentionality-T which supervene on this intentionality-C. The intentionality that matters here is intentionality-T as

different things, we no longer symbolize the individual thing but rather that which they have in common—the concept—and the concept itself is first gained by our symbolizing it, for, since the concept is of itself imperceptible to the sense, it requires a perceptible representative in order to appear to us” (1882, p. 156).

a pragmatic intentionality enabling agents to be directed to others and to the environment, so that they can start mastering and sharing the contentful resources of natural language.

As we have seen, there are intentionality-T performances which are involved in the acquisition and use of natural language, including concept use. But there is no reason to think that these performances are grounded on the processing of mental contents or mental representations (Hutto & Myin, 2015). However, the fact these agents can entertain cognitive attitudes (intending, desiring, believing, attending...) towards distant, absent, counterfactual or abstract properties or states of affairs requires the use of concepts or public meanings, and is deployed by the production and the manipulation of linguistic and mental states endowed with intentionality-C. One may argue that utterances sometimes express or are driven by pre-existing propositional attitudes, but these propositional attitudes are first constituted by the use of natural language sentences, exhibiting intentionality-C and intentionality-T, and dependent on intentionality-T as pragmatic intentionality.

The capacity to have contentful thoughts, to be directed to distal or abstract events in virtue of contents, and the capacity to talk, arise and develop together, and they are dependent on intentionality-T as a pragmatic intentionality. There is no contentful thought (exhibiting intentionality-C) without natural language; but there is no mastery of natural language without intentionality-T in agents. The acquisition and use of natural language require intentional-T capacities in agents (joint attention, coordination, responsiveness, directedness, ...) in a context of social and cultural norms, but it does not require states which would be intentionally contentful independently of language.

V. CONCLUSION

When John Perry writes that

The intentionality of linguistic acts is a special case of the intentionality of purposeful action. The language to which a token belongs, the identity of the words and their meanings, the syntax, the reference of terms, all derive from the minds of the speakers, and *connections between those minds, other minds, things and properties*. (2006, p. 316; my emphasis)

There are at least two distinct ways of understanding what he means by “connections between those minds, other minds, things and properties”—or so I have claimed in this paper. Those connections can be intentional in two different ways: they can exhibit (semantic) intentionality-C which would determine intentionality-T, or (pragmatic) intentionality-T only. According to MPI and RMI, the intentionality of linguistic acts is dependent on individual mental representations. The intentionality-T of a cognitive state is a matter of intentionality-C. In this first sense, Perry’s connections are contentful, and ground the possibility of linguistic intentionality. Contrary to RMI and thus MPI, and in continuity with

recent critiques of RMI in philosophy of cognitive science, I have argued that it is possible to hold simultaneously that public natural language is constitutive of one kind of intentionality (intentionality-C, and the intentionality-T which supervenes on it) and that another kind of intentionality (intentionality-T, a pragmatic intentionality) is necessary for the acquisition and use of public natural language. In this picture, the intentionality of linguistic acts is both constitutive and constituted: it is constitutive of thoughts and their intentionality-C, and constituted by intentionality-T as a property of deeds, non-linguistic acts and behaviour, historically and socially situated. One can appeal to a kind of non-linguistic intentionality for explaining linguistic intentionality without embracing mentalism and representationalism, but by developing a more pragmatic picture of the intertwinement between mind and language.

REFERENCES

- Allan, K. (2010). Referring as a Pragmatic Act. *Journal of Pragmatics*, 42(11), 2919–2931.
- Block, N. (1986). Advertisement for a Semantics for Psychology. *Midwest Studies in Philosophy*, 10(1), 615–78.
- Brandom, R. (2011). *Perspectives on Pragmatism: Classical, Recent, and Contemporary*. Cambridge, Mass.: Harvard University Press.
- Brentano, F. (1874). *Psychologie vom empirischen Standpunkte*. Leipzig: Duncker & Humblot.
- Burge, T. (1979). Individualism and the Mental. In: P. A. French, T. E. Ueling, H. K. Wettstein (Eds.), *Midwest Studies in Philosophy*, (Vol. 4, pp. 73–122). Minneapolis: University of Minnesota Press.
- Burge, T. (2010). *Origins of Objectivity*. Oxford: Oxford University Press.
- Byrne, A. (2006). Intentionality. In: J. Pfeifer, S. Sarkar (Eds.), *The Philosophy of Science: An Encyclopedia*. Milton Park, Abingdon: Routledge.
- Campbell, K. (1990). *Abstract Particulars*. Oxford: Blackwell.
- Carruthers, P. (2002). The Cognitive Functions of Language. *Behavioral and Brain Sciences*, 25(6): 657–719.
- Chomsky, N. (2000). *New Horizons in the Study of Language and Mind*. Cambridge: Cambridge University Press.
- Clark, A. (1998). Magic Words: How Language Augments Human Computation. In: P. Carruthers, J. Boucher (Eds.), *Language and Thought: Interdisciplinary Themes* (pp. 162–183). Cambridge: Cambridge University Press.
- Crane, T. (2001). Intentional Objects. *Ratio*, 14(4), 298–317.
- Crane, T. (2003). *The Mechanical Mind: A Philosophical Introduction to Minds, Machines and Mental Representation* (2nd ed.). Milton Park, Abingdon: Routledge.
- Crane, T. (2013). *The Objects of Thought*. Oxford: Oxford University Press.

- Cummins, R. C. (1989). *Meaning and Mental Representation*. Cambridge (MA): MIT Press.
- Davidson, D. (1984). *Inquiries into Truth and Interpretation*. Oxford: Oxford University Press.
- Davidson, D. (2001). *Subjective, Intersubjective, Objective*. Oxford: Clarendon Press.
- Dretske, F. (1994). If You Can't Make One, You Don't Know How It Works. *Midwest Studies in Philosophy*, 19(1), 468–482.
- Dreyfus, H. L. (2002). Intelligence Without Representation: Merleau-Ponty's Critique of Mental Representation. *Phenomenology and the Cognitive Sciences*, 1(4), 367–83.
- Dummett, M. (1993). *The Seas of Language*. Oxford: Oxford University Press.
- Field, H. (1978). Mental Representation. *Erkenntnis*, 13(1), 9–61.
- Fodor, J. A. (1975). *The language of Thought*. New York: Crowell.
- Fodor, J. A. (1985). Fodor's Guide to Mental Representation: The Intelligent Auntie's Vade-Mecum. *Mind*, 94(373), 76–100.
- Fodor, J. A. (1987). *Psychosemantics: The Problem of Meaning in the Philosophy of Mind*. Cambridge (MA): MIT Press.
- Frege, G. (1882). On the Scientific Justification of a Concept-Script. *Mind*, 73(290), 155–160.
- Gallagher, S. (2017). *Enactivist Interventions: Rethinking the Mind*. Oxford University Press.
- Grice, H. P. (1989). *Studies in the Way of Words*. Cambridge (MA): Harvard University Press.
- Harman, G. (1993). Meaning Holism Defended. *Grazer Philosophische Studien*, 46(1), 163–71.
- Haugeland, J. (1990). The Intentionality All-Stars. *Philosophical Perspectives*, 4, 383–427.
- Haugh, M., Jaszczolt, K. M. (2012). Speaker Intentions and Intentionality. In: K. Allan, K. Jaszczolt (Eds.), *Cambridge Handbook of Pragmatics* (pp. 87–112). Cambridge: Cambridge University Press.
- Horgan, T., Tienson, J. (2002). The Intentionality of Phenomenology and the Phenomenology of Intentionality. In: D. J. Chalmers (Ed.), *Philosophy of Mind: Classical and Contemporary Readings* (pp. 520–533). Oxford: Oxford University Press.
- Hudin, J. (2006). Motor Intentionality and Its Primordality. *Inquiry*, 49(6), 573–590.
- Hutto, D. D., Myin, E. (2013). *Radicalizing Enactivism: Basic Minds Without Content*. Cambridge (MA): MIT Press.
- Hutto, D. D., Myin, E. (2017). *Evolving Enactivism: Basic Minds Meet Content*. Cambridge (MA): MIT Press.
- Hutto, D. D., Satne, G. (2015). The Natural Origins of Content. *Philosophia*, 43(3), 521–536.

- Jacob, P. (1997). *What Minds Can Do: Intentionality in a Non-Intentional World*. Cambridge: Cambridge University Press.
- Kaplan, D. (1989). Afterthoughts. In: J. Almog, J. Perry, H. Wettstein (Eds.), *Themes from Kaplan* (pp. 565–614). Oxford: Oxford University Press.
- Kim, J. (1996). *Philosophy of Mind*. Boulder, Colorado: Westview Press.
- Kiverstein, J., Rietveld, E. (2015). The Primacy of Skilled Intentionality: On Hutto & Satne’s the Natural Origins of Content. *Philosophia*, 43(3), 701–721.
- Kriegel, U. (2013). The Phenomenal Intentionality Research Program. In: U. Kriegel (Ed.), *Phenomenal Intentionality*. Oxford: Oxford University Press.
- Kripke, S. (1980). *Naming and Necessity*. Cambridge (MA): Harvard University Press.
- Loar, B. (1981). *Mind and Meaning*. Cambridge (MA): Cambridge University Press.
- Loar, B. (2003). Phenomenal Intentionality as the Basis of Mental Content. In: M. Hahn, B. Ramberg (Eds.), *Reflections and Replies: Essays on the Philosophy of Tyler Burge* (pp. 229–258). Cambridge (MA): MIT Press.
- Menary, R. (2009). Intentionality, Cognitive Integration and the Continuity Thesis. *Topoi*, 28(1), 31–43.
- Millikan, R. (2004). *Varieties of Meaning*. Cambridge (MA): MIT Press.
- Millikan, R. (2017). *Beyond Concepts. Unconcepts, Language and Natural Information*. Oxford: Oxford University Press.
- Montminy, M. (2010). Context and Communication: A Defense of Intentionalism. *Journal of Pragmatics*, 42(11), 2910–2918.
- Morgan, A., Piccinini, G. (2018). Towards a Cognitive Neuroscience of Intentionality. *Minds and Machines*, 28(1), 119–139.
- Noë, A. (2005). *Action in Perception*. Cambridge (MA): MIT Press.
- Noë, A., Thompson, E. (2002). Introduction. In: A. Noë, E. Thompson (Eds.), *Vision and Mind: Selected Readings in the Philosophy of Perception*. Cambridge (MA): MIT Press.
- Perry, J. (2006). Using Indexicals. In: M. Devitt, R. Hanley (Eds.), *The Blackwell Guide to the Philosophy of Language* (pp. 314–334). Oxford: Blackwell.
- Putnam, H. (1975). The Meaning of “Meaning.” In: H. Putnam (Ed.), *Mind, Language and Reality: Philosophical Papers* (Vol. 2, pp. 215–271). Cambridge: Cambridge University Press.
- Recanati, F. (1993). *Direct Reference: From Language to Thought*. Oxford: Blackwell.
- Recanati, F. (1998). Pragmatics. In: E. Craig (Ed.), *Routledge Encyclopedia of Philosophy* (Vol. 7, pp. 620–633). Milton Park, Abingdon: Routledge.
- Recanati, F. (2003). *Literal Meaning*. Cambridge: Cambridge University Press.
- Rey, G. (2003). Chomsky, Intentionality, and a CRTT. In: L. M. Antony (Ed.), *Chomsky and His Critics* (pp. 105–139). Malden: Blackwell.
- Rosenberg, A. (2013). Disenchanted Naturalism. In: B. Bashour, H. Muller (Ed.), *Contemporary Philosophical Naturalism and its Implications* (pp. 13–17). Milton Park, Abingdon: Routledge.

- Rowlands, M. (2010). *The New Science of the Mind: From Extended Mind to Embodied Phenomenology*. Cambridge (MA): MIT Press.
- Sachs, C. B. (2014). Discursive and Somatic Intentionality: Merleau-Ponty Contra ‘McDowell or Sellars’. *International Journal of Philosophical Studies*, 22(2), 199–227.
- Schiffer, S. (1972). *Meaning*. Oxford: Oxford University Press.
- Schlicht, T. (2018). Does Separating Intentionality from Mental Representation Imply Radical Enactivism? *Frontiers in Psychology*, 9, 1–14.
- Searle, J. R. (1983). *Intentionality: An Essay in the Philosophy of Mind*. Cambridge: Cambridge University Press.
- Searle, J. R. (2001). *Rationality in Action*. Cambridge (MA): MIT Press.
- Speaks, J. (2006). Is Mental Content Prior to Linguistic Meaning? *Noûs*, 40(3), 428–467.
- Steiner, P. (2014a). Enacting Anti-Representationalism. the Scope and the Limits of Enactive Critiques of Representationalism. *Avant: Trends in Interdisciplinary Studies*, 5(2), 43–86.
- Steiner, P. (2014b). The Delocalized Mind. Judgments, Vehicles and Persons. *Phenomenology and the Cognitive Sciences*, 13(3), 437–460.
- Steiner, P. (2019). Content, Mental Representation and Intentionality: Challenging the Revolutionary Character of Radical Enactivism. *Croatian Journal of Philosophy*, 18(55), 153–174.
- Thompson, E. (2007). *Mind in Life*. Cambridge (MA): Harvard University Press.
- Tomasello, M. (2003). *Constructing a Language. A Usage-Based Theory of Language Acquisition*. Cambridge (MA): Harvard University Press.
- Tomasello, M. (2008). *Origins of Human Communication*. Cambridge (MA)/London: MIT Press.
- Varela, F. (1992). Autopoiesis and a Biology of Intentionality. In: B. McMullin (Ed.), *Proceedings of the Workshop ‘Autopoiesis and Perception’* (pp. 4–14). Dublin: Dublin City University.
- Voltoolini, A., Calabi, C. (2009). *I problemi dell’intenzionalità*. Turin: Einaudi.