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(Non-)conceptual representation of meaning in utterance comprehension

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ABSTRACT
Cognitivist, as well as many perceptualist, views of utterance comprehension agree that understanding an utterance involves knowing, believing, perceiving, or, anyhow, mentally representing the utterance to mean such-and-such. I dub such views representationalist. They have been criticised for placing an undue metasemantic demand on utterance comprehension: that speakers be able to represent meaning *as meaning*. Critics have adverted to young speakers, say about the age of three, who do comprehend many utterances but may be rather limited in their abilities to think about meaning as such, to cast doubt on this demand. This paper examines what the balance of developmental evidence and arguments shows, and identifies options for a representationalists response. Though there is some evidence that three-year-olds are curtailed in their abilities to think about meaning as such, they may yet turn out to have a concept of meaning, or at least some proto-semantic concept. Moreover, even if they lack any such concept, there is, I will propose, a way of developing representationalism, drawing inspiration from Davidson's paratactic view of indirect speech reports, on which meaning can be non-conceptually represented. Independently of developmental considerations, this proposal is of interest to friends of a perceptualist view of comprehension.

1. Introduction

To understand an utterance one must grasp its meaning. Does one also have to grasp its meaning *as* its meaning? And what would that involve?

This paper defends an affirmative answer to the first question. In reply to the second, it argues that it involves mentally representing the utterance as meaning so-and-so. This representation may not, however, require use of a concept of meaning. To bring out a way in which an utterance can be mentally represented as meaning so-and-so without use of concept of meaning, a 'paratactic style' account of the mental representation of meaning is outlined, drawing inspiration from Davidson's account of the linguistic representation of speech acts.

In affirming the first question, and answering the second by positing a mental state representing the utterance as meaning so-and-so, the view to be outlined here agrees with a familiar position I dub:

> **Cognitivism** Understanding an utterance involves knowing, or believing, that the utterance means so-and-so.

Some clarifications that will apply throughout: By 'understanding an utterance', 'utterance comprehension', and cognates, I throughout understand occurrent states of understanding a token, perceptually present utterance, unless otherwise noted. I use 'involves' as a variant for '(perhaps partially) consist in'. The phrase 'that the utterance means so-and-so' could be replaced by an alternative specification of a broadly semantic (in the sense of meaning- or content-involving) fact about the utterance, e.g. that is a case of saying, or being true iff, or expressing the proposition that so-and-so, thereby obtaining different forms or formulations of cognitivism. The focus here shall however be on what these versions have in common, viz. that they posit (propositional) knowledge of or belief in a semantic fact about the utterance. I will use 'that the utterance means so-and-so' as a generic way of talking of such facts.[1]

One familiar motivation for cognitivism is the thought that, first, understanding an utterance is, or involves, knowing what it means, and, second, knowing what it means is knowing that it means so-and-so.[2] Another motivation (invoking the notion of belief rather than that of knowledge), might be the idea that, to comprehend an utterance, one must at least assign it a certain meaning, or take it to mean something, where, in either case, this is (or so it might be held) a matter of believing that it means so-and-so.

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[1]Cognitivism is defended by, among others, Campbell (1982); Dummett (1991, 83–106); Lepore (1997); Heck (2006); Johnson (2007), and Waights Hickman (2020).

[2]For an expression of the first point, see, e.g. Dummett (1991, 117). The second point is an instance of a standard view of knowledge-wh ascriptions, cf., e.g. Karttunen (1977). For the two points in combination, see, e.g. Heck (1995, 82).

Though widely held, cognitivism has been criticised for placing undue cognitive demands on speakers. Granted, someone understands an utterance only in so far as she grasps what it means. Yet if an utterance, U, means M, 'what U means' alludes to M. Grasping M (U's meaning or content) is one thing, grasping the notion that U means M (a broadly semantic fact about U) another. Cognitivism implies that comprehending U involves having such a grip on this semantic fact as is needed for knowing or believing it to obtain. The objection denies that such a metasemantic condition must be fulfilled by anyone who understands an utterance. One notable ground for denying this is that some young speakers, around the age of three, do understand a diverse range of sentences, but seem rather curtailed in their abilities to think about meaning as such. I will dub this line of criticism the 'objection from undue metasemantic demands'.[3]

Now, cognitivism implies a claim I will call:

> **Representationalism** Utterance comprehension involves mentally representing that the utterance means so-and-so.

Representationalism also returns a positive reply to our first opening question, and a related, but more general, answer to the second. The answer is more general in that the posited mental representation of meaning may but need not take the form knowledge or belief; instead, it could be realised in, say, a state of perception, or quasi-perception, of an utterance as meaning so-and-so, as many perceptualist views (taking comprehension to be perceptual or quasi-perceptual) hold (cf. Hunter 1998; Fricker 2003; Brogaard 2020). However, although representationalism is logically weaker than cognitivism, it may be thought the objection from undue metasemantic demands still applies. For representationalism still imposes a metasemantic demand on comprehension: one must have what it takes to mentally represent a semantic fact about the utterance. Tyler Burge voices scepticism about such demands:

> One cannot assume, as a conceptual truth, that understanding and communicating meaning require *metarepresentation* of meaning, reference, intention, belief, or the like. It is one thing to use and understand language. It is another to have a metarepresentational understanding of the psychological or semantical facts that go into that use and understanding. One needs evidence that early language learners attribute mental states in learning language. (Burge 2018, 417, his italics.)

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[3]The objection is pressed against cognitivism in Longworth (2008a) (cf. also his 2018, 822–3). Soames (1989) directs it against forms of cognitivism that attribute knowledge of truth-conditions. Burge (2018) defends scepticism about whether three-year-olds can represent meaning as such (cf. the main text below), and elsewhere, e.g. in Burge (1999), develop views on which utterance comprehension does not involve knowing or believing that the utterance means so-and-so.

Two comments: First, I will not construe representationalism as a purported conceptual truth; indeed, not even as making a claim about all metaphysically possible utterance comprehension, but one restricted to comprehension manifesting the normally developing linguistic capacities of humans.[4] At the same time, its domain must of course not be arbitrarily restricted; I will, in view of this, take it to subsume the speech comprehension of children from about 30 months, from which age they typically are competent with a diverse range of sentences.[5] Second, Burge in the cited paper suggests the needed evidence concerning the attributions made by early language learners, including three-year-olds, is missing, also when it comes to attribution of semantic facts. He takes issue, then, even with representationalism in our sense.

If representationalism is to be abandoned, then for what? An example of a non-representationalist view is provided by Michael Devitt, who argues that, to understand some linguistic input, 'what we have to end up with in "the message-in box" is not a mental metalinguistic statement about the linguistic input, however detailed, but a mental statement that means the same as the input' (Devitt 2006, 223).[6] Guy Longworth's (2018) recent 'entertaining account' can also be classed as non-representationalist. On his account, to understand what is said in an utterance is to have a distinctive attitude (distinctive 'intentional mode', in the terms of Crane 2001) towards what is said, involving a certain first-order conceptual entertaining of what it said; it does not consist in representing a proposition about what is said, e.g. a proposition to the effect that so-and-so is what is said in the utterance. Moreover, at least some sub-streams of the broadly Wittgensteinian tradition that construes linguistic

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[4]This is in line with an approach to language and linguistic competence seeking not to limn the principles of any metaphysically possible language or linguistic comprehension (including that of, say, Martians with an utterly different psychological and biological makeup) but what characterizes the normally developing language and linguistic capacities of humans. Such an approach is, of course, associated with Chomsky, but not wedded to the details of his programme, cf. Rey (2020) for recent wide-ranging discussion. The restriction to normally developing human capacities raises hard boundary-drawing questions, e.g. over how people with autism are to be classed (cf., e.g. Glüer and Pagin 2003 on how the linguistic competence of some autistics may bear on philosophical views of meaning and understanding). In the interests of space, I shall set this issue aside, in part because the questions autistics raise for representaitonalism (e.g. concerning metarepresentational capacities) overlap with those that three-year-old speakers raise, which will be considered at length.

[5]See Hadley, McKenna, and Rispoli (2018) for the claim that a crucial milestone in development typically is reached by about 30 months of age. Though children may have a vocabulary of around 50 words and be able to combine two words ('more milk', 'want ball') by about 24 months, competence with simple sentences, that are understood not as memorised wholes but in terms of grammatical structure allowing for a diversity of subject-verb combinations, may be expected to be in place only by about 30 months.

[6]Devitt's view here has affinities with the position LePore (1997) dubs 'translationism' and attributes to Schiffer (cf. Schiffer 1987, 192f; 262) and Fodor (cf. Fodor 1990, 187–8). Translationism could, like Devitt's position, construed as a non-representationalist view.

comprehension in terms of practical abilities or know-how can also plausibly be regarded as sceptical of representationalism.[7]

This paper aims to get clearer about the objection from undue metasemantic demands, both concerning what the balance of developmental evidence and arguments show, and concerning the options representationalists have for responding. I shall argue representationalists are in a good position to handle the objection – in a better position than, I think, is commonly appreciated. Though there is some evidence that three-year-olds are curtailed in their abilities to think about meaning as such, they may yet turn out to have a concept of meaning, or at least some proto-semantic concept. Moreover, even if they lack any such concept, there is, I will propose, a way of developing representationalism on which meaning can be non-conceptually represented. This proposal transposes aspects of Davidson's paratactic theory of the linguistic representation of speech acts, i.e. his theory of indirect speech reports, into a theory of the mental representation of the content of utterances. This proposal allows for a sense in which the specifically metasemantic aspects of the representation of meaning can be non-conceptual.

I begin, in the next section, by briefly motivating representationalism. Section 3 sets out the objection from undue metasemantic demands, in two steps. The first step says (in alternative versions) that if cognitivism, or (alternatively:) representationalism, is true, then utterance comprehension requires one to possess, not only the concepts specifying the content the utterance is understood to express, but also a concept of meaning. The second step maintains this requirement upon comprehension is misplaced. Developmental evidence for the second step is presented.

Section 4 pursues the empirical case for – or against! – the second step of the objection in greater depth and breadth. It concludes it is far from clear three-year-olds lack a concept of meaning; alternatively, they may at least have a certain proto-semantic concept. Section 5 responds to the first step of the objection (specifically: to the version targeting representationalism). It outlines the noted paratactic-style proposal on which meaning can be non-conceptually represented. Some attractions of the view that are independent of the developmental considerations but

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[7]For a recent statement of such a view, see Hornsby (2005). Hornsby (p.c.) allows her view may be classed as non-representationalist. In writings prior to circa 1978, Dummett regarded knowledge of language as a practical ability (cf., e.g. Dummett [1976] 1993); he later however revised that view, construing it as form of implicit knowledge that explains the rationality of speech and is not a purely practical ability (cf. Dummett [1978] 1993, 94–105; 1991, 83–106; 1993, vii–xii).

speak to those who favour a perceptual view of comprehension are also noted.

2. Why representationalism?

Why assume representationalism? Since cognitivism implies representationalism, reasons for cognitivism are reasons for representationalism.[8] Moreover, even assuming cognitivism is false, the following seems to be a putative datum: adult speakers who understand an utterance to mean so-and-so are, at least typically, in a position to know or justifiably believe that it means so-and-so. Non-cognitivist representationalists are well-placed to explain why this should be so. If the mental representation of meaning is not (*pace* cognitivism) a case of knowledge or belief, it is likely a high-level perceptual state of the utterance as meaning so-and-so. It is a familiar idea that perceptions of x as being F are, at least typically, apt to serve as an input to knowledge or justified belief that x is F.[9]

Representationalism is also, and perhaps more fundamentally, part of a plausible answer to the following:

> **Linking Question** When someone understands a perceived utterance, U, to express a certain content, M, how are the utterance perceived and the content grasped psychologically linked for her?

To see the point of this question, notice that hearing an utterance and having in mind its meaning is not enough to understand it. Someone with minimal French may hear (and even parse) an utterance of 'Il va pleut', and co-incidentally think it is going to rain, without understanding it. This subject fails to associate the content grasped with the utterance perceived.

Representationalism offers ready answer to the Linking Question. U and M have something to do with each other, for the comprehending subject, since comprehension consists in mentally representing U as meaning M. Since comprehension is personal-level and paradigmatically

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[8]For reasons for cognitivism, see e.g. the writings cited in note 1.

[9]Of course, in order for perceptions of x as being F to enable knowledge, or justified belief, that x is F, various conditions must hold: veridicality, reliability, no defeat, etc. If the relevant perception is non-conceptual, these conditions include that of having a concept of F linked with a capacity to recognise F-ness perceptually. Non-sceptics however agree in thinking these conditions typically are met. It is at least unclear why they shouldn't also be met for the case of a perception of a given utterance as meaning such-and-such. Moreover, reasons to think they typically *aren't* met in this case are likely to be carry over to create reasons to suspect there is no putative datum – that comprehenders typically are in a position to know or justifiably believe that an utterance means so-and-so – to be explained here to begin with.

conscious, representationalists have every reason to hold this representational state, in which comprehension consists on their view, to be so too. The broad terms in which this account is couched are of course very familiar.[10] It is uncontroversial that occurrent mental states may have representational content, and widely accepted that their contents can be central to their psychological, epistemic, and conscious character.[11] There is no need to posit sui generis attitudes, nor (for that matter) ditto non-representational qualia.

What are the non-representationalist, alternative answers to the Linking Question? One might here propose to invoke (i) association, (ii) causal input-output conditions, or (iii) intentional mode/attitude as psychological features or relations that provide the relevant link between perceived utterance, U, and content grasped, M. Alternatively, one might contend there is no need to answer the Linking Question. I will discuss these options in turn.

Option (i), of invoking a sub-representational form of association, seems unpromising. Such association falls short of securing comprehension. For example, by brute classical conditioning you may come to associate utterances of the Xhosa phrase 'kuzakubakho ukutya' with the thought that there will be food. Although the phrase happens to mean there will be food you do not understand it. Some people associate the concepts of salt and pepper, activation of the one leading to activation of the other, so that hearing the phrase 'Here's salt' reliably leads them to entertain the thought that here is pepper, even though they do not understand the phrase to mean anything other than that here is salt.

How about option (ii), appealing to certain causal input-output conditions on comprehension? Thus it might be proposed that, for a subject to understand an utterance, U, to express M, her entertaining of M must be the output of specifically linguistic processing caused by U, where the relevant processing is supposed to exclude mere association, but include syntactical, semantical, and perhaps some allied pragmatic processing. One worry here concerns how to specify the relevant, specifically linguistic processing. To specify it as whatever issues in comprehension is circular. What would be the alternative? Well, one natural thought is that it is processing that, inter alia perhaps, exploits or manifests

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[10]Of course, when one gets down to developing a representationalist account in detail, under various theoretical and empirical pressures, from various domains and operating at various levels, some of the resources one might find reason to adopt may be less familiar and more speculative.

[11]This is agreed even by several of those who deny that consciousness is fully grounded on, supervenes on, or reduces to, representation. Cf., e.g. Husserl ([1901] 2000) and Peacocke (2008) for two such theorists.

knowledge of, or beliefs or other representational states concerning, the meaning of words or phrases in the language of target utterance.[12] If so, and given that the comprehension of the utterance results from the use of such knowledge/beliefs/representations, one would naturally expect the comprehension itself (as per representationalism) to take the form of knowledge/belief/representation concerning what the utterance means.

A second problem is that at least some pragmatic processing may be needed to access what is said by an utterance, and these processes may, on occasion, include associative ones. For example, comprehending an utterance of

(1) Her purse is of crocodile.

as a case of saying that her purse is of crocodile leather may depend on the association between crocodile and crocodile leather.[13] But if association is allowed a role here, we lack an account of why someone who, by association, comes to think *here is pepper* upon hearing 'here is salt' may not, and typically would not, understand the latter to mean the former.

A third problem is this. Perceiving U, in an unfamiliar language, might cause a subject to be presented with a first-language translation, Ú, where Ú triggers linguistic processing outputting M. For example, a demon/scientist might so manipulate someone's brain so that hearing the alien U causes the first-language Ú to occur to her in the form of verbal imagery, figuring for her as heard rather than as spoken (cf. Hurlburt and Heavey 2018). If the subject is unaware that Ú translates U, she does not understand U to mean M.[14] The proposed, output-side condition would, then, need to be supplemented by an input-side condition, e.g. one to the effect that U be the proximate input to the linguistic processing outputting entertaining of M.

A fourth and perhaps more basic problem remains even if the former could be overcome. Even if we can specify causal input-output conditions satisfaction of which ensures that U is understood to mean M, this story does not yet account for how U and M are related from the subject's point of view, when she understands U to mean M. I take it to be plausible

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[12]For various arguments that the capacities or processes underlying comprehension should be understood in such representational terms, see, e.g. Lepore (1997), Johnson (2007), and Rey (2020).
[13]See Recanati (2004, 30–31).
[14]See e.g. Fricker (2003) for illuminating use of such translation-assisted scenarios to explore conditions for utterance comprehension.

that there is some such link, from the comprehending subject's point of view, both on phenomenological grounds, and in view of how features of the utterance, such as its tone of voice, affects, in a minimally reflectively accessible way, our dispositions to believe or accept what we understand the utterance express (a point I shall return to below). Now, it is not generally true that proximal inputs to a certain type of processing are salient, from the subject's point of view, in relation to a representation of such-and-such that is outputted by that processing. For example, light is arguably a proximal input to visual processing delivering visual representations of colour, yet colours strike us as having something to with distal surfaces, not, typically, with light.

I turn, then, option (iii) above, of invoking a distinctive intentional mode, or attitude. This would be in the spirit of Longworth's entertaining account, which proposes, as noted, that understanding what is said is a distinctive first-order attitude to the content that is what is (understood to be) said. Now, Longworth distinguishes sub-species of the mode of understanding, corresponding to whether this content is understood to be the content of an affirmation, or question, or command. Might the psychological link to a specific utterance be captured by positing another, hyper-fine-grained dimension of variation among sub-types of the attitude of understanding? Longworth considers but rejects this option:

> It would be implausible to build the identification of specific sources of what is understood—that is, the identification of particular speakers, occasions of speaking, or utterances—into distinctions amongst attitudes so that, for example, understanding what Peter said involved a different attitude from understanding what Paul said. (Longworth 2018, 823)

I agree it would be unattractive to posit a hyper-fine-grained, one-off species of attitude corresponding to each utterance that is understood to mean something. Longworth gives however no alternative account of the indicated psychological link, conceding that the question how this link is to be understood is an as-yet unresolved one for the account.

The three options considered do not, of course, exhaust every logically possible non-representationalist reply to the Linking Question.[15] Their

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[15]Husserl's ([1901] 2001, vol. I, pp. 181–235) view of comprehension, in the first Logical Investigation, could, perhaps, be construed as non-representationalist alternative, distinct from options (i)–(iii) above. He argues, roughly, that when an utterance, U, is understood to mean M, the awareness or grasp of M is 'founded' on one's awareness of U ([1901] 2001, vol. I, p. 214), where 'founding' expresses a relation of ontological dependence ([1901] 2001, vol. II, p. 25). Now, the relevant founding relation here could be cashed out, in part, in terms of a representationalist view of comprehension: a comprehension-constituting representation of U as meaning M could be seen to be founded on awareness

difficulties or shortcomings hint, though, that providing a satisfying non-representationalist answer is not straightforward. In any case, the burden is on the non-representationalist to provide one.

Perhaps it will be said, however, that the Linking Question can just be set aside – that comprehension need not involve a psychological link, along the lines we have been suggesting, between utterance perceived and content grasped. The following 'injection' scenario, from Burge (1999), bears on this:

> Suppose that we could not perceive words others speak. Suppose that the stimulus effects of the words nevertheless affected us by some natural causal process in such a way that we reliably understand their sense … as received — rather than as initiated. Suppose that we could not directly know or even reliably guess anything about the words whose effects were thus injected. Suppose that the word sounds. ..called up understanding of conceptual content. … by bypassing the perceptual system, but triggering the same central mechanisms by which we understand our own speech … Understanding, however, remains as good as ever. (Burge 1999, 244)

If understanding can remain 'as good as ever' without even perceiving the utterance understood, *a foritori* it could remain as good as ever without the content understood being psychologically linked with a perceived utterance.

Now, since representationalism, as here construed, only makes a claim about normally developing linguistic capacities, there is no need to deny the possibility of the injection scenario. Does that scenario however cast doubt on the importance of a psychological link between content and utterance in normally developing comprehension? One reason to think not, hinted at above, has to do with as it were the downstream side the contents that utterances are understood to express, viz. with our dispositions to believe or accept them. The trustworthiness of a comprehended content depends, as Longworth (2008b, 359–366) elsewhere emphasises, on who uttered it. Its trustworthiness also depends on such features of the utterance as whether it is in a serious, or jocular, tone of voice. Parallel points apply to contents that are comprehended to be the contents of commands or requests: their authority (in the sense, roughly, of claim on our compliance) depends on who uttered it,

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of U, in more or less the way in which a perceptual-demonstrative judgement about an object may be founded on perceptual awareness of that object. This construal may or may not be Husserl's intention. If this is not the intention, however, the view faces the challenge that mere founding – i.e. founding, absent further, non-representationalist detail concerning why it holds, which I cannot see that Husserl provides – is too generic a relation to capture the specific sort of link M bears to U when U is understood to mean M. To pursue this is however beyond the scope of the present paper.

with what tone of voice, etc. Clearly, we somehow register such features concerning the source of a comprehended content and are sensitive to them in apportioning belief or acceptance. This sensitivity is not realised at an entirely subconscious or sub-personal level, but seems to be something that, from a ripe age, is available to reflection, as witness such familiar dialogues as:

(1) (a) Why didn't you think it was snowing.
     (b) It was *Lars* who said it, and it sounded as if he was joking.[16]

This suggests there is a personal-level psychological link between perceived utterance and comprehended content, and that this link is of some importance to the epistemic and social roles of comprehension.[17]

The case for representationalism here is, of course, non-conclusive, but does, I think, motivate its status as a serious contender.

3. The objection from undue metasemantic demands

The objection from undue metasemantic demands proceeds in two steps: The first step posits certain metasemantic demands on comprehension, if cognitivism, or (in an alternative version:) representationalism, is true. The second denies these demands invariably are met when there is comprehension.

3.1. The first step

The first step comes in a logically weaker and stronger versions, targeting, respectively, cognitivism and representationalism.

The weaker version says that if cognitivism is true, one can understand an utterance to mean so-and-so only if one possesses a concept of meaning. This claim follows from cognitivism if belief and knowledge are conceptual representational states, in the sense that one can know/ believe that … C … only if one possesses a concept of C, i.e. if they are states with conceptual content.[18] Now, beliefs have been widely agreed

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[16]On the role of everyday epistemic dialogues of this sort, concerning perception of utterances, see also Longworth (2008b, 351, 367).

[17]For the record: Burge (2013, 272–284) no longer endorses his earlier view, based inter alia on the injection scenario, that the perception of the utterance is epistemically inessential to ordinary comprehension.

[18]In question here, throughout, is the so-called 'state', or the (closely related) 'relative', sense of the terms conceptual, non-conceptual, (representational) content; for these senses, see respectively Byrne (2005)

to have conceptual content.[19] If knowledge implies belief, knowledge would have ditto content. Even apart from whether knowledge implies belief, it is often assumed on can know that … C … only if one possesses a concept of C (cf., e.g. Longworth 2018, 822).

The logically stronger first-step claim says that, if representationalism is true, one can understand an utterance to mean so-and-so only if one possesses a concept of meaning. The case for this claim cannot rely on an agreed presumption that mental states with representational content invariably have conceptual content. It is widely admitted that at least some states have non-conceptual representational content (cf. Bermudez and Cahen 2020). Paradigm candidate examples include perceptions as of fine-grained colours, distances, and kindred low-level properties (cf. Peacocke 1992); and sub-personal, or intra-modular, states representing, say, complex syntactical principles (cf. Chomsky 1986; Rey 2020) or semantical assignments (cf. Larson and Segal 1995; Rey 2020). Now, states of utterance comprehension are admittedly rather different from these paradigms: unlike the former, they are, if perceptual at all, very much cases of high-level perception; unlike the latter, they are personal-level and paradigmatically conscious. However, why not think states of comprehension could turn out to be an interestingly different type of example of non-conceptually representing states?

A reason to think not trades on a plausible background constraint on comprehension, viz. that to understand an utterance to mean such-and-such one must be able to *think* such-and-such. To understand 'il pleut' to mean it is raining one must be able to think – to grasp the idea – that it is raining. One must be able to think of rain not only as it were *de re* (as when beholding downpour outside and wondering 'What's that?'), but of rain *as* rain. To have a concept of C can, as a first pass, be equated with having such an ability to think of Cs as such.

Now, representationalists want to account for utterance comprehension in terms of one's mentally representing the utterance as meaning so-and-so. Consider, then, such a representation of (say) an utterance of 'il pleut' as meaning that it is raining. If it has conceptual content, it immediately follows that, to understand the utterance to have this meaning, one must possess a concept of rain. However, if the relevant representational state has non-conceptual content, it is precisely not

and Speaks (2005). Unlike the contrasting 'content' and, respectively, 'absolute' sense of these terms, the state/relative sense is not committed, absent further argument, to conceptual and nonconceptual contents being of intrinsically different kinds.

[19]Laurence and Margolis (2012, 293) describe this claim about belief as a 'point of consensus'.

the case that one needs to possess the concepts specifying its content. What, then, could explain the target background constraint on comprehension? Logically, representationalists could invoke some factor in comprehension independent of the mental representation of the utterance as meaning so-and-so, but this is on the face of it ad hoc, and detrimental to the unity of their account. It is hard to see how there could be an attractive, unitary explanation of the target background constraint unless the posited mental representation of meaning is conceptual. Or so it may be argued.

3.2. The second step

The second step of the objection denies that subjects who understand utterances invariably have a concept of meaning. I will set aside reasons to deny this that invoke the conceivability or metaphysical possibility of such subjects, since I construe representationalism as restricted to utterance comprehension that manifests the normally developing linguistic capacities of humans. However, as noted, I take its purported domain to subsume the utterance comprehension showed by children from about the age of three and upwards.[20]

   To argue some speakers of that age, or older, lack a concept of meaning we must presume some constraints on what it takes to possess a concept (a conceptual representation) of F, generally, or of meaning, specifically. We have suggested, so far, that having a concept of F is being able to think of Fs as such. Some widely supposed, and slightly more fleshed-out marks of having a concept of F, as opposed to having merely the sort of representational capacities of F in play in non-conceptual contents of F, include the following. By these marks, someone possessing a concept of F should, repectively:

- first, exhibit systematicity (Fodor 2008), or, relatedly, meet the Generality Constraint (Evans 1982); i.e. roughly, operate so that, if she also possesses a concept of G, and can represent that a is F, and that b is G, … , then she can 're-combine' to represent that b is F, that a is G, … .;
- second, have some ability to categorise suitably presented Fs together (even when they are dissimilar in other respects) and distinguish them

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[20]See Hadley, McKenna, and Rispoli (2018), and nt. 5 above, for the important milestones typically reached about that age.

from non-Fs (even when similar to Fs in other respects) (cf. Laurence and Margolis 1999);

- third, have some rudimentary understanding of F, realised in an elementary or 'folk' theory of F, capturing some key relationships F bear to certain other matters, as, for example, is enshrined in the idea that possession of psychological concepts goes together with having an elementary 'theory of mind', (cf. Laurence and Margolis 1999);
- fourth, have some rudimentary ability to reason, e.g. deductively, about F, and, relatedly,
- fifth, have capacity to represent Fs in certain logically structured ways, e.g. embedding under negation (that something *is not* F), disjunction (that something is F *or* …), or quantification (that *all*, or *some*, are Fs) (cf. Crane 1992; Burge 2010; Block, forthcoming).

These various marks are of course likely to be interrelated. I shall make no claim about exactly what (if any) combination is necessary and sufficient for concepthood but operate on the looser assumption that being a conceptual representational capacity goes with exhibiting some sufficiently robust subset of these marks. Now, various streams of developmental research casts doubt on the extent to which three-year-olds meet these marks, when it comes to their representation, such as it is, of meaning.

Consider systematicity. If we apply this constraint to a conceptual representation of an utterance as meaning so-and-so we get such instances as the following: If someone has conceptual representations of meaning (say) that the sun is up, and of meaning that the moon is up, in terms of which she represent that an utterance of 'the sun is up' means that the sun is up and that an utterance of 'the moon is up' means that the moon is up, then she should also be able represent – to make sense of the scenario – that an utterance of 'the moon is up' means that the sun is up and an utterance of 'the sun is up' means that the moon is. Piaget's (1929) 'sun/moon' task may be regarded as, in effect, a test for such capacities. In one notable version of this task it is measured to what extent children can play along with a pretence that meanings of words have been swapped around, e.g. that 'cow' means dog and 'dog' cow. A consistent finding is that monolingual children under the age of four or five struggle with such tasks, less than half of children at this age being able to play along correctly (bilinguals of the same age fare

significantly better) (cf. Ianco-Worrall 1972; Bialystok 1988; Finestack and Bangert 2015).[21]

Let's turn to the headings of categorisation and 'elementary/folk theory'-type understanding of meaning. Under the former heading, one might expect possessors of a concept of meaning to be able to categorise together words that mean the same, or stand for the same, even when they are different qua words, identified by their sounds, i.e. when they are synonyms or co-refer. Under the latter heading, one might expect a minimal appreciation of how meaning is related to but distinct from the sound of words. Linking this again to categorisation capacities, one might here expect capacity to class similar-sounding words together even when they differ in meaning, e.g when they are homonyms or rhyming words.[22]

Now, there is evidence that a grasp of synonymy, co-reference, homonymy and rhyme only develops around the age of four. Martin Doherty and Josef Perner (1998) tested children on a synonymy task where one should 'say the same' as someone else but use a different word, drawn from stock of words presented beforehand, e.g. use 'truck' if prompted with 'lorry'. Four- and five-year-olds could play this game, and spot whether others abide by its rules, but three-year-olds were at chance. It was separately tested that the three-year-olds understood each of the candidate words presented beforehand. They were also found to master classificatory games with a similar underlying structure and complexity, e.g. to follow rules where one should choose another member of a given category, but a different one – another truck, say, but with different colour or size. The failure on the synonymy task could not, then, be explained by limited vocabulary, or a lack of an ability to make classifications of the relevant structural complexity, or so Doherty and Perner argue.[23]

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[21]It might be observed that if the only semantic concept representationalist need to attribute is that of someone saying such-and-such, then systematicity does not require success on a Piagetian 'sun/moon' task but only that one can represent that someone else, B, said what person A was conceived to say. However, I believe representationalist should concede a need to attribute semantic concepts that link meaning (not only with speakers but also) with words or phrases. If comprehension is couched in terms of a concept of S as saying such-and-such, it should be by way of (also) representing that S *in producing so-and-so words/phrases* is saying such-and-such. Support of this claim must await another occasion. However, since the claim, if anything, makes it harder to defend representationalism against the worries addressed in this paper, such support is not needed for our purposes.

[22]For an analogy: To have a concept of such-and-such shapes might be supposed to require some grip on shape as something distinct from, say, the colour or texture of something. One might, accordingly, expect possession of shape concepts to go together with a capacity to class different-coloured/-textured things together as all being of a certain shape – circles, say – and to class similar-coloured/-textured things together even when they vary in shape.

Later studies have replicated these findings for synonymy and/or found similar results for grasp of homonymy (Doherty 2000), for the ability to class rhyming words together (Farrar and Ashwell 2012), and for the ability to understand identity statements such as 'Mr Mueller is the firefighter', and so, in effect, to grasp that 'Mr Mueller' and 'the firefighter' both refer to the same thing (Perner, Mauer, and Hildenbrand 2011).

Connected developmental findings here link up, in a slightly different way, with the idea that possessing a concept of meaning requires an 'elementary/folk theory'-type understanding of meaning. Matters of meaning – i.e. such semantic matters as reference, truth/falsity, saying something about something, etc. – are matters of representation. A rudimentary understanding of meaning might thus be expected to go together with a rudimentary understanding of representation, capable of manifesting itself in other domains of representation, e.g. mental or pictorial representation. Now, there is evidence that the noted capacities to grasp synonymy, co-reference, homonymy and rhyme not only to correlate with each other but also with such other skills as: passing standard, verbal false-belief tasks (Doherty and Perner 1998; Doherty 2000; Perner, Mauer, and Hildenbrand 2011); understanding ambiguous, 'duck-rabbit'-type figures (Wimmer and Doherty 2011); and 'Level 2' visual perspective taking skills, wherein one appreciates that objects look different to different people seeing them from different angles (Flavell et al. 1981; Doherty and Perner 2020). These skills all seem to call for a certain meta-representational ability. For many of them, notably success on standard false-beliefs tasks, there is evidence they typically are acquired only about the age of four (cf., e.g. Wellman, Cross, and Watson 2001).

I will note, finally, a recent study, which connects with the idea that possessing a concept of F goes with having abilities of reasoning or cognitive processing concerning Fs.

If someone masters a certain putatively domain-general style of reasoning or processing concerning other subject matters, and possesses concept of F, then, prima facie, there is some reason to expect her to master them concerning F.[24] Now, it has been found that children as

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[23]For an earlier study of grasp of synonymy, in this case among connectives, see Flores d'Arcais (1978), which finds, along lines similar to Doherty and Perner (1998), that 'In all these tasks results show that the capacity of making distinctions between the meaning of the connectives develops much more slowly than one would predict on the basis of the first experiments dealing with comprehension' (1978, 150).

[24]Of course, this is only a prima facie reason. Executing the (putatively domain-general) process about Fs may impose larger demands on working memory, inhibitory control, attention, or other executive

young as three show a preference for sources of noncircular explanations (e.g. 'The dog went this way because I've seen him go in this direction') over circular explanations (e.g. 'The dog went this way because he went in this direction') (Mercier, Bernard, and Clément 2014; see also Castelain, Bernard, and Mercier 2018). If they have a concept of meaning, they might, then, be expected to have a similar preference for non-circular over circular explanations of meaning. A recent study explored whether three- or five-year-olds have such preference, i.e. for noncircular definitions of either novel words ('Meager means when something is small') or familiar words ('Asleep means when you are not awake') over circular definitions of, respectively, novel ('Meager means when something is meager') or familiar words ('Asleep means when you are being asleep') (Tippenhauer et al. 2020). Three-year-olds had no clear preference for the source of noncircular definitions, for either novel or unfamiliar words. Five-year-olds had such a preference, but only for unfamiliar words.

In view of the findings above, one might be tempted to agree with Doherty when he concludes that 'prior to this age [of roughly four years] children do not possess the metalinguistic awareness necessary to represent the relationship between words and their referents' (2000, 391), or, as he also puts it, that 'children [before that age] lack the conceptual understanding necessary to understand homonymy' (2000, 389), alluding here to understanding specifically of the semantic, representational character of language.

A form of Morgan's Canon, or Ockham's Razor, may seem to favour accounting for the linguistic capacities of three-year-olds in ways that avoid assigning possession of a concept of meaning – as, e.g. a non-representationalist view of comprehension would enable us to avoid.

4. Are the metasemantic demands really unmet, and undue?

The first sub-section below notes some grounds for hesitation about the reasons for utterance comprehension without possession of semantic concepts just offered. Some cautionary comments about the respective grounds for hesitations are however appended. The second sub-section turns to a positive line of argument for thinking comprehension indeed requires having a concept of meaning, springing from word learning.

functioning capacities than executing them about other subject matters. On these issues, especially as they arise for studies of the meta-representational capacities of infants, see Carruthers (2013), and Scott and Baillargeon (2017).

These two sub-sections aim, in effect, to offer a more balanced presentation of various developmental considerations bearing at the issue at stake here, in their complexities. The third sub-section offers a provisional assessment, pointing out some options for the cognitivist or representationalist.

4.1. Are the metasemantic demands unmet?

4.1.1. Concerning systematicity

Typical varieties of the Piagetian 'sun'/'moon' task, indicative of whether children can make sense of a scenario where meanings have been swapped around, require much in the way of inhibitory control, and arguably of other forms of executive control, such as working memory. An alternative account, then, might be that an underlying representational system, supporting systematic representing meaning, is in place, but as yet hampered in its exercise because of these processing demands.[25] Moreover, it has been suggested that, in more playful settings, budding speakers well under the age of three engage in activities that show a grasp of the possibility of swapping meanings around. Thus Michael Tomasello and Hannes Rakoczy argue:

> The major evidence [that young children view linguistic symbols reflectively and normatively] is children's tendency in the second year of life to play with words and how they are used in a manner very similar to symbolic play with objects … . Thus, with a child approaching her second birthday one can systematically misname objects in a playful way, for example, calling an elephant a giraffe, and they will sometimes join into this game – both laughing at the adult play with words and contributing themselves. (Tomasello and Rakoczy 2003, 128–9)

4.1.2. Cautionary comment

The most directly relevant studies cited by Tomasello and Rakoczy here, by Horgan (1981) and Johnson and Mervis (1997), are single case studies, raising questions whether the indicated abilities are typical for speakers of that age or examples of untypical precociousness. Moreover, one may query just what the pretence concerns in these playful activities. Consider a characteristic example from Horgan (1981), wherein her daughter, at 1 year and 4 months, puts a tennis ball on her foot, saying

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[25]Some influential models of metalinguistic awareness, such as that of Bialystok (1988), indeed suggest processing demands have a large part to play in the failure of young speakers on the 'sun/moon'-task.

'shoe', and laughing. As Gombert (1992, 117–18, 85–92) in effect suggests, the pretence here might be that the ball is a shoe rather than that 'shoe' has a shifted meaning.

4.1.3. Concerning failures in synonymy, co-reference, homonymy and rhyming tasks

Although three-year-olds have been found to fail in synonymy and co-reference tasks, it may be said they *do* have a certain ability to class together words with the same meaning, or the same reference, even when the words differ as words. The three-year-olds' competent understanding and use of, say, 'truck' and 'lorry' as, in each case, meaning such-and-such vehicles may be held *already* to constitute a way of treating or classing these words together. The failure of three-year-olds in homonymy and rhyming tasks perhaps indicate that they lack a clear grasp of how words sound; however, perhaps they nevertheless can have a concept of the meaning of words without also having a concept of so-and-so other features of words from which (by adults' lights) their meaning is to be distinguished?

4.1.4. Cautionary comment

To suppose that the 'treating synonyms as such' that is involved in, say, understanding both 'truck' and 'lorry' as meaning so-and-so a type of vehicle already can be regarded as a form of conceptual co-classification is, in effect, to beg the question at stake between non-representationalists and (some of) their opponents, concerning whether comprehension involved deployment of semantic concepts. To suggest that budding speakers may have a concept of meaning, though none of how words sound (thus failing homonymy or rhyming tasks), makes it hard to see how they could conceive of the possibility of recombining words and meanings, thus achieving systematicity, since that would require a conceptual grip on word identity apart from meaning.

4.1.5. Concerning the emergence of meta-representational capacities

Even if semantic concepts come to be possessed only with a suite of other meta-representational skills, the dating of the acquisition of the relevant wider package to about four years can be disputed. In recent decades, developmentalists have explored forms of false-belief tasks that, in contrast to traditional, verbal varieties, use various implicit tasks and measures, such as the tendency of infants and children to look longer at unexpected events (Onishi and Baillargeon 2005), to look in the

direction of anticipated actions or events (Southgate, Senju, and Csibra 2007), or to help others achieve their (presumed) aims (Buttelmann, Carpenter, and Tomasello 2009). These studies have often found (as in the three just-cited studies) that children well under three years succeed in these implicit false-belief tasks. Some have taken this to show that already at this ripe age children have a meta-representational capacity sufficient to understand false belief, and put their failure in traditional, explicit false-belief tasks down to the special demands, on working memory, attention, or inhibitory control, that these impose (cf. Carruthers 2013; Scott and Baillargeon 2017). If these views are right, it would not be surprising if some semantic concept, such as that of meaning, reference, or truth/falsity, come online as children begin to comprehend language in earnest, over their second and third year.

4.1.6. Cautionary comment

The claim that putative success of children under the age of four on implicit false-belief tasks indicate a meta-representational capacity is much contested; on alternative views, these feats can be accounted for by taking these children to identify, predict, and explain action and sensory/perceptual states in non-representational terms (cf., e.g. Butterfill and Apperly 2013; Burge 2018). Besides, research on implicit false-belief tasks is currently undergoing something of a replication crisis (cf. Poulin-Dubois et al. 2018; Wenzel et al. 2020).

4.1.7. Concerning the failure to distinguish non-circular from circular definitions

The recent study by Tippenhauer et al.'s (2020) indicated that three-year-olds, and even to some extent five-year-olds, fail to distinguish between circular and noncircular explanations of meaning, although they do make such a distinction between circular and noncircular explanations of other matters. However, the authors add:

> it is important to point out that both groups of children provided definitions when prompted, although 5-year-olds did this more than 3-year-olds. This finding suggests that even the youngest group of children understood what it means to define a word. (Tippenhauer et al. 2020, 11)

Anyone who understands what it means to define a word would surely qualify as possessing some semantic concepts (if only the concept of a definition).

4.1.8. Cautionary comment

This study may indeed be rather equivocal for the question to what extent budding speakers possess a concept of meaning. However, even if three-year-olds provide definition-like statements, using words such as 'means' unprompted, it could be questioned to what extent they understand what they are saying and so what definitions are.[26] In so far as definitions are explanations of meaning, and circular definitions non-explanatory, circular definitions are pseudo- or non-definitions. Their failure to distinguish the latter from genuine definitions, along with their failure on synonymy and co-reference tasks etc., may lead one to doubt that their use of 'means' or cognates expresses grasp of something recognisable as a concept of meaning. Perhaps it is more akin to early uses of 'dog', where that word is applied to dogs, all right, but also to various other furry four-legged creatures of comparable size, and so, arguably, is not expressive of a concept of a dog.

4.2. Are metasemantic demands undue?

Children begin to learn the meaning of words in earnest around the age of one. As they do so, they soon start to seek out information about what things are called. William Merriman and John Marazita observe:

> One of the requests most frequently made by 1- and 2-year- olds is for something's name (i.e. "What dat?") (Brown 1968; Smith 1933). It is also among the most frequent requests that parents direct to their children. (Brown 1968; Merriman and Marazita 2004, 59)

These activities appear to be intentional. It is tempting to think, then, that children have some grip on their point or purpose: that their purpose has to do with what things are called. Augustine famously yielded to this temptation:

> When they (my elders) named some object, and accordingly moved towards something, I saw this and I *grasped that the thing was called by the sound they uttered* when they meant to point it out. Their intention was shewn by their bodily movements. (Augustin *Confessions,* I. 8. My italics.)

Although Wittgenstein and his followers lamented the suggestion here that budding speakers in effect entertain semantic hypotheses about words, Jerry Fodor (1975, 55–64) later strongly endorsed it, arguing that

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[26]For analogous doubts over whether early uses of psychological verbs, such as 'want' and 'believe', manifest possession of a concept of desire, or belief, see Burge (2018, 417, 425).

word learning must be a form of hypothesis testing, viz. of hypotheses about what words mean. Psychologist and linguists writing on acquisition of word meaning, in the wake of the cognitive revolution in psychology, have often adopted a similar, broadly cognitivist view, taking word learning, at least from the second year of life, to be associated with a 'naming insight' (McShane 1980), whereby children realise that words refer to objects, or a capacity to draw inferences about meaning from a variety of cues, including object salience, care-givers' direction of attention, gestures, etc. (cf. Clark 2016, 139–171).[27]

Now, it might be said that, even if word learning involves representing, at some level, hypotheses about what words mean, these representations might be modular, housed by some dedicated word meaning acquisition device. If so, then, since intra-modular representations of F (e.g. representations of complex syntactical properties housed by a syntax module) do not necessarily give grounds for attributing to the subject a concept of F, the relevant hypotheses about word meaning need not manifest grasp of a concept of meaning.

However, there reasons to doubt that word learning is a modular process. As Paul Bloom argues, unlike acquisition of syntax, word learning may seem to be informationally unencapsulated (cf. also Clark 2016, 146–167):

> [C]hildren learn words through the exercise of reason. They figure out what people are intending to say when they use words, and they bring all of their knowledge to bear when figuring out how a word should be understood. (Bloom 2001a, 1103)

Bloom explicitly concludes word learning goes together with possession of semantic concepts:

> Why is it that 6-month-olds do not speak, and, except in the most careful laboratory circumstances, show no understanding of even the most common words? My guess is that they do not learn words. They might associate sounds with objects, in much the same way that nonhuman animals can, but they have no conception of *reference*, no understanding that words are symbols that can refer to the external world. (Bloom 2001b, 1125. Italics in original)

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[27]It is noteworthy that even those who have expressed scepticism over whether children under four possess concepts of meaning, such as Doherty (2000, 389, 391), elsewhere write of infants as making assumptions precisely about the reference of words, cf: 'Faced with a familiar object, for which they have a label (e.g. "banana"), and a novel object, children from seventeen months … assume that a novel label ("fendle") refers to the novel object'. (Doherty and Perner 2020, 2)

The sketched considerations here are not, to be sure, conclusive as they stand. Even if word learning is a broadly cognitive, non-modular process, wherein learners are inferentially or even rationally sensitive to an open-ended range of information relevant to meaning, it does not follow that they form beliefs or conceptualised representations about meaning. A variant of Longworth's entertaining account might propose, instead, that budding speakers form sui generis attitudes of understanding words to mean so-and-so (after all, beliefs are not the only attitudes that might be rationally formed and revised in response to evidence; intentions, say, may be so too). However, the sketched line of argument does suggest, at the least, that developmental considerations do not one-sidedly favour the idea that three-year-old or younger speakers lack a concept of meaning but can positively be marshalled in favour of the claim that they possess one.[28]

4.3. Provisional assessment: representationalist options

A recent joint commentary by fifteen developmentalists cautions that, in the wake of recent replication failures, we do not know yet how rich a theory of mind infants have, notably with respect to their meta-representational capacities (Poulin-Dubois et al. 2018). Similar caution may well be merited with respect to how rich capacities for representation of meaning that should be attributed to speakers under four years. On the one hand, there are reasons, inter alia from world learning, to suppose that even budding speakers have some grip on a notion of meaning. On the other hand, the cognitive role of any such semantic representations in budding speakers, as manifested in skills in flexible pretence, categorizations, reasoning, etc. concerning meaning, does appear to be somewhat

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[28]The argument from word learning also bears on a variant of the objection from undue metasemantic demands suggested by Longworth (2008a, 73, nt. 27). The variant says, first, that if cognitivism is true, utterance comprehension involves (not merely possessing but) exercising a concept of meaning, whereas, second, some cases of comprehension do not involve exercising a concept of meaning – even though it may turn out that all who comprehend speech do *possess* a concept of meaning, say for reasons of neural wiring unrelated to anything essential to utterance comprehension. I agree with Longworth it would be unsatisfactory for the cognitivist merely to argue that comprehenders are bound to have a concept of meaning lurking, at it were, somewhere in their repertoire. They should elucidate how that concept does some explanatory work for comprehension. The argument from word learning suggests, though, that cognitivists can offer a case for the concept doing such work. Moreover, in so far as the representation of meaning in comprehension is conceptual, the concept of meaning would do explanatory work in comprehension in answering the linking question raised in section 2 above, i.e. the question how the content grasped and utterance perceived are psychologically linked for the comprehending subject.

curtailed, when compared with the ditto roles for their mental representations of non-semantic matters.

One dialectical option for the cognitivist (and representationalist) in view of this, is to double down on a commitment that utterance comprehension requires possession of a concept of meaning. This commitment has not, at least, yet been empirically disproven. The limited skills when it comes to thinking explicitly about meaning, in evidence in budding speakers, would, on this view, reflect performance limitations, broadly conceived, not limits on conceptual competence per se. This option resists the objection from undue metasemantic demands at the second step.

Another dialectical option would be to restrict the cognitivist, or representationalist, claim that comprehension involves mentally representing *meaning* as such to speakers of age four or older, conceding that comprehension in three-year-olds may be of a somewhat different variety. The difference in variety may be slight, though. Three-year-olds may, in place of a concept of meaning, be using a proto-semantic concept, or what we may call a concept of proto-meaning. We may think of this as a concept that is responsive to semantic features of words, all right, but to these features as mixed up with phonological or other non-semantic features, so as to not be expressible by 'means', as used by adults, or identifiable with any adult concept of meaning. The proto-semantic concept may stand to a concept of meaning somewhat like whatever is expressed by early uses of 'dog' (that is applied to dogs, all right, but also to various other furry four-legged creatures of comparable size) stand to a concept of dogs. This dialectical option in effect concedes the objection from undue metasemantic demands, but holds it calls for only minor refinements of the cognitivist or representationalist view.

The next section explores a third option, open, I shall argue, at least for the non-cognitivist representationalist, which resists the objection at the first step. Instead of proposing a conceptual representation of proto-meaning, it proposes a proto-conceptual representation of meaning.[29]

5. Non-conceptual representation of meaning

Section 3.1 considered the idea that the mental representation of an utterance as meaning so-and-so, *ex hypothesi* constitutive of

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[29]Consideration of a fourth option in logical space – proto-conceptual representation of proto-meaning – must be left for another occasion.

understanding the utterance to mean so-and-so, has non-conceptual content. It faced the following challenge. How are we to explain, in a non-ad-hoc, unified way, why understanding, say, an utterance of 'il pleut' to mean that it's raining requires possessing a concept of rain?

A first step towards an answer to this challenge is to recognise that the category of non-conceptual representational states subsumes that of *only partially* conceptual representational states, i.e. states with a representational content, *C*, such that being in the state requires possessing *some, but not all*, of the concepts that specify *C*. Consider, then, a state with the content *'il pleut' means that it is raining*. If being in this state requires possessing the concept of rain but not that of meaning, it has only partially conceptual content (again: a sub-class of non-conceptual contents, by the standard definition of the latter). If comprehension-constituting states are only partially conceptual in this way, the explanatory challenge is answered compatibly with reduced metasemantic demands.

Moreover, only partially conceptual representational states should, it might be argued, be recognised independently of considerations about utterance comprehension. For example, vision arguably represents not only fine-grained, low-level features such as colours or distances, but enduring coherent objects, or some natural or functional kinds, where the representation of the objects (cf. Quilty-Dunn 2020) or the kinds (cf. Carruthers 2015, 65–66; Mandelbaum 2018) arguably is conceptual even if that of the low-level features is not. On such a view, the overall representational content of vision, wherein these lower- and higher-level features are bound together, would qualify as only partially conceptual.

This is only a first step, however. The schematic idea of an only partially conceptual representational state needs to be filled in, for the candidate case of utterance comprehension. We need a better grip on how the allegedly conceptual and non-conceptual aspects of the state interrelate. Davidson's (1968) paratactic analysis of indirect speech report is suggestive here. It proposes that a sentence like:

(D) Galileo said that the Earth moves.

is to be analyzed in terms of two separate but interrelated claims

(D-c) The Earth moves.

(D-m) Galileo said that.

In (D-m), 'that' is supposed to function as a demonstrative. It is held to refer to something provided by the other element in the analysis, (D-c). In Davidson's terms, by uttering this other referred-to element, I make myself a 'samesayer' with Galileo.[30] The important point for present purposes, however, is that Davidson breaks apart the seemingly unitary (D) into two component claims, one strictly metarepresentational ('Galileo said that'), and the other in no way metarepresentational ('The Earth moves').[31] Now, Davidson's analysis is a theory of the linguistic representation of speech acts, i.e. of their representation in sentences like (D). Its interest for our purposes lies in suggesting the possibility of a structurally analogous analysis of the *mental* representation of speech acts. According to representationalism, understanding an utterance U to mean C involves a mental representation with a content that, in schematic terms, can be given by:

(S) U means C.

The proposal now is to take the content specified by (S) to be represented by two interlinked representational states, with the respective contents

(S–c) C.

(S-m) U means that.

where the (S-m)-state (i.e. the state with the content specified by (S-m)) is a strictly metasemantic representation and the (S–c)-state a first-order representation, by being in which the attributor thinks whatever the attributee was understood to mean. The (S–c)-state, and thereby its content, is linked up with or referenced by the (S-m)-state in such a way that they, in so linked combination, can be regarded as representing the content given in (S). Now, if the (S–c)-state qualifies as conceptual and the (S-m)-state as non-conceptual, then the higher-order state of the suitably linked combination of these underlying states, supposing it can be regarded as having the content of (S), qualifies as an only partially conceptual representational state, as desired.

How may we understand the suggestion here that the (S-m)-state links up with and references (the content of) the (S–c)-state, and yet, in contrast with the (S–c)-state, is non-conceptual? Let's begin with idea of linking.

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[30]Davidson invokes the samesaying relation in part to avoid commitment to propositions. For useful discussions the paratactic view that are not signed up to Davidson's strictures against propositions, see McFetridge (1976) and Rumfitt (1993).

[31]The other component may be metarepresentational *per accidens*, as when the to-be-analysed sentence is 'Galieo said that Bellarmine believed that the moon was smooth'.

Davidson's claim, as noted, was that the 'that'-element of (D-m) is a demonstrative, effecting demonstrative reference to the utterance of (D-c).[32] However, although this model of demonstrative-like reference may be useful for our purposes, there are other, perhaps equally promising models or anyhow analogies for making sense of the linking, 'that'-element of the (S-m)-state The representational states in play here may be, be realised by, or at least be suitably analogous to, computational states. It is a familiar idea that a computational state can, given how it is processed, link up with (the information provided by) other such states. Many programming languages have 'pointers' that, very roughly, do not store a value of a memory location directly, as underlying variables do, but store an address for a memory location (cf. Parlante 1998). Another, and more familiar example of computational linkages is of course hyperlinks.

Hyperlinks moreover suggest a toy model of how such links may hold between information in different formats. Consider hyperlinks embedded in a map, in analog/iconic format, clicking on which brings up information, in discursive format, concerning head of state, system of government, population, etc. for the country the analog/iconic representation of which embeds the link. This is of course merely a toy model – an aid to make sense of the very idea of a representational state linking up, in virtue of the forms of processing in which it partakes, with another, rather different kind of representational state. Of course, the linking, 'that' element of the 'U means that'-state would differ from hyperlinks in diverse ways, e.g. in that they would be processed in such a way that 'clicking' on the link (following through to access the linked information) would be mandatory. Besides, I make no claim that the representational vehicles of the 'U means that'-state are iconic/analog in format.

Rather, if the 'U means that'-state is non-conceptual, its status as such would depend on the fact that the representational capacities in play fall short of the marks of conceptuality noted in section 3.2. That is to say: on their not supporting systematicity; on their not allowing the representation of meaning to combine with negation, disjunction, quantification, or similar constructions (i.e, on their not supporting representing that U *doesn't* mean that; that U *either* means that$_1$ *or* means that$_2$, that *each of* these utterances means that,, etc.); relatedly, on their not allowing for the forms of reasoning or 'elementary/folk theory'-style insight

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[32]Cf. McFetridge (1976) and Rumfitt (1993) for a variant view on which 'that' accomplishes deferred ostention of the proposition expressed by the (D-c) utterance.

needed to categorise synonyms as such (finding that *each of these* mean that) or homonym as such (finding that, although blah-blah and blih-blah sound alike, blah-blah means this but blih-blah *doesn't*; it means that), or carry out kindred tasks. As opposed to supporting these marks of conceptuality, the capacities in play in 'U means that'-representations may turn out to be as it were dedicated to representing that this given utterance positively has this specific meaning, as provided by the linked (S–c)-representation.[33]

This paratactic-style proposal affords attractive freedom of manoeuvre to representationalists. Either all utterance comprehenders within the scope of representationalism, including three-year-olds, will turn out represent meaning in ways that support the marks of conceptuality, or some will not (as the evidence reviewed in the last section *may* suggest). If all do, the paratactic-style proposal is not called for – not on that score, at any rate.[34] If some do not, the paratactic-style proposal offers representationalists a way of accommodating those who fall short.

However, the paratactic-style proposal need not be restricted to speakers who fall short of having a concept of meaning. Even those who possess such a concept may not use it in ordinary, fluent comprehension. They may retain and depend for fluent comprehension on a dedicated, non-conceptual system for representing meaning, used in 'U means that'-style representations, suitably linked with 'C'-style representation giving the content the relevant utterance is understood to have. Ordinary mature speakers would, then, operate according to what might be dubbed a 'dual process' account of metasemantic competence, by analogy to how they are viewed on 'dual process' accounts of mind reading, according to which they have both (i) an automatic, inflexible, system of action explanation and prediction, emerging in infancy,

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[33]Two other writers who recently (and independently, it seems) have been inspired by Davidson's paratactic theory to develop structurally parallel accounts of the mental representation of contentful states are Spicer (2012), and Sainsbury (2018, 62–102) with his 'display account'. Neither of these writers focus however on the mental representation of speech acts or (in broad terms) linguisitic meaning, but rather of beliefs or other psychological attitudes. Sainsbury exclusively focuses on the (S-c), i.e. the content-specifying, aspect of the attributions. However, his discussion of the 'displaying' as opposed to (meta-)representational role of these (S-c) representations is congenial to our purposes. Cf. also Spicer (2012), who defends the first-order character of these representations. Moreover, neither of these writers suggest that the strictly meta-representational, (S-m)-aspect of the attributions might be non-conceptual. A fuller comparison between the present proposal and the structurally similar ones from Spicer and Sainsbury must however await another occasion.

[34]The basic paratactic-style structure is, of course, consistent with the claim that *both* the (S-c)-state *and* the (S-m)-state have conceptual content. The assumption that the representation of meaning in utterance comprehension is only partially conceptual, not presuming grasp of concept of meaning, gives a special reason to discern such a paratactic structure but is not logically demanded for discerning it. For other reasons for discerning such structure in content-attributing states, see Spicer (2012) and Sainsbury (2018, 62–102).

alongside (ii) a non-automatic, flexible system for mental attribution, emerging around age of four.[35] Henceforth, I will assume the paratactic-style proposal is implemented as such a dual process view, i.e. as applying to the fluent comprehension of even conceptually sophisticated speakers.

This paratactic-style view has attractions for perceptualists, i.e. for those who view utterance comprehension as perceptual or at least quasi-perceptual. There are reasons to think perception, as opposed to perceptually grounded belief, characteristically has non-conceptual content (cf. Burge 2010; Block, forthcoming). Yet the content, C, which an utterance is understood to express must be such that the subject possesses the concepts that specify C – this was our agreed background constraint on comprehension. These two points might be held to combine into a hefty obstacle to assimilating comprehension to perception.[36] Admittedly, given the agreed background constraint, and assuming perception has *exclusively* non-conceptual content, in the sense that one needs to possess *none* of the concepts specifying its content, which Burge and Block suggest, fully assimilating comprehension to perception remains out of the question on our paratactic-style account. However, even on these assumptions, our account allows us to identify a crucial representational element in comprehension, viz. the 'U means that'-state, that is eligible, even under these assumptions, to be considered perceptual.[37]

Indeed, one of Block's (forthcoming) arguments for considering perception non-conceptual allow, on our paratactic-style account, for a nice parallel for comprehension. Block observes perception does not represent disjunctive states of affairs even with ambiguous stimuli, such as the Necker cube, where *either* the one, *or* the other, of its sides is closer, for all that the cues indicate. Rather, perception flips from representing the one as closer, to representing the other as such. Now the same goes for comprehension: on hearing an ambiguous sentence such as 'She loves her dog more than you', comprehension does not provide a disjunctive construal – one does not hear it as *either* meaning that she loves her dog more then she loves you *or* meaning that she loves

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[35]See Apperly and Butterfill (2009) and Butterfill and Apperly (2013) for such a dual process account.

[36]See [name redacted] (in submission) for such worries about perceptual views of comprehension. [Note to editors/reviewers: The paper provisionally cited here is a contribution to the same special issue as the present submission, and was read at the workshop held in connection with the special issue.]

[37]If, alternatively, perception has non-conceptual content in the weaker, and more standard, sense that one need not possess each concept specifying its content (as defended by, e.g. Carruthers 2015, Mandelbaum 2018, and Quilty-Dunn 2020), then there is scope for a closer assimilation to perception.

her dog more than you love it. Rather, comprehension flips. Our suggestion that the 'U means that'-state in comprehension does not allow for disjunctive representation explains this.

The paratactic-style proposal also makes good on a feature of comprehension stressed by Longworth, viz. that utterance comprehension be 'a form of *first-order* engagement with the propositional content expressed in an utterance, a way of thinking that very content, as opposed to thinking about that content' (Longworth 2018, 820) The paratactic-style makes good on this since the linked, 'C'-state is a straight, first-order representation.[38] The co-presence of a linking 'U means that'-state does not disfigure the account into one on which comprehension (merely) takes the form of thinking about the content understood, inter alia since this linking representation is a mere non-conceptual state.

Plenty of questions arise over the account, of course. Is it available to cognitivists, or only to non-cognitivist representationalists? How is the link between the (S-m) and (S–c) states to be construed, more exactly? Can the link break down – and how would that show up (could it explain, say, putative illusions of meaningfulness, as found inter alia in cases of Wernicke's aphasia)? Can the paratactic structure of the account be generalised to other content attributions, e.g. belief attributions, and, if not, is that a problem? These questions must however await another occasion. The intention here is chiefly to put the account forward as one meriting further exploration.

6. Conclusion

When you understand an utterance, U, to mean something, M, how are U and M linked from your point of view? Representationalism offers what is, at least in broad terms, an attractively straightforward answer to that question: they are linked by your representing U as meaning M. Yet representationalism faces the objection that it places an undue metasemantic demand on speakers: their being able to represent meaning as such. Do three-year-olds, say, who seem to be bona fide speakers, meet this demand? There are indications, albeit far from conclusive, in the developmental evidence and arguments reviewed here, that although three-year-olds have *some* understanding of the meaningfullness of language, their representation of meaning, such as it is, falls short of marks of

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[38]The first-order nature of the content-providing representation, on a paratactic-style account, is stressed in Spicer (2012).

concepthood. However, even if they lack a concept of meaning, representationalists need not despair, since meaning, we have argued, can be non-conceptually represented. Such a (partly) non-conceptual view of the representation of meaning in comprehension is of interest, independently of developmental considerations, to those favouring a perceptual view of comprehension.

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Disclosure statement

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