Linguistics and Philosophy (2023) 46:65–85
https://doi.org/10.1007/s10988-022-09357-y

ORIGINAL RESEARCH

Metalinguistic disputes, semantic decomposition, and externalism

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Accepted: 31 March 2022 / Published online: 7 June 2022

Abstract In componential analysis, word meanings are (partly) decomposed into other meanings, and semantic and syntactic markers. Although a theory of word meaning based on such semantic decompositions remains compatible with the linguistic labor division thesis, it is not compatible with Kripke/Putnam-style indexical externalism. Instead of abandoning indexical externalism, a Separation Thesis is defended according to which lexical meaning need not enter the truth-conditional content of an utterance. Lexical meaning reflects beliefs about word meaning shared in a speaker community, and these may rest on possibly erroneous world-level theories. It is argued that this type of lexical meaning is indispensable for explaining word composition processes and the rationality of metalinguistic disputes.

Keywords Metalinguistic negotiation · Lexical meaning · Componential analysis · Semantic externalism · Semantic internalism · Twin Earth

1 Introduction

There is a tension between lexical semantics and semantic externalism in truth-conditional meaning theories. If expressions like nouns and verbs have a meaning, then it should be possible to decompose these meanings into a logical combination of other meanings or similar entities like Fregean senses, concepts, semantic markers, and logical relations between them. However, this position is incompatible with forms of semantic externalism according to which the meaning of a linguistic expression is constituted by the relations between users of the expression, usage patterns, the expressions, and things in nature. This type of externalism goes back to Kripke (1972)

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and Putnam (1975) and is called *indexical externalism* in what follows. Indexical externalism holds that worldly facts individuate a linguistic expression's meaning, which is originally fixed indexically. Another problem is that if such externally individuated lexical meaning is truth-conditionally relevant for the truth conditions expressed by an utterance as a whole, it is difficult to explain how a disagreement about word meaning may be rational when it involves offering, discussing, and negotiating alternate word meanings. Metalinguistic negotiation and 'conceptual engineering' appear to be futile in such an approach, despite growing evidence that they are common.[1]

In this article, I argue that a theory of lexical semantics based on decomposing word meaning into other meanings is possible and necessary for explaining metalinguistic disputes and to do componential analysis in lexical semantics. However, not defending lexical meaning atomism comes with a cost. According to the Separation Thesis, semantic decompositions of lexical meaning need not enter the truth-conditional content of an utterance. Instead of representing truth-conditional meaning, a semantic decomposition of an expression represents common world-level beliefs about the extension of that expression.[2] This way of looking at lexical meaning remains compatible with the view that metalinguistic disputes are rational and often substantive.

2 Background: semantic decomposition and metalinguistic disputes

In what follows, *semantic decomposition* serves as an umbrella term for different kinds of componential analyses of lexical meaning. This is the topic of the following paragraphs. The second portion of this section briefly addresses the connection of semantic decomposition to metalinguistic disagreements.

2.1 What is a semantic decomposition?

Semantic decomposition is involved in any type of lexical meaning analysis that applies the following thesis:

> (DT) Decomposition Thesis: The meaning of linguistic expressions can be decomposed into other meanings or meaning-like entities like concepts, semantic markers, and Fregean senses.

Componential analysis in lexical semantics uses semantic decompositions. The analysis of English kinship terms by Wallace and Atkins (1960) is one example. In their approach, *FaFa* is a shortcut for the father's father and *MoFa* a shortcut for the

[1] See, for instance, Plunkett and Sundell (2013), Plunkett (2015), Plunkett and Sundell (2019) versus Cappelen (2018).

[2] Examples in this article primarily concern noun meaning but occasionally other syntactic categories such as verbs also play a role. The term *expression* is used to encompass all of these. Occasionally, I will also use *word* and *term* because these have become customary in the literature about metalinguistic negotiation. Italic font is used for mentioning expressions.

mother's father. Given that, the word *grandfather* decomposes into *FaFa* or *MoFa*, *grandmother* into *FaMo* or *MoMo*, and so on for other kinship terms.[3] Even though these decompositions look like conventional logic textbook definitions, Wallace and Atkins are more concerned with psychological adequacy. Many accounts of componential analysis strive for cognitive rather than logical adequacy, and there are 'looser' representations than logical ones such as Putnam's stereotypes (Putnam, 1970), prototype theory (Rosch, 1983), and conceptual spaces (Gärdenfors, 2000). Therefore, the above version of DT deliberately leaves it open whether a decomposition is logical or allows for more general semantic representations.

Methods of compositional analysis vary widely in what decompositions they allow, what counts as a semantic feature, whether these are primitive, how they combine, and whether they contain prototypical information. They also delineate semantic knowledge and encyclopedic world knowledge differently.[4] In some accounts such as Jackendoff (1990), Levin (1995), Levin and Rappaport Hovav (2001), and Harley (2006, pp. 199–212), a decomposition represents concepts and potentially complex relations between them, so strictly speaking, the word is not decomposed into public language meanings. That is why in the above formulation of DT 'meaning-like entities' are allowed, whatever they may be. DT does not imply a definitional theory of lexical meaning and does not state that meanings in a decomposition need to be less complex or primitive. A linguist may decompose expressions into arbitrarily complex structures based on theoretical pressures and empirical data from informants, and such an account may include descriptions of meaning-like elements like concepts and Fregean senses.

The decomposition thesis has been assumed in diachronic and structural linguistics since the 1950s. For instance, componential analysis is used in studies by Coseriu (1962, 1964, 1966), Goddard (1998), Goodenough (1956), Harley (2010), Hjelmslev (1961), Jackendoff (1976, 1990, 2002), Katz (1972), Levin and Rappaport Hovav (2001), Murphy (2010), Pottier (1964, 1992), Pustejovsky (1995), and Wierzbicka (1972, 1996). All these accounts have in common that they resort to the decomposition thesis in one way or another.

2.2 Metalinguistic disputes

We may combine the decomposition thesis with an empirical thesis about metalinguistic disputes:

> (ML) Metalinguistic Decomposition: Metalinguistic disputes sometimes concern what constitutes the right, an adequate, or otherwise preferable semantic decomposition of a linguistic expression.

To put it more colloquially, metalinguistic disputes sometimes concern word meaning, which is, in turn, specified by paraphrases, characterizations, definitions,

[3] Cf. Pericliev (2013) for a refined version of this type of analysis for Bulgarian kinship terms.

[4] See Murphy (2010) for a comparison between Conceptual Semantics (Jackendoff), the Generative Lexicon (Pustejovsky), and NSM Theory (Wierzbicka, Goddard).

meaning postulates, and other logical and conceptual combinations. Speakers use more words to describe or characterize a word's meaning.

As Plunkett and Sundell (2013) and Plunkett (2015) argue, speakers having a metalinguistic dispute need not necessarily mention linguistic expressions. A dispute may be implicitly about the meaning of words, concepts, associated contextual ingredients, or their social role. Speakers appear to use expressions like in a regular discussion in such a dispute, yet the discussion may concern aspects of their meaning. Ludlow (2008, 2014) provides the following, well-known example about the question of whether the legendary racehorse Secretariat qualifies as an athlete:

(1) a. Secretariat is an athlete.
b. No, Secretariat is not an athlete (Ludlow, 2008, p. 118)

Suppose the discussion continues in one of the following ways:

(2) a. *Athlete* means *human or animal that elicits a high level of physical prowess and training, usually in races and other competitions.*
b. No, that's wrong. Animals cannot be athletes.

(3) a. An athlete is a human or an animal that elicits a high level of physical prowess and training, often in races and other competitions.
b. No, that's wrong. Animals cannot be athletes.

Example (2) is explicitly metalinguistic since it quotes linguistic material. Plunkett and Sundell (2013, pp. 16–17) argue in detail that examples like (1) may likewise be metalinguistic because they may indirectly concern the meaning of a term. Consequently, continuation (3) can also be metalinguistic, concerning the 'right' or most adequate meaning of *athlete*. It is also possible to use (2) as a paraphrase of (3), and vice versa. Both sentences can be used to address the meaning of *athlete*, even though they do not have the same truth conditions since only (2) quotes English words.

The existence of such metalinguistic disputes implies that the decomposition thesis is true. If the decomposition thesis was false, then metalinguistic disputes could not be about what constitutes the right, an adequate, or otherwise preferable decomposition of a word like in (2-a).

There are two more points concerning ML. First, (1) and (3) can also be examples of classical world-level disagreement. The thesis is only that *some* readings of (1) and (3) concern the term *athlete* like in (2). Second, not all metalinguistic disputes involve semantic decompositions. Plunkett and Sundell also discuss contextual norms[5] and an expression's functional role in society[6] as sources of metalinguistic disagreement. A metalinguistic dispute may even concern the correct or preferred pronunciation. In what follows, I will only consider metalinguistic disputes about the 'right' or adequate decomposition of a linguistic expression. For the purpose of this article, it suffices to acknowledge that these types of metalinguistic disputes exist, not that they are the rule.

[5] See Plunkett and Sundell (2013, p. 2; pp. 13–14), cf. Barker (2002).

[6] See Plunkett and Sundell (2013, pp. 20–21).

3 Challenges to the decomposition thesis

What is the worry with the decomposition thesis? The problem is that there are strong arguments against it. The following sections summarize some known objections.

3.1 The lack of specificity objection

According to the first objection, a loose bundle description like (3) may not be specific enough to determine an expression's extension, and thus might not represent the expression's truth-conditional contribution to the meaning of an utterance in which it occurs. The same applies to 'conceptual' approaches such as Schank (1975), Jackendoff (1976), and Harley (2010) that deliberately do not presume that definitions of word meaning are at stake. These approaches use semantic markers and concepts such as HORSE and GO, which are either atomic or further decomposable, and related by inference rules and dependency graphs.

Such representations are generally not specific enough to represent the truth-conditional contribution of an expression. These accounts often represent some kind of shared, common-sense core meaning, which does not adequately and uniquely identify an extension. For example, not every drinkable transparent liquid is water.

3.2 The non-veracity objection

The non-veracity objection states that since decompositions rest on world-level theories in one way or another, the semantic decomposition of an expression cannot enter the truth-conditional meaning of an utterance containing it if the underlying world-level theory is false. Taking a decomposition to supply the lexical meaning of an expression may at any moment yield the wrong truth conditions for utterances containing it since the underlying world-level theory may turn out to be false.

Moreover, lexical meaning does not seem to change when underlying world-level theories are falsified. For example, take the claim that *Whales are colossal fish that roam the oceans and spit water out of a hole*. The decompositions ancient fishers with these beliefs would have attributed to *whale* are erroneous and cannot represent the meaning of the noun given that many utterances about whales by these fishers were true. They referred to whales in the same way we do today. But whales aren't fish, thus assuming they are yields the wrong truth-conditional content for *whale*. This objection also applies to commonsense core meaning. For example, many speakers mistakenly refer to koalas as bears, as the colloquial term *koala bear* seems to suggest. That commonsense notion of koalas cannot be the basis of a semantic decomposition of *koala*, however, if it takes part in constituting the truth conditions of an utterance containing the word. Koalas aren't bears.

To summarize, a decomposition of an expression's lexical meaning may generate incorrect predictions about the truth-conditional content of utterances containing it.

3.3 Objections based on externalism

Putnam's famous Twin Earth thought experiment is supposed to show that meanings are not solely individuated by semantic representations in our minds.[7] On Earth, *water* means H_2O because speakers who use it live in an environment where the drinkable, transparent liquid in seas, ponds, rivers, and oceans consists of H_2O. They use *water* in ways that pick out water indexically, or simply follow other speakers by intending to use the term in the same way as speakers who originally referred to water ostensively. In contrast, on an imaginary planet called Twin Earth *water* refers to XYZ because everything that looks like water is XYZ in that place. Suppose $Oscar_1$ resides on Earth and $Oscar_2$ on Twin Earth. Putnam's central point is that these facts about *water* on Earth and Twin Earth are independent of the state of our knowledge about chemistry and the psychological states of $Oscar_1$ and $Oscar_2$. In the year 1750, *water* on Twin Earth would refer to XYZ and *water* on Earth would refer to H_2O, even though the chemical composition of water was unknown at the time.

Moreover, according to Putnam we may assume, for the sake of argument, that $Oscar_1$ and $Oscar_2$ are in the same psychological state.[8] $Oscar_1$ and $Oscar_2$ may have the same mental episodes, but when one uses *water* it refers to XYZ and when the other uses the noun, it refers to H_2O. Whatever semantic decomposition of *water* they have in their minds/brains cannot represent its meaning in their language. To distinguish a use of *water* on Earth from a use of *water* on Twin Earth, the causal histories of the terms need to be taken into account. When speakers from Earth use the noun *water*, they talk about H_20 because there is a history of uses of the noun by speakers in their community who used it (broadly-conceived) indexically to pick out water and lived in an environment full of water when they did so.

Contemporary externalists sometimes ignore that Putnam (1975) continued to argue that competent speakers need not implicitly know a description of this externalist content. Instead, a competent speaker of the term only needs to implicitly know syntactic and semantic 'markers' and a 'stereotype', where according to Putnam (1970) a stereotype represents typical, exemplary properties of the denoted entities.[9] Putnam was fairly radical in assuming a hidden indexical component for all general terms, including words for artifacts like *pencil*, yet his semantic representations are partly internalist and based on semantic decomposition. He advocated a hybrid metasemantics which remained internalist insofar as semantic competence is concerned. We may call this the *hybrid view*.

[7] See Putnam (1975, pp. 139–144).

[8] $Oscar_1$ consists mostly of H_2O and $Oscar_2$ mostly of XYZ, and Putnam presumes that this fact plays no substantial role in a functional description of their psychological states. I believe this to be correct if one buys into the other premises of the thought experiment, but it is worth noting that the existence of Twin Earth is physically impossible according to our best current knowledge.

[9] In more elaborate approaches such as Prototype Theory of Rosch (1983), properties are ordered according to how close they are to a prototypical exemplary. Conceptual Spaces of Gärdenfors (2000) go even further and model concepts as regions in metric space, allowing for distance measures between them.

In contrast to this, contemporary externalists do not consider the internalist component of Putnam's proposal vital. Instead, authors like Cappelen (2018) assume that usage patterns determine the meanings of general terms in addition to indexically-fixed externalist content. Speakers are competent in using a general term or verb if they use it the same way as others in the speaker community. This is not a hybrid view of lexical meaning.

Notice that if general terms and verbs worked exactly like proper names, then Twin Earth thought experiments would be unnecessary, and no one would seek to decompose their meaning or argue about it. They, however, do not. There is no equivalent tension between semantic decomposition and externalism for proper names. As Kripke (1972) argued convincingly, proper names do not need to have a meaning, and if they do, a competent speaker does not need to know it.[10] For example, someone who associates with the name *Abraham Lincoln* the property of being the one and only most famous car maker uses the name competently while harboring incorrect views about Abraham Lincoln.

In contrast, while a competent speaker may not be required to provide the correct semantic decomposition of a general term or verb (more on this later), failing to provide any semantic decomposition at all or providing an obviously inadequate one will usually be considered a failure to understand the expression. For example, someone who associates with the noun *democracy* preparations for producing cakes on a commercial scale does not understand what *democracy* means. The same holds for other grammatical categories, such as verbs. A speaker who associates the verb *to skirl* with an ice-skater's spinning around the center, for example, does not grasp its meaning. A tension occurs because Twin Earth scenarios seem to speak for indexical externalism while competent speakers are occasionally required to provide some semantic decomposition of an expression, proper names excluded. There would be no problem if competent speakers were not required to be able to produce a decomposition that is not too far off.

3.4 The lack of disagreement objection

The dispute over relativism vs. contextualism has given rise to a more recent argument against semantic decomposition. We may refer to an agent-relative interpretation of the decomposition thesis as *DTA* and a language-relative interpretation as *DTL*. The argument concerns DTA. When two speakers have different lexical decompositions 'in mind,' it appears that they are just speaking at cross purposes. Suppose, for instance, that Anna and Bernard are disputing the meaning of *atom*. According to Anna, *atom* means *smallest indivisible building blocks of nature* and according to Bernard it means *smallest building blocks of nature with the characteristic properties of chemical elements*. Suppose they disagree about the divisibility of atoms:

[10] This does not hold for partially descriptive proper names. See Soames (2002) for an account of these compatible with Kripke (1972).

(4) a. Anna: Atoms are indivisible. Otherwise, they wouldn't be atoms.
b. Bernard: No, atoms are divisible. Rutherford's experiments showed that.

Anna seems to speak another language. More precisely, if Anna's decomposition enters the semantic content of the sentence *Atoms are indivisible*, and Bernard's decomposition enters the semantic content of his interpretation of that sentence, then they disagree about different semantic contents. Furthermore, if their beliefs rest on semantic contents of this kind, they remain compatible and co-tenable despite the apparent disagreement. For instance, Bernard may believe that the smallest indivisible building blocks of nature are indivisible but that the smallest building blocks of nature with the characteristic properties of chemical elements are divisible. Why then fight about words and not just say that Anna is right since $atoms_A$ *are indivisible*, but Bernard has $atoms_B$ in mind?

Externalists do not face this problem since, in their opinion, (4) is not a metalinguistic dispute, not even indirectly like in example (3). The noun *atom* denotes atoms, which can be split. Bernard is right whilst Anna is wrong, and they both speak English, not English_A and English_B.

3.5 The analyticity objection

A fifth argument against the decomposition thesis goes back to Quine's critique of analyticity. As is well known, Quine (1964) challenged the Kantian idea that some judgments are analytic. If Quine is correct, analyticity only comes to a degree and does not warrant an exceptionally high degree of epistemic certainty. A seemingly analytic judgment is revisable like any other judgment. However, contrary to what Quine suggested, the decomposition thesis seems to imply that some sentences would be analytically true. For example, according to what Anna believes, *Atoms are indivisible* is true by virtue of the meaning of the word *atom*. This does not seem to be adequate if Quine's criticisms of analyticity are justified.

Maybe this is not much of a problem, given Anna is wrong both about the meaning of *atom* and the nature of atoms. However, the analyticity objection may also apply under DTL, if DTL is understood as implying that semantic decompositions enter the semantic content of an utterance. If a decomposition is considered truth-conditionally relevant, then it seems that certain statements should be analytically true by virtue of the meaning of the terms involved. For instance, *Water is* H_2O would be analytically true if the meaning of H_2O were constitutive for the meaning of *water*. Quine criticizes this type of analyticity, arguing that defining it in terms of meaning presupposes an account of synonymy, which can only be explained in terms of some form of analyticity. Neither meaning in the sense of Fregean senses nor analyticity nor synonymy are clear-cut notions, Quine argues, and trying to explain one in terms of the other will lead to circularity.

To summarize, the five externalist arguments sketched above make a strong case against the decomposition thesis. Has lexical semantics rested on a mistake?

4 Why the decomposition thesis is indispensable

If the decomposition thesis leads to so many problems, then why not give it up? There are two arguments against such an approach. First, it would make lexical semantics hard, if not impossible. Second, it would lead to an implausible error theory about metalinguistic disputes.

4.1 Word composition and the lack of a universal ontology

Most natural languages have productive word composition processes requiring the decomposition thesis to be true for compound words. Giving up the thesis would imply that a German term like *Betäubungsmittelverschreibungsverordnung* is not composed out of other meanings although the similar English noun phrase *regulation for the prescription of anesthetics* is composed out of the meanings of its parts, as per the usual rules of semantic composition at sentence level. Despite the variations in English noun phrase syntax and German morphology, there is no significant meaning difference between the two expressions. The German word is derived by a systematic word composition process that is at least similar to semantic construction at sentence level.

To save the thesis, one might advocate a mixed approach according to which compound words have complex semantics, whereas simple words like *water* and *atom* are not semantically decomposable. This *primitivism* resembles how Moore (1903) addressed the 'Open Question Argument' about *good*.[11] Moore's position was metaphysical, but Fodor and Lepore (1992, 1993) advocated a similar position in the philosophy of mind and in semantics under the label *semantic atomism*. This position has a number of undesirable consequences.

First, to account for productive word composition processes, compound words will not be semantically primitive in such an approach, or it would become descriptively inadequate. But why would words like *galaxy* and *spiral* have primitive meanings fixed indexically while the meaning of *spiral galaxy* is derived? One way to answer this question is to assume a designated ontology and treat all syntactically primitive general terms akin to what Putnam and Kripke called natural kind terms. However, natural languages differ in their lexical inventories of morphologically simple words, and a semantic externalist wants their foundation of lexical meaning to be rooted in nature, not in how we conceptualize nature in cognition. Yet different languages support different primitive ontologies by their choice of lexical inventory. So instead an atomist defending the mixed position must stipulate a designated ontology that is independent of the realization of morphologically simple words in a particular language. However, the existence of such an ontology would contradict Quine's theses about ontological indeterminacy and relativity (Quine 1960, 1969). According to Quine (and many others), no designated ontology can serve as an Archimedean point from which all other metaphysics could be derived.

[11] See Moore (1903, Sects. 13–14).

What about taking ostensive 'first uses' as a criterion then?[12] This would mean that the semantically primitive inventory that constitutes a designated ontology would result from mere coincidences. If *spiral galaxy* was first used ostensively, this would be a mere coincidence, for it can just as well be used descriptively. Such contingent processes do not lead to a *designated* ontology, they rather lead to the language-relativity problem the externalist seeks to avoid.

Moreover, decompositions only partially go hand-in-hand with morphological processes and are instead often motivated by ontological concerns about identifying states and processes. As an example, the minimal semantic argument structure of verbs such as *to buy*, *to sell*, and *to borrow* is determined by contrasting these activities with one another as well as with related behavior like stealing and gifting. These semantic distinctions cannot be made only on the basis of syntactic criteria.

Linguists also use decompositions to find disparities in the lexicalized inventories of various natural languages. For example, the word *river* is opposed to *stream* based on size, whereas French *rivière* is distinguished from *fleuve* by the fact that the former flows into the sea and the latter does not.[13] It is hard to see how these nouns may have an indexical externalist meaning. They are semantically complex, based on different criteria for determining the respective extensions, but they are not words for artifacts. Examples like these demonstrate that the indexical component of indexical externalism only works for proper names and natural kind terms that have an (assumed) underlying microstructure like their chemical composition or their DNA. It does not provide a general foundation for the individuation of the meaning of general terms and other logical predicates like those associated with verbs, at least not one that does not directly contradict Quine's points about ontological relativity. There is no reason to believe that the meanings of *stream* and *river* are primitive whereas those of *rivière* and *fleuve* are derived, or vice versa.

To summarize, indexical externalism must somehow account for word composition processes and therefore cannot legitimately assume that all expressions of a natural language have an atomistic semantics. However, languages differ in their lexical inventories of morphosyntactically primitive terms and productive word composition rules. To eliminate language-relativity, a designated ontology that can be justified independently of any natural language would be required. Although this was originally a goal of logical empiricists, Quine and others have convincingly shown that no such designated ontology exists. Resorting to ostensive first uses to differentiate semantically primitive from compound expressions would result in arbitrary categorizations and still fall short of the goals of lexical semanticists who seek to map and compare the primitive inventories of natural languages and their word composition processes.

[12] The following point does not concern atomist internalism of Fodor (1975, 1987). Fodor's approach has been criticized elsewhere and not many internalists nowadays consider themselves atomists, given that the main attraction of semantic internalism is precisely that it fares well with the decomposition thesis.

[13] See Culler (1976, pp. 23–24).

4.2 The rationality of metalinguistic disputes

The second argument concerns metalinguistic disputes. A semantic externalist has an answer to the charge of talking at cross purposes: Metalinguistic disputes are world-level disputes about nature in disguise. However, this cannot be the correct approach to explain *all* types of metalinguistic disputes. In the case of general terms like *water*, *atom*, and *whale* the justification for a given decomposition is epistemic. Evidence suggests that whales are not fish, for instance. So the externalist may argue that the actual nature of whales ultimately fixes what *whale* means because, at some point, when speakers started to communicate about whales they were in a broad sense ostensively referring to whales, and the corresponding patterns of use have been transmitted from speaker to speaker. However, in what Plunkett and Sundell (2013, 2019) refer to as normative metalinguistic disputes, the justification need not primarily be epistemic. Normative metalinguistic disputes about words like *democracy*, *family*, *gender*, and *torture* are value-based. Although the extensions of these terms may hinge on historically evolved social facts, a normative dispute about them does not solely rest on those facts; otherwise, the dispute would not be normative. For example, in a society where gender is frequently equated with biological sex, it may make particular sense to question this understanding and advocate for a more inclusive use of the term.

Against such attempts of changing the meaning of expressions and 'semantic amelioration' (Haslanger, 2012), Cappelen (2018) argues that humans lack control over the meaning of terms and that an internalist semantics for itself does not guarantee such control. However, it does not matter for the rationality of metalinguistic disputes how much degree of control we have if we have at least some control. A lack of control does not imply no control at all, and if there is some control, normative metalinguistic disputes become rational in general, even if they often turn out to be futile. Social change is hard to achieve.

Furthermore, sometimes metalinguistic disagreements involve terms that do not have extensions (yet), rendering meaning theories based on ostensive definitions or hidden indexicality untenable. For instance, it is perfectly rational to discuss what the meaning of *democracy* should be for people who live in a world where democratic nations do not yet exist and ideas about democracy are only just taking shape. As a remedy, an indexical externalist might try to explain the meaning of *democracy* by pointing to democratic states, possibly even future states. However, this is a case of the tail wagging the dog. We must first understand what *democracy* means before we can put democracy into practice.

There is one more point worth highlighting. Any implicit normative metalinguistic disagreement can be made explicit by mentioning the term under consideration and discussing which definition is more adequate. Since semantic externalists cannot deny that we often agree on definitions, they must create a stark division where none exists. In practice, it makes little difference in such situations whether an English speaker says *'Atom' means 'smallest building blocks of nature with the characteristic properties of chemical elements'* or *Atoms are the smallest building blocks of nature with the characteristic properties of chemical elements*.

5 Addressing the challenge

As the discussion so far has demonstrated, on the one hand, we need DT for explaining word composition and the rationality of metalinguistic disputes; on the other hand, externalist objections and Quine's critique of analyticity speak strongly against DT, implying that parts of lexical semantics are mistaken. The solution to this apparent conundrum is to isolate lexical meaning from the truth-conditional contribution of a word to an utterance as a whole, as the following thesis makes explicit:

> (ST) Separation Thesis: Lexical meaning need not enter the truth-conditional content of an utterance.

The thesis does not imply a lack of compositionality. When paired with a compositionality principle, a truth-conditional semantics at the sentence level requires truth-conditional contributions of the parts to the whole. However, from the standpoint of a decomposition-based lexical semantics, this contribution may be deficient and might not reflect the goals of a lexical semantic theory. To illustrate this point, consider a Montague Grammar with type-driven evaluation. In this setting, the truth-conditional contribution of *athlete* may simply be its semantic type (*et*), the type of a function from individuals to truth values, and a predicate $Athlete(x)$ of that type with a corresponding interpretation in intended models.[14] The predicate need not and should not be decomposed into a complex such as $\lambda x.Human(x) \wedge Has\_\_Prowess(x)$ with corresponding readings in intended models. Nonetheless, a lexical semanticist may be interested in such a decomposition as a finer-grained representation of the meaning of the term. According to the Separation Thesis, this meaning does not have to represent the truth-conditional contribution of a use of *athlete*.

I argue in the following sections that this departure from the status quo is not as drastic as it might seem at first glance.

5.1 Any semantic decomposition is based on world-level theories

In light of influential externalist positions in philosophy, linguists have shied away from the assumption that a description of lexical meaning provides an expression's definition. Many instead talk about cognitive representations like thematic and conceptual roles. However, some extralinguistic beliefs must enter these representations since otherwise competent could not be distinguished from incompetent speakers. Speakers do not need to implicitly know the expert definition of an expression to use it competently, but they cannot be too far off. Someone who believes *inflammable* means that something is fire-proof, for example, does not use the adjective competently.

[14] As Montague (1974b) showed in contrast to the use of logic IL in Montague (1974a), we do not *have* to translate to a logic since the same mathematical constraints can also be expressed by directly translating from a disambiguated natural language representation to algebraic structures. Cf. Dowty (1979, pp. 29–32).

The limited extralinguistic beliefs that enter linguists' meaning representations can be based on widely accepted theories about what these expressions stand for; or, they may rest on shared beliefs in a speaker community, even if these beliefs are ostensibly false or inadequate from a truth-conditional perspective. In both cases, a componential analysis rests on world-level opinions and theories in addition to linguistic criteria. This knowledge is selected in the context of a broader semantic and syntactic approach to the lexicon in linguistic theorizing, whereas in metalinguistic disputes speakers typically adopt a definitional approach to meaning. For example, the lexicon entry for *water* contains a slot for H_2O in Pustejovsky's approach, among other features, because the belief that water consists of H_2O reflects the scientific consensus about the substance. A dispute among laypeople about the meaning of *water* will also concern beliefs about what water is, but it may be broader in scope. Such disputes are rarely only concerning grammatical features of a word, for instance.

In both cases, semantic decompositions remain compatible with Burge's type of social externalism. There is likely a linguistic labor division (Burge, 1979), which is, in turn, based on an epistemic labor division. For example, physicists are experts about light, so their theories about light have a certain epistemic priority over folk beliefs, and if we disagree about the purported properties of light we may defer the resolution of a dispute to those experts. Likewise, a plumber is likely to be very knowledgeable about flanges. So, the physicist's views about light and the plumber's views about flanges may enter our theories about the meaning of *light* and *flange* in one way or another.

This type of meaning reflects an antirealist stance. Opinions and theories are incorporated into semantic decompositions of linguistic expressions, either to capture the beliefs of the respective speaker or group of speakers about the denotations of those expressions, or by referring to expert opinions to create a reasonable snapshot of what is deemed an adequate description of their meaning at a time.

In contrast to this, indexical externalism presumes a realist stance. Light has certain properties, and we may be mistaken about some of them. So we cannot use any of its alleged properties to describe what *light* means—at least not, from a strictly realist perspective. This position gets word meaning right in case theories are refuted and speakers assess that meaning retrospectively. The noun *water* meant the same from 12th Century AD through 1750 to 1950. (Nitpickers may have to adjust for language change or use the Latin term *aqua* instead.) False claims about whales were not "true for 19th Century whalers." Phrases like *true for* are merely convoluted and misleading ways to talk about beliefs. The truth conditions of statements about whales haven't changed over time, even those of statements whose truth values have changed. Thanks to whalers there are less whales today, some of them are near extinct, but this has nothing to do with the meaning of *whale*. The world has changed, the truth conditions remained the same. A realist sentence-level semantics is appealing because metaphysical realism is appealing. It is hard to see how we could conduct modern science from a strictly antirealist perspective.

The realist perspective seems to have the upper hand, but keep in mind that the difference between a realist and an antirealist stance about lexical meaning barely

plays a role in practice. In the absence of evidence to the contrary, the indexical externalist will assert that water is H_2O. The hidden indexical element of indexical externalism is irrelevant in an actual specification of the meaning of *water*, as one cannot point to water in writing and the semantic theory must be written down.[15] In practice, both realists and antirealists evaluate world-level and metalinguistic disputes using the best currently available theory. A lexical semanticist who accepts the decomposition thesis could immunize their account against the counter-intuitive consequences of theory change by stipulating that the semantic decomposition of *water* is based on the one and only correct theory of water, whatever that may be. Is this a wise course of action? Certainly not! It would be equivalent to a physicist declaring that their theory of atoms is the correct theory, whatever that theory may be. That is not reasonable physics. Surprisingly, indexical externalists have gotten away with this type of reasoning, possibly because 'metasemantics' is widely accepted to be a very abstract business. So is physics, however, and it should be obvious that the immunization strategy is not acceptable.

To overcome this critique, suppose that a substantive account of lexical meaning does not assume that the underlying world-level theory is true, appropriate, and has the greatest merits of all theories. The Non-Veracity Objection can then be avoided only by postulating the Separation Thesis, which states that a semantic decomposition does not generally enter the truth-conditional content of an utterance in which the expression was used.

This consequence is not as paradoxical as it might seem at first glance if one takes into account that very similar phenomena occur at higher levels of semantic composition. For example, conventional implicatures of appositive constructions are truth-conditionally independent of the 'at-issue' dimension of the main clause.[16] In an appositive construction, such as *Lance Armstrong, 2003's Tour winner, had never won it before 2003* (Potts, 2004, p. 49), the predication that Lance Armstrong is the 2003's Tour winner is not at issue and is independent of the main clause.

Unless an utterance is overtly or implicitly metalinguistic, the same applies to the truth-conditional role of lexical meaning at sentence level. In both cases, there are predications at play that are not at issue. To further explore the analogy, consider the sentence *Atoms, the smallest indivisible building blocks of nature, are listed in the periodic table of elements*. Similarly to how the appositive in this sentence is irrelevant to and independent of the truth conditions of the main clause, lexical meaning based on the idea that atoms are the smallest indivisible building blocks of nature does not enter the semantic content of a clause in which *atom* is used. Nevertheless, to describe speaker competence with respect to *atom* some world-

[15] It becomes relevant in an explicitly modal approach like Ulrike Haas-Spohn's original PhD thesis (Haas-Spohn, 1994). However, even if natural kind terms like *water* are rigid with respect to metaphysical modalities, which is questionable, this modeling is still based on the current scientific consensus and water could turn out to be XYZ from an epistemic perspective. This epistemic lack of rigidity may be expressed by diagonalizing content, but it can also simply be expressed by distinguishing metaphysical and epistemic modalities in the first place. A powerful general critique is that metaphysical modalities of the sort presumed by Kripke (1972) are way more problematic and less clear than epistemic and logical modalities. However, this discussion goes beyond the scope of this article.

[16] See Potts (2004, pp. 49–73).

level beliefs about atoms must enter a description of the meaning of *atom* to exclude blatant violations of speaker competence. This type of lexical semantics remains possible as long as the Separation Thesis is accepted. When the meaning of an expression is not at issue in the utterance as a whole, lexical meaning can be separated from sentence-level meaning in a truth-conditional setting; lexical meaning does not have to be identical to an expression's truth-conditional contribution and does not have to be characterized by it exhaustively.

There still seems to be a problem if the truth of an assertion implies a revision of the theory underlying a semantic decomposition. While this is not a sentence-level semantic problem in the suggested approach since the lexical meaning does not enter the semantic content of an utterance, it seems to be epistemically incoherent to make such claims. This problem has a solution, though. When people make such assertions in metalinguistic disputes, they pitch the conceived core meaning against their own candidate. To stretch the analogy with appositives a bit further, what would appear to be a statement like *Atoms, the smallest indivisible building blocks of nature, are divisible* if we put part of the lexical meaning of *atom* into an appositive, is in reality analogous to an acceptable statement such as *Atoms, commonly conceived as the smallest indivisible building blocks of nature, are (in fact) divisible*.

5.2 Meaning need not be truth-conditional

The findings of the previous section may explain why few lexical semanticists are interested in truth-conditional meaning. They often do not want to track truth conditions, they instead wish to track—to the extent to which linguistic theorizing and theoretical purposes require—commonly held beliefs that ascribe non-accidental properties to objects that fall under the terms whose meanings they characterize. For instance, suppose that speakers in a linguistic community at a time commonly believed about water that one of its central properties was to contain spiritus angelicus and therefore believed this mystical substance to be one of the defining features of *water*, then it can make sense to state that a description of the meaning of *water* at that time involves uses of *spiritus angelicus*. It would hardly make sense to criticize this approach to lexical meaning by pointing out that spiritus angelicus does not exist. Spiritus angelicus has never been part of the truth-conditional contribution of *water*, even though it could have been believed to be part of it. It does not matter for this type of lexical meaning whether the underlying views or theories are true or well-confirmed.

This sort of lexical meaning forms part of a broader understanding of how speakers perceive and linguistically express (their) reality. For example, the Finnish word *karhu* for bear was taboo because bears were holy animals of the forest associated with the goddess Mielikki and cosmological myths of origin. Bears were worshiped and you were not supposed to talk about them. So in the ancient Finnish speaker community *karhu* meant more than *bear* means among current speakers of English. At the same time, however, it is reasonable to assume, in the absence of evidence to the contrary, that the members of various Finno-Ugric tribes encountered bears in the woods when they thought they met a karhu with magical

powers. The word *karhu* meant something else than *bear* but its truth-conditional contribution was the same. For all we know, bears are not holy creatures and they were not holy creatures then either. They were believed to be holy creatures.

Some indexical externalists may only be willing to speak of meaning as long as it contributes to a sentence's truth conditions in a context. However, as we have seen, this cannot be true in general, since appositives are meaningful and provide truth conditions at a separate content-level independently of those of the main clause. The position would also be too radical. It would compel us to conclude that the lexical meaning of *karhu* is solely given by the fact that the word denotes bears (or is true of bears only, or has the set of bears as extension). It also fails to account for the lexical meaning of words for entities that do not exist or to which no facts correspond in reality. The indexical externalist must concoct a complicated story about usage patterns and conditions of use for linguistic expressions that 'explain' their meaning without providing a semantic decomposition. For example, the meaning of *witch* must be explained by the various ways in which speakers referred to women over the centuries and erroneously attributed false beliefs about supernatural abilities to them without actually decomposing the meaning into those predicates commonly attributed to witches that can be considered definitory, central properties of witches.

Although not impossible, getting this story right is surprisingly hard. Bear in mind that we believe witches do not and did not exist, and we believe this because it is extremely implausible that women with supernatural abilities consorting with the devil have ever existed. Women who were thought to have magical skills, on the other hand, did exist. If the content of the false beliefs people had at the time did not constitute part of the meaning of *witch*, then what would distinguish the (nonexistent) witches from the women who were actually burned at the stake? It is most emphatically none of their actual properties. The solution to this apparent conundrum, which is of the indexical externalist's own making, is that witches did not exist because no person satisfied all those properties that constitute the decomposed meaning of the general term *witch*.

There are other reasons why truth-conditional meaning cannot be the only kind of meaning. Language has functions other than referring to nature and getting our opinions about nature right. To these belong functions like expressing evaluative attitudes, asking questions, prescribing and issuing commands, and coordinating actions. How these are related to truth conditions and to what extent utterances with these functions have truth values has been the topic of heated discussions, some of which cannot be decided by semantic theories. Moreover, it is unclear which selectional criteria of expressions are truth-conditionally relevant. For example, many languages encode a degree of animacy.[17] Is animacy truth-conditionally relevant or not? As another example, languages like Tamil and Japanese have elaborate built-in politeness systems in their grammatical and lexical choices.[18] Do politeness features enter the truth-conditional content of an utterance or not? There

[17] See Dahl and Fraurud (1996).

[18] See Levinson (1983, pp. 130–132).

are no simple answers to these questions, and linguists need notions of meaning that allow them to do lexical semantics without answering them.

5.3 Externalist arguments revisited

It is now time to revisit the externalist arguments against the decomposition thesis that were discussed in Sect. 2.1.

The Lack of Specificity Objection was based on the idea that many reasonable semantic decompositions are not specific enough to serve as the truth-conditional contribution of a linguistic expression. This is correct but a semantic decomposition does not have to capture an expression's truth-conditional contribution.

The Non-Veracity Objection and Twin Earth Scenarios can be addressed jointly. Twin Earth arguments suggest that decompositions may turn out to be false, in which case they cannot represent an expression's meaning. The reply is that, on the one hand, if the best current world-level theory is used to support a semantic decomposition, this is merely the antirealist counterpart to a realist indexical semantics. Both perspectives complement one another, and which one is picked is a question of practicality. On the other hand, if beliefs and outdated theories are taken as a basis of semantic decompositions, then the type of lexical meaning that these constitute does not concern the actual truth conditions of utterances. Realist intuitions about Twin Earth scenarios cannot reject this type of meaning because it is intentionally designed not to track those intuitions. According to an antirealist conception of lexical meaning, the meanings of expressions change when the underlying world-level theories change in a way that invalidates a semantic decomposition. The retrospective impression that the meaning did not change is due to the fact that speakers in the community tend to accept the new theory while rejecting the old. This perception is irrelevant for a diachronic lexical semantics that describes what linguistic expressions meant to speakers of an ancient speaker community. Generally, this type of lexical semantics is not concerned with the veracity of world-level theories and opinions.

Externalists contend that a semantic decomposition does not have to be believed or implicitly known by a speaker in order for the speaker to be considered a competent user of a linguistic expression. There are three possible replies to this view. First and foremost, this thesis is not generally true. As examples illustrate, with the exception of non-descriptive proper names, competent speakers are expected to be able to provide semantic decompositions for linguistic expressions that are roughly in the right ballpark. Using *democracy* as if it meant *preparations for the production of cakes* constitutes a failure of linguistic competence and is not a world-level opinion about democracy. Second, componential analysis remains consistent with the idea of a linguistic labor division. Speakers may defer to experts, and those experts' beliefs may inform a semantic decomposition. Third, accepting fallible beliefs as constitutive parts of lexical meaning at a given time in a given speaker community does not commit us to full internalism of lexical meaning. Some expressions, such as natural kind terms, may nonetheless have an indexicalist externalist metasemantics. Moreover, semantic decompositions remain compatible with a weaker form of semantic externalism according to which lexical meaning is

an idealization and abstraction from the cognition of individual speakers. We may call this position *idealizing externalism*. In this view, meanings are abstractions from processes in the minds/brains of speakers, but they do not need to be fully represented in their cognition at the time of an expression's use. Furthermore, there is some semantic underdetermination. Not every general term has a 'right' meaning. For example, value-laden expressions like *God*, *democracy*, *freedom*, *good*, and *brilliant* probably do not have a definite meaning. Experts persistently disagree about the meanings of such terms (Mackie, 1977), and presuming that they have definitive meanings amounts to taking a particular metaethical stance. The lexical core meaning of a general term may not be uniform beyond a highly underdetermined common denominator, and core meaning may be divided into different proposals for what constitutes the 'right' meaning of an expression in such cases. These ultimately reflect diverging opinions about the subject(-ive) matter addressed by such terms.

The Lack of Disagreement Objection concerned the rationality of metalinguistic disputes about the 'right' meaning of a linguistic expression. When two speakers disagree about the meaning of a word and have their own semantic decompositions in mind, it appears that they are merely talking at cross purposes. In response, notice first that the interlocutors' positions in such examples are often not co-tenable. Disputes often include explicit metalinguistic statements like (2-a) that make them non-co-tenable. Moreover, even when there is no incompatibility between the semantic contents of utterances, there may be incompatibilities at the broader theory-level. For example, if Anna and Bernard measure atoms in the same way, then it may be reasonable for them to hypothesize that they are talking about the same kind of entities, and only one of the rival theories of atoms can be correct. (This is not always the right assumption, as the history of the term *nebula* in astronomy has shown.) So, lexical meaning based on the decomposition thesis can still allow for substantive and content-based metalinguistic disagreements; they are substantive because they are based on competing theories with differing merits. Speakers only talk at cross purposes when they are unaware of each other's theories and do not keep track of them.[19]

The answer to the Analyticity Objection is closely related to the previous reply. That argument was based on the idea that any semantic decomposition seems to predict that some statements are true solely by virtue of their meaning, but that Quine (1960, 1964, 1969) has rendered this type of analyticity untenable. This criticism does not apply to a lexical semantics endorsing the Separation Thesis because the thesis does not allow us to presume that a sentence can be true solely by virtue of its meaning. For starters, the semantic decomposition may not be truth-conditionally relevant. Second, even if it is relevant because the sentence is metalinguistic, every semantic decomposition is based on a world-level theory or, less systematically, based on opinions. Since opinions, beliefs, and theories may turn out to be false, any such semantic decomposition may turn out to be inadequate. The lesson here is not to dismiss the decomposition thesis but rather to take Quine

[19] See Rast (2020) for a more in-depth analysis of how theory-based disagreement relates to metalinguistic disputes.

seriously and abandon the idea that a sentence can be true solely by virtue of its meaning. Such sentences do not exist because all theories and opinions are fallible.

Finally, some good news: There is agreement about specific types of expressions between indexical externalism and approaches to lexical meaning based on the decomposition thesis. Because their decompositions are not grounded in empirical theories, nouns denoting abstract mathematical concepts such as *triangle* and *morphism*, natural language quantifiers such as *most*, connectives such as *or*, and modals such as *maybe* have been semantically decomposed in both traditions. For instance, although the adequacy of taking a particular decomposition to represent the meaning of *morphism* is an empirical issue, the theory of morphisms itself is not. As deflationists like Thomasson (2015, 2017) have emphasized, the underlying theories need not assume Platonism either. They also do not render Quine's arguments against analyticity invalid. It appears that indexical externalists have permitted semantic decompositions of such expressions because the underlying regularities are so certain that a theory change is extremely unlikely.

6 Conclusion

Lexical semantics has not rested on a mistake. The tension between semantic decomposition and semantic externalism is only a concern for a radical form of indexical externalism in which truth-conditional sentence-level meaning is the only kind of meaning. That position is incompatible with most forms of componential analysis in lexical semantics, which rely on semantic decompositions in one form or another, and with the thesis that some metalinguistic disputes concern what counts as the most appropriate or adequate meaning of a word. However, this is not the only option available to an indexical externalist. It is more fruitful to recognize that this strong form of semantic externalism is the realist counterpart of a lexical semantics based on our current best world-level theories, and that semantic decomposition and componential analyses can also be partly based on beliefs of speakers and groups of speakers at a time. If the underlying theory is falsified, the lexical meaning in question cannot represent what the respective linguistic expression *really* means, yet it still represents the kind of meaning addressed in metalinguistic discussions. Both sorts of meaning have a place in linguistic theory and in everyday disagreements about word meaning.

When do speakers choose a world-level discussion and when do they discuss word meaning? One might hypothesize that an answer to this question will have to do with the role a word plays in an underlying world-level theory, but this question deserves more attention and is left for another occasion.

Acknowledgements Work on this article was conducted under contract DL 57/2016/CP1453/CT0002 and project UIDB/00183/2020 with funding from the Portuguese Foundation for Science and Technology (FCT).

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