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One "True" Meaning

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Some words express different meanings in different contexts, such as "bank" and "I." *Linguistic alethic pluralists* claim that "true" is another such word. This is a surprising thesis that holds implications for debates about the nature of truth. Yet it is in need of careful elaboration and evaluation. I describe several versions of linguistic alethic pluralism, alongside tests that natural language theorists use to identify different types of meaning variation. I also consider empirical studies that have recently targeted the use of "true." I conclude that there is currently no evidence for linguistic alethic pluralism, and unlikely to be any forthcoming.

Some words express different meanings—or, more technically, *contents*—relative to different contexts, such as "bank", "book" and "I". Other words, like "mammal," seem to express the same content in all ordinary contexts. Which category does the English word "true" belong to? An increasing number of theorists are *linguistic alethic pluralists*, who claim that "true" belongs to the first category. I will argue that no evidence from natural language emerges for linguistic alethic pluralism.

Determining whether linguistic alethic pluralism holds has an impact that goes beyond the philosophy of language. Different positions on the meaning of "true" have different implications for the nature of truth, and vice versa. For instance, is there a substantive truth property or concept? Are there multiple truth properties or concepts? Linguistic alethic pluralism is naturally aligned with affirmative answers to both questions. While claims about the metaphysics of truth are difficult to evaluate directly, a promising strategy assesses them indirectly by evaluating linguistic alethic pluralism. There are a number of tests and empirical strategies that natural language theorists use to identify words that can express different contents. One difficulty in evaluating linguistic alethic pluralism is that distinctions are sometimes not drawn between the theses that

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"true" is homonymous like "bank", polysemous like "book", or context sensitive like "I." Another difficulty is that pluralists disagree about whether the content of "true" varies in ordinary discourses or only in paradox-generating ones. Different forms of linguistic alethic pluralism will therefore require different testing strategies.

I begin by giving some background information about linguistic alethic pluralism and its implications (§1). I then describe the tests that natural language theorists use to identify different types of meaning variation (§2). I consider applications of these tests to "true" (§3), before discussing recent empirical studies investigating "true" (§4). I argue that no convincing evidence emerges for linguistic alethic pluralism.

1. Linguistic Alethic Pluralism

First, I explain the distinction between homonymy, polysemy and context sensitivity (§1.1). I then describe the different available versions of linguistic alethic pluralism (§1.2), before discussing the impact of linguistic alethic pluralism on metaphysical debates about truth (§1.3).

1.1. Different Meanings

Some natural language expressions seem to express the same meaning in all ordinary contexts.[1] For example, the predicate "is a mammal" is ordinarily associated with a meaning that yields the collection of all warm-blooded animals that have mammary glands. Yet many expressions seem to express different meanings relative to different contexts. Each of the following includes such an expression:

(1) a. Yemi went to the bank.
    b. The feather is light.

(2) a. Yash is a dog.
    b. Yemi liked the book.

(3) a. I am walking.
    b. Yemi is tall.

1. I take an *expression* to be a string of a language—divided into one or multiple words—that is individuated on the basis of phonological and orthographic properties. For instance, "see" and "sea" are distinct expressions, whereas "bank" is a single expression associated with multiple characters. I leave open the possibility that a single expression might be mapped to multiple lexical items or lexico-syntactic representations.

For instance, "bank" is associated with one meaning that yields the collection of financial institutions and another meaning that yields the collection of areas of ground bordering rivers and other bodies of water. To know whether (1a) is true relative to a given circumstance, we need to know whether the meaning of the occurrence requires Yemi to have gone to a building or a riverbank.

To distinguish the forms of meaning variation exhibited by (1a)–(3b), some minimal assumptions about the nature of meanings are required. A standard approach replaces talk of "meanings" with a distinction between characters, contents and extensions (see Kaplan 1989). A *character* is a "standing meaning" associated with an expression on the basis of linguistic conventions, while a *content* is what is expressed by a particular occurrence of the expression relative to a context of use. Then, an *extension* is the non-linguistic item—such as a collection of individuals in the case of a one-place predicate and a truth value in the case of a sentence—that results from evaluating a content at a circumstance. A *circumstance of evaluation* is a specification of at least a world, possibly in addition to other features (see Kaplan 1989: 502). More formally, characters are treated as functions from contexts to contents, and contents are treated as functions from circumstances of evaluation to extensions. This approach makes it possible to distinguish several ways in which sentences may express different meanings.

First, (1a)–(2b) include *lexically ambiguous* words, which are associated with multiple characters.[2] "Bank" is associated with one character that yields a content that maps each circumstance to the collection of financial institutions, and a second character that yields a content that maps each circumstance to the collection of areas of ground bordering bodies of water. Similarly, one character associated with "dog" yields a content that maps each circumstance to the collection of members of *canis familiaris*, and another yields a content that maps each circumstance to the collection of *male* members of *canis familiaris*.

There is a further subdivision between types of ambiguous expressions: (1a)–(1b) include *homonymous* expressions that are associated with multiple unrelated characters, whereas (2a)–(2b) include *polysemous* expressions with multiple related characters. Determining whether an expression is homonymous or polysemous can be difficult. Etymological evidence and speakers' linguistic intuitions are generally used to support the existence of some relation, although these methods can be unreliable (see Lyons 1977: 550–552). A further complication is that some have taken relatedness of characters to come in degrees, predicting that expressions will fall on a spectrum that moves gradually from regular polysemy to homonymy (Apresjan 1974; Vicente and Falkum 2017).

2. I set aside other forms of ambiguity—such as *structural ambiguity* (e.g., "He saw her duck") and *scope ambiguity* (e.g., "Every dog likes some woman")—where expressions consisting of *multiple* words are associated with multiple characters.

Next, (3a)–(3b) include *context-sensitive* words. A character counts as context sensitive if and only if it maps different contexts to different contents; and an expression is context sensitive if it is associated with at least one context-sensitive character.[3] Hence the word "I" counts as context sensitive because it is associated with a character that maps each context to a content that yields the speaker of that context for any circumstance. Similarly, "is tall" is typically assigned a character that yields different contents depending on a contextually determined standard: the content expressed at one context might map any circumstance to the collection of individuals that are taller than the average woman, and the content expressed at another context might map any circumstance to the individuals that are taller than the average professional basketball player.

An ambiguous word need not be context sensitive: for although the discourse context helps hearers to decide which character is relevant for the interpretation of a particular occurrence, each character might map every context to the same content. Nevertheless, a word may be both ambiguous and context sensitive. For example, "light" is homonymous (it is associated with one character pertaining to colours and another pertaining to weights) and context sensitive (the first character yields different contents depending on contextually determined standards of what counts as a light colour, as does the second character with respect to what counts as a light weight).

1.2. Varieties of Linguistic Alethic Pluralism

Linguistic alethic pluralism states that the word "true"—when it applies to expressions that denote truth-bearers—expresses different contents in different contexts; that is, it is either homonymous, polysemous or context sensitive.[4] A number of theorists have advanced this thesis. Kölbel (2008; 2013) aims to show that "true" is lexically ambiguous or context sensitive, although he favours

3. This definition (from Viebahn and Vetter 2016: 6–7) only captures *indexical contextualism*. *Nonindexical contextualism* about a particular expression assigns it an invariant content that maps enriched circumstances (i.e., including features additional to worlds and times, such as speakers or tastes) to extensions, where the context fixes the relevant enriched circumstance (see MacFarlane 2014: 88). A definition compatible with nonindexical contextualism would state that a character counts as context sensitive if and only if, for some non-identical contexts, it determines contents that yield distinct extensions relative to circumstances that include the same world and time. Since nonindexical contextualist analyses are unusual, and there is nothing particular to the case of "true" that would motivate them, the simpler definition will suffice for current purposes.

4. It is uncontroversial that "true" expresses different contents when it applies to expressions that do not denote truth-bearers ("he is a true friend," "her aim was true," etc.). While the name "linguistic alethic pluralism" derives from Pedersen (2006: 107), I have altered his definition (originally: "There is more than one truth predicate").

the former view.[5] The view that "true" is ambiguous is also briefly advocated by Tarski (1944), and defended more extensively by Yu (2016; 2021) and Égré (2021). An analysis of "true" as context sensitive has been endorsed by Burge (1979; 1982), Simmons (1993; 2018), Yu (2016; 2021), Henderson (2019; 2021), and Égré (2021).[6]

It is clear that linguistic alethic pluralism has become increasingly popular. But why would anyone endorse it? Consider sentences like the following:

(4) a. Dogs are mammals.
b. Corndogs are tasty.
c. This sentence is not true.

Suppose you think that these sentences (or truth-bearers associated with them) are true. Are they true in the same sense? Many theorists think that they are not. Some of these theorists have detected a contrast in the sense in which truth-bearers associated with different domains of discourse or subject matters can be true. This contrast emerges for the "factual" truth-bearer presented by (4a) and the "non-factual" one presented by (4b).[7] This perceived contrast has led some theorists to endorse *metaphysical alethic pluralism*: the thesis that there are multi-

5. Kölbel claims that his arguments are also compatible with the conclusion that "true" is what he calls "pragmatically ambiguous": while a given occurrence "may semantically express concept $c1$, the speaker may intend to communicate, and succeed in communicating some distinct concept $c2$" (368). The idea is that "true" regularly contributes to what we might call "pragmatic inferences," where this phrase covers what has elsewhere been referred to as "conversational implicatures" (Grice 1989; Levinson 2000), "implicitures" (Bach 1994), "explicatures" (Carston 1988; Sperber and Wilson 1986), and "free pragmatic enrichment" (Recanati 1993). For those who uphold the standard view of the semantics-pragmatics distinction, the thesis that "true" contributes to pragmatic inferences does not count as a form of linguistic alethic pluralism: different uses of "true" would not *express* different contents, but would merely *convey* a range of contents that are distinct from the unique content expressed. This is one reason that the current paper does not discuss the thesis that "true" contributes to pragmatic inferences. A second reason is that, to my knowledge, there are no existing advocates of the thesis. A third reason is that "true" appears to fail some tests that should detect whether candidates for the different contents conveyed by its uses are pragmatic inferences, such as the cancellability test (Grice 1989: 44).

6. In the literature on the Liar paradox, a position advocated by Parsons (1974), Barwise and Etchemendy (1987), Glanzberg (2001), and Murzi and Rossi (2018) is also often described as "contextualist." Strictly speaking, advocates of this view do not claim that "true" or "is true" is context sensitive. Rather, they think that certain *sentences* containing the truth predicate (including Liar sentences) are context sensitive due to the presence of a covert element (e.g., a quantifier expression) that connects their interpretation to a context-dependent domain of propositions. It is possible that Yu also holds this type of view, although he describes his position as advocating the context sensitivity of "true" (2016: 162).

7. I remain neutral about how "factual" should be defined. My only assumptions are that (4a) would count as "factual", and that truth-bearers that concern taste or humour would count as "non-factual." One definition is given by Kölbel (2008: 376), who suggests that p is *factual* "just in case it is a priori that when one thinker believes p and another thinker believes not-p, one of them must be mistaken."

ple truth properties or concepts, which are associated with different domains of discourse (see Cotnoir 2013a; b; Lynch 2001; 2006; 2009; 2013; Wright 1992; 2001; 2013). Other theorists have detected a contrast between truth-bearers associated with non-paradox-generating sentences like (4a) and (4b), and paradox-generating sentences like (4c). This perceived contrast has resulted in a number of theories where occurrences of paradox-generating sentences can be true in some special sense (see Glanzberg 2001; 2004; 2006; Parsons 1974; Schlenker 2010).

Linguistic alethic pluralists tend to be motivated by their inclination towards one of these positions. For it might be natural to think that the different types of truth-bearers end up in distinct extensions for "true", and that applying "true" to expressions associated with the different types of truth-bearers causes it to express contents that yield these distinct extensions. Linguistic alethic pluralists may thus be divided into two categories, depending on the types of truth-bearers that they take to provide evidence of the variability of "true":[8]

> *Factual alethic pluralism*: Factual and non-factual truth-bearers end up in different extensions for "true."
>
> *Paradoxical alethic pluralism*: Truth-bearers associated with non-paradox-generating sentences and Liar-style sentences end up in different extensions for "true."

Factual alethic pluralism has been advocated by Kölbel (2008; 2013), while advocates of paradoxical alethic pluralism include Burge (1979; 1982), Simmons (1993; 2018), Beall (2013), Yu (2016; 2021), Henderson (2019; 2021), and Égré (2021). Some linguistic alethic pluralists provide further details about the way in which the contents of "true" differ; for example, it might be claimed that factual truth-bearers are true in a "correspondence" sense, whereas truth-bearers that are non-factual or associated with Liar-style sentences are true in a "deflationary" sense (see Kölbel 2008; Yu 2016).

Advocates of both forms of linguistic alethic pluralism may make different predictions about whether two occurrences of "true" will express different contents. For instance, factual alethic pluralists predict that a factual truth-bearer associated with the sentence "Dogs are mammals" is in one possible extension

8. An advocate of either type of alethic pluralism might predict differences between additional types of sentences. For instance, factual alethic pluralists might think that truth-bearers pertaining to mathematics and to the empirical sciences cannot be in the same extension for "true," or that truth-bearers pertaining to taste and humour cannot be in the same extension. Paradoxical alethic pluralists might think that truth-bearers associated with sentences that produce other semantic paradoxes, or with sentences that contain vague expressions (e.g., see Égré 2021), can be in the same extension for "true" as certain truth-bearers associated with Liar-style sentences.

for "true" while a non-factual truth-bearer associated with "Corndogs are tasty" can only be in another extension for "true." Paradoxical pluralists may allow truth-bearers associated with both sentences to be in the same extension for "true." Hence advocates of the two views disagree about whether "true" is likely to express non-identical contents that yield different extensions when it occurs in "It's true that dogs are mammals" and in "It's true that corndogs are tasty."

There are also broader differences in empirical predictions. Factual alethic pluralists predict that evidence of linguistic alethic pluralism should emerge from the ordinary usage of "true." After all, naive speakers of English regularly issue claims with factual and non-factual subject matters. Paradoxical alethic pluralists need not commit themselves to this prediction, since ordinary speakers do not routinely issue sentences that produce semantic paradoxes. This difference will affect how factual alethic pluralists and paradoxical alethic pluralists handle evidence unfavourable to their views (see §3.4).

In sum, versions of linguistic alethic pluralism may be distinguished according to the mechanism that causes "true" to express different contents in different contexts (homonymy, polysemy or context sensitivity). They may also be distinguished according to the type of truth-bearer that can end up in one extension of "true" but not in another extension of "true" (non-factual or paradoxical truth-bearers). Empirical predictions diverge based on both the mechanism and the type of truth-bearer emphasised. This will affect the testing of linguistic alethic pluralism, as discussed in §3. In the remainder of the current section, the implications of endorsing any version of linguistic alethic pluralism will be considered.

1.3. Implications of Linguistic Alethic Pluralism

Linguistic alethic pluralism has been relatively neglected in the literature; for instance, Pedersen (2006) describes it as "uninteresting" compared with metaphysical alethic pluralism. Whether or not linguistic alethic pluralism is inherently interesting, it holds implications for the nature of truth.

First, there is a connection with deflationism. *Deflationists* hold that the word "true" serves a purely expressive or logical function—disquotation or denominalisation, and forming generalisations—that is captured by all non-paradoxical instances of the schemas (for a sentence *s* or proposition *p*)[9]:

"*s*" is true iff *s*

<*p*> is true iff *p*

9. See Horwich (1990), Field (1986), Ramsey (1927), and Quine (1970).

Inflationists hold that "true" expresses a more substantive property that instances of the schemas do not fully capture, such as correspondence with reality, coherence with relevant beliefs, empirical verifiability, and so on. If linguistic alethic pluralism holds, then there would be good grounds for rejecting deflationism as a general thesis, at least as defined above.[10] For it is difficult to see how different occurrences of "true" could express different contents if "true" only ever serves the same function captured by instances of the schemas. At the same time, there might be justification for a deflationary analysis of some uses of "true": linguistic alethic pluralists often claim that "true" has one construal where it serves a function captured by the schemas, and another involving a more substantive property (e.g., Kölbel 2008; 2013; Yu 2016).

Second, there is a connection with metaphysical alethic pluralism. Recall that this thesis takes there to be multiple truth properties or concepts, which are generally linked to different domains of discourse. Metaphysical pluralism has been more widely discussed and endorsed than linguistic alethic pluralism, and is frequently deemed a more interesting thesis (Pedersen 2006). Metaphysical pluralists are often keen to distinguish their position from a linguistic thesis. For instance, Wright (1996: 924) emphasises that his view is "not that 'true' is ambiguous, that it means different things as applied within different regions of discourse […] the concept admits of a uniform characterization wherever it is applied." Still, the fact that one version of linguistic pluralism is typically endorsed due to an inclination to accept metaphysical pluralism (see §1.2) emphasises the close connection between the views.

Several theorists have argued that at least the concept-based formulation of metaphysical pluralism entails linguistic alethic pluralism. Lynch (2001: 726) states that "a plurality of truth concepts entails that the word 'true' is ambiguous," given the assumption that occurrences of "true" can express contents associated with these different concepts (also see Kölbel 2013: 287; Yu 2016: 22).[11]

10. Beall (2013) describes how semantic paradoxes might motivate a form of linguistic alethic pluralism where there are multiple truth predicates that meet a different definition of "deflationary": all of them reduce to logical resources, although not all of them display the "transparency" captured by the deflationists' schemas. Another alternative definition of "deflationism" treats it as the denial that "true" attributes a substantive property to truth-bearers. There is continued disagreement about what makes a property "substantive," although popular candidates include: grounding genuine similarities between bearers (Asay 2014; Edwards 2018), playing an explanatory role with respect to other phenomena (Williams 2001), or having a constitution theory (Horwich 1990). Some characterisations might then allow versions of linguistic alethic pluralism where "true" has multiple construals involving distinct "non-substantive" properties.

11. Wyatt (2018) defines an *interlinguistic* form of concept-based metaphysical alethic pluralism that seemingly avoids attributing ambiguity to the English word "true": "There are at least two actual linguistic communities L_1 and L_2 such that some L_1-members use a truth concept T_1, whereas some L_2-members use a distinct truth concept T_2" (176). If L_1 consisted of all English

In the other direction, if the content expressed by a predicate can be thought of as (or as determining) a property or concept, then at least some versions of the linguistic thesis that different occurrences of "true" express different contents entail the metaphysical thesis that there are multiple truth properties or concepts.[12] Evidence for at least some versions of linguistic alethic pluralism would therefore provide evidence for at least some versions of metaphysical alethic pluralism, given further assumptions about the connections between contents and concepts or properties. Evidence against linguistic alethic pluralism would apply pressure to at least the concept-based formulation of metaphysical alethic pluralism.

As indicated above, there are areas of open debate surrounding the connections between different versions of linguistic alethic pluralism and metaphysical theses about the nature of truth. Still, linguistic alethic pluralism is more amenable to empirical assessment than metaphysical theses about truth are. Evaluating linguistic alethic pluralism is therefore a promising strategy for assessing deflationism about some or all occurrences of the word "true," in addition to at least some versions of metaphysical alethic pluralism.

2. Tests for Meaning Variation

Natural language theorists have suggested a multitude of tests for identifying different types of meaning variation. I focus on a range of the more promising ones.[13] The *contradiction* test (§2.1) and *zeugma* test (§2.2) distinguish between ambiguous and unambiguous expressions. The *related characters* test (§2.3) distin-

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speakers, and T_1 were the only truth concept associated with the claims expressed by English speakers, then the English word "true" need not be ambiguous.

12. This entailment need not hold for a version of linguistic alethic pluralism that gives a deflationary analysis of some occurrences of "true" while claiming that others express the same non-deflationary content. If the deflationary analysis does not attribute a substantive property or concept (see fn.10), then it might follow that there is only one truth property or concept (i.e., the one associated with the non-deflationary content). Note that this type of entailment would be expected to hold for any expression where different occurrences express different contents, not just "true": for example, if contents are linked to properties or concepts in the aforementioned way, then there are multiple lightness properties or concepts (i.e., pertaining to weights versus colours).

13. Those tests that are omitted from the current section are either similar to another test discussed, less clear than other tests, or obviously unhelpful in the case of "true." For instance, the identity test (Lakoff 1970: 357–358; Zwicky and Sadock 1975: 17–20; Kempson 1977: 129–130) and the collective descriptions test (Cappelen and Lepore 2003) are closely related to the zeugma test (see §2.2). There is a lack of clear instructions about how to carry out the definitional test (Geeraerts 1993: 230), along with tests centering on "clusters" of candidate semantic values (Viebahn and Vetter 2016: 9). Tests seeking differences in the position of an expression at the level of logical form (ibid.) are obviously unhelpful in the case of "true."

guishes between homonymous and polysemous expressions. The *number of candidate contents* test (§2.4) and the *inter-contextual disquotation* test (§2.5) distinguish between context-sensitive and context-insensitive expressions. Importantly, these tests are typically applied "from the armchair," with theorists employing their own linguistic intuitions and informally consulting several other informants. One reason for this is the difficulty of adapting these tests for large-scale empirical studies with untrained speakers. For example, it is difficult to design training and tasks that would allow ordinary speakers to judge the number of candidate contents of an expression. Empirical studies are discussed further in §4.

2.1. The Contradiction Test

One tries to specify a context where a simple sentence that includes the target expression can be both affirmed and denied, without contradiction (Quine 1960: 128–9; Zwicky and Sadock 1975: 7–8).[14] If one can specify such a context, then this is evidence that the target expression is *ambiguous*, and if one cannot, then this is evidence that the expression is *unambiguous*. Consider:

(5) a. That is a bank, but it isn't a bank.
b. What Yemi's talking about is a book, but it isn't a book.
c. That is a mammal, but it isn't a mammal.

Contexts for which occurrences of (5a) and (5b) are non-contradictory include ones where the relevant item is a financial institution rather than a riverbank, or an abstract literary work that has been accepted for publication but not yet printed as physical book-copies. However, it is not possible to imagine a context where speakers are using "mammal" in the ordinary way but (5c) is non-contradictory.

Gillon (1990: 408) argues that passing the contradiction test is neither necessary nor sufficient for ambiguity: some sentences that contain ambiguous words might not permit affirmation and denial (e.g., non-declarative sentences, such as "Go to the bank"), and some sentences that lack ambiguous words but contain context-sensitive expressions might pass the test if contextual features are allowed to shift (e.g., "That's a mammal, but that isn't a mammal," where the occurrences of "that" are understood to pick out distinct individuals). A simple way to circumvent these concerns is to apply the contradiction test exclusively to

14. It is worth noting that Zwicky and Sadock (1975) characterise ambiguity in terms of multiple underlying semantic representations, hence it might be the case that a context-sensitive expression would count as "ambiguous" in their broader sense. The current formulation of the contradiction test aims to ensure that only expressions with multiple characters will pass it, by requiring that a *single* context is specified for the target sentence.

sentences of the form "*DP* is *XP*, but *pro* isn't *XP*," where "*DP*" is a phrase that is understood to pick out an item ("that", "the man," "she," etc.), "*pro*" is a pronoun ("it," "she," etc.) that is understood to pick out the same item as "*DP*," and "*XP*" results from combining a potentially ambiguous word with the minimal number of other words required to produce a grammatical phrase (e.g., "a bank," "the bank," "light," etc.). Moreover, it is important to specify a *single* context for which a non-contradictory occurrence results, where any contextual features that might affect the interpretation of context-sensitive expressions are held fixed.[15]

2.2. The Zeugma Test

One forms a pair of sentences containing the target word that meets two conditions: first, plausible interpretations of the sentences require a distinct construal of the target word in each case (e.g., "ATM machines are found in banks," "Water voles are found in banks").[16] Second, it must be possible to combine those sentences by means of a construction that "reduces" or "deletes" one of the constituents containing the target word. These constructions include anaphoric verb phrases (as in (6a)) and coordination (as in (6b) and (6c)). If the resulting sentence sounds *zeugmatic* (odd in a sense that results from inappropriately linking two expressions), then this is evidence that the target expression is *ambiguous*, and if it does not, then this indicates that the target expression is either *unambiguous or ambiguous between closely related characters*.

15. Viebahn (2018: 758–759) further criticises the test, claiming that it cannot reliably be used to detect polysemy. He argues that the test misclassifies "book" as unambiguous, because there are no contexts in which an occurrence of "That is a book, but it isn't a book" is non-contradictory. In my view, the problem might be that it is unusual for speakers to use a demonstrative to pick out an abstract object. By considering a variant where it is easier to understand the speaker as using a phrase that picks out an abstract work—such as "What Yemi's talking about", in (5b)—a non-contradictory occurrence *does* emerge. When a target word that might be polysemous appears to fail the test, the test should therefore be applied to further sentences where "*DP*" is replaced with some alternative phrases, in order to confirm its verdict.

16. While it is difficult to give clear criteria for an interpretation of a sentence's being *plausible*, a rough criterion might be that assessors judge the content it would express under that interpretation to be potentially true at the actual world. An interpretation might be implausible due to violations of contingent facts (water voles are not regularly kept in financial institutions in the actual world), physical possibility (male members of *canis familiaris* cannot be the ones that become pregnant) or logical possibility (male and female members of a species cannot mature later than the female ones). It is particularly important to ensure that plausible interpretations require a distinct construal for potentially polysemous words where one character is more general than another (Zwicky and Sadock 1975: 23–25; Cruse 1986: 63–64). Otherwise, both occurrences of the target word could be construed in the more general sense. For example, the sentences "Dogs can become pregnant at twelve months" and "Dogs produce sperm at fourteen months" are poor candidates for the zeugma test: while the first is plausible only with the more general character of "dog," the second is plausible with either character (cf. (6b)).

(6) a. ATM machines are found in banks, and water voles are too.
b. Dogs can become pregnant at twelve months, and mature later than bitches.
c. Stallions and mares are mammals.

A sense of zeugma is produced by (6a) and by (6b) (originally from Cruse 1986: 64), but not by (6c).

The weakened inference provided by the absence of zeugma derives from problems that the test encounters when applied to polysemous expressions (see Geeraerts 1993; Lascarides et al. 1996; Viebahn 2018). Viebahn (2018: 754) produces examples where polysemous expressions appear to yield no zeugma, such as (7a); although as he points out, there are also often some sentences for each polysemous expression that do sound zeugmatic, such as (7b):

(7) a. Yemi heard of the book and picked it up at the library a few hours later.
b. The book is owned by many and has rotten pages.

Viebahn concludes that "the closer the meanings of an expression are related, the less likely it is that forcing them together will lead to zeugmaticity" (Viebahn 2018: 754). It follows that producing a number of sentences in which an expression yields no zeugma cannot suffice to show that the expression is unambiguous: for the expression might be polysemous, and be associated with characters that are so closely related that zeugma rarely or never arises.

Another issue with the test concerns the extent to which assessors are able to distinguish between zeugma and other forms of oddness (see Lyons 1977: 407–408). For instance, (8) exhibits a form of pragmatic oddness that results from conjoining clauses with poor thematic relatedness, which makes it difficult to imagine a natural question under discussion:

(8) ATM machines are found in banks and corndogs are tasty.

This type of pragmatic oddness disappears when the sentence is assessed relative to a context with a suitable question under discussion. For instance, the oddness of (8) is eliminated when it is considered relative to a context where a speaker has asked any of the following questions:

(9) a. What are some properties of ATM machines and what are some properties of corndogs?
b. Why did you go to the bank, and why did you start salivating when you saw a corndog seller there?
c. What are two things that you believe?

In contrast, seeking suitable contexts for (6a)–(6b) does not mitigate their oddness.

To summarise, a single sentence that yields no zeugma does not show that the target expression is unambiguous (e.g., for "book" in (7a)). It does, however, indicate that the target expression is neither homonymous nor polysemous between distantly related characters. A sentence that yields zeugma does provide evidence that the target expression is ambiguous (e.g., for "book" in (7b)). Finally, the reliability of the evidence depends on establishing that the oddness of a target sentence is indeed zeugma.

2.3. The Related Characters Test

Viebahn and Vetter (2016: 4–5) claim that certain typical relations often hold between the characters of polysemous words, which they describe as *constitutive* (one character yields extensions consisting of objects and another yields the matter of which the objects are constituted), *causal* (one yields a producer and another yields the product), *instantiating* (one yields an abstract type and another yields its concrete tokens), *metaphorical extension* (one character originated as a metaphorical or figurative use of another character) and *pragmatic strengthening* (one character originated as a pragmatic inference (see fn.5 above) associated with another character). To apply the test, one checks whether such relations hold between the proposed characters of the target word. If any of the relations hold, then this provides evidence that the word is *polysemous*.

An instantiating relation holds between the character of "book" that yields informational objects and the one that yields physical book-copies. A metaphorical extension relation holds between the character of "long" that is linked to a property of spatial distances and the character linked to a property of temporal "distances." A pragmatic strengthening relation holds between the character of "since" used to express temporal succession and the one used to express causality: the former, original character often leads to a pragmatic inference of causal connection between events (e.g., "Since Yemi returned from the library, she has been reading"), and this inference was eventually encoded in a separate character that does not involve temporal succession (e.g., "Since Yemi is in the library, Yash assumes she is reading"). On the other hand, none of the relations seem to hold between the different characters associated with "bank". Moreover, if one tried to assign a distinct character to "I" for each context in which a different speaker utters it, then one would find that none of the typical relations hold between the proposed characters.

Viebahn and Vetter note that it can be difficult to determine whether the typical relations hold, especially in the case of metaphorical extension and pragmatic strengthening. Judgements regarding the latter two often draw on etymological facts, which can be unclear. Moreover, further relations that are less straight-

forward to characterise can hold between the characters of polysemous expressions, such as ones based on a more general form of resemblance; hence the absence of the typical relations isolated by Viebahn and Vetter does not justify any conclusions about the polysemy of a word. Still, the test may deliver a clear verdict in cases where the presence of one of the typical relations—especially a relation of the first three types—is obvious (e.g., for "book").

2.4. The Number of Candidate Contents Test

Viebahn and Vetter (2016: 8) describe a test that involves estimating the approximate number of *candidate contents* for an expression, where these are the different contents that the expression might express relative to different contexts of use. If the expression has relatively many candidate contents, then this provides evidence that it is *context sensitive*, and if it has relatively few, then this provides evidence that it is *context insensitive* (although it is potentially ambiguous if it has more than one candidate content). For example, there are as many candidate contents for "I" as there are speakers of English, and as many for "light" as there are standards for counting as a light colour or a light weight. There are comparatively few candidate contents for "book": there is one content yielding the collection of abstract works, one content yielding the collection of physical book-copies, and potentially several more.

Concerns might arise about the imprecision of the instructions for carrying out this test. It is unclear how to reliably estimate candidate contents, and exactly how many candidate contents are required in order to provide evidence of context sensitivity. The results should therefore be interpreted with care, and employed in combination with the results of other tests.

2.5. The Inter-Contextual Disquotation Test

Cappelen and Lepore (2003; 2004; 2005) develop a test that applies to unambiguous target expressions.[17] One tries to identify some sentence *s* containing the target expression such that a speaker can truthfully utter a version of the following schema at some context: "There can be false utterances of '*s*' even though *s*."[18]

17. Cappelen and Lepore discuss two further tests. Since their three tests sometimes appear to disagree about whether a target expression is context sensitive (see Hawthorne 2006; Leslie 2007: 144), it makes sense to choose one of the tests to rely upon. I focus on their first test because their *inter-contextual indirect reports* test has been criticised due to complications surrounding the assessment of indirect reports (see Szabó 2006: 37–8; Cappelen and Hawthorne 2009: 42; Viebahn 2013), and their *collective descriptions* test is closely related to the zeugma test (see §2.2).

If there is some such *s*, then this provides evidence that the target expression is *context sensitive*, and if there is no such *s*, then this provides evidence that the target expression is *context insensitive*. For instance, a true occurrence of the schema is given in (10a) (relative to a context where the speaker is a philosopher), which provides evidence for the context sensitivity of "I". Since it does not seem that a speaker could truthfully utter (10b) relative to any context, (10b) provides evidence for the context insensitivity of "mammals."

(10) a. There can be false utterances of "I am a philosopher" even though I am a philosopher.
b. There can be false utterances of "mares are mammals" even though mares are mammals.

One concern about this test is that assessors often disagree about the verdict, or are unable to reach a clear verdict. For instance, Cappelen and Lepore (2003: 43–45) argue that expressions like "is tall" are classified as context insensitive by their tests, but it is far from obvious that this is the case.[19] Indeed, others have argued that expressions classified as context insensitive by Cappelen and Lepore count as context *sensitive* according to their inter-contextual disquotation test, including proper names, quantifier expressions, "is tall," "ready," and "red" (Bezuidenhout 2006: 8; Szabó 2006: 36; Leslie 2007: 141–142). These observations might raise doubts about whether the application of the test relies exclusively on pre-theoretic, linguistic intuitions available to any speaker of the language.

With five tests now in place, we are in a position to see how they have been used to evaluate linguistic alethic pluralism.

3. Testing Linguistic Alethic Pluralism

Recall that versions of linguistic alethic pluralism can be divided according to the mechanism by which "true" is supposed to express different contents (homonymy, polysemy or context sensitivity) and the type of truth-bearer that can end up in one extension of "true" but not in another extension (non-factual or paradoxical truth-bearers). Factual alethic pluralists and paradoxical alethic pluralists disagree about the sorts of sentences and contexts that will cause "true" to express different contents. Hence the tests for the different mechanisms would need to each be applied to "true" in one setting that evaluates the predictions of

18. The contents expressed by any potentially context-sensitive non-target expressions must be held fixed for all of the relevant contexts (Cappelen and Lepore 2003: fn.9).

19. It is not implausible to claim that "There can be false utterances of 'Yemi is tall' even though Yemi is tall" gives a true occurrence of the schema, relative to a context where the speaker is engaged in a discussion about tall five year olds and it is true that Yemi is tall for a five year old.

factual alethic pluralists, and in another setting that evaluates those of paradoxical alethic pluralists.

To be clear, I intend to remain neutral about whether it is an advisable methodological strategy to evaluate linguistic alethic pluralism via these tests. On the one hand, the tests are regularly used by natural language theorists as a means of investigating whether or not a target expression is ambiguous or context sensitive. When applied carefully, they are taken to have some reliability. On the other hand, features particular to "true"—for instance, the highly specific contexts in which it is expected to express distinct contents (see §3.4)—might make these tests ill-suited for uncovering any ambiguity or context sensitivity. The current section aims to assess whether theorists' prior applications of these tests provide evidence relevant to linguistic alethic pluralism, and to draw some further modest conclusions about its prospects. As discussed in the conclusion, any doubts about the applicability of these tests to "true" further undercuts the potential for empirical evidence in support of linguistic alethic pluralism to emerge.

First, I consider the contradiction, zeugma and related characters tests (§3.1–3.3). Then, I pause for an interim summary of the lack of evidence that "true" is ambiguous (§3.4). The candidate contents and inter-contextual disquotation tests are considered next (§3.5–3.6), before a summary of the lack of evidence that "true" is context sensitive (§3.7).

3.1. Applying the Contradiction Test

Both factual and paradoxical alethic pluralists have claimed that the contradiction test supports the ambiguity of "true," although others have disputed this claim for factual alethic pluralism. First, Kölbel (2008; 2013) argues that a version of the contradiction test provides evidence that "true" is either lexically ambiguous or context sensitive.[20] Kölbel (2008: 370) states that "[m]any users would accept, or make, utterances like the following two," and that occurrences of such sentences "do not seem to be incompatible":[21]

20. Kölbel also takes his arguments to be consistent with the view that "true" regularly contributes to pragmatic inferences (see fn.5 above).

21. He also briefly discusses the results of a questionnaire that he distributed to three groups of students participating in a philosophy course on truth. Each time, more than half of the students selected "true" (as opposed to "false" or "no answer") for the second and sixth statements on the questionnaire:

(i) Ali G is very funny.
(ii) Statements (judgements, beliefs, propositions) concerning what is funny can't be true or false.

(11) a. That's true. (Where someone has just uttered "Chaplin is funny.")
b. Statements (judgements, beliefs, propositions etc.) about what is funny cannot be true or false.

He takes these results to provide evidence that some occurrences of "true"—such as the one in (11a)—express a "deflationary" notion of truth, while others—such as the one in (11b)—express a "substantial" one. He additionally claims that the collection of truth-bearers that count as true in the substantial sense is a proper subclass of the collection that count as true in the deflationary sense, consisting of all and only the factual truth-bearers.

The reason that Kölbel's version of the test could not provide evidence for lexical ambiguity in particular is that the context might shift between occurrences of (11a) and (11b).[22] This would allow two occurrences of a context-sensitive target expression to express distinct contents. Yet §2.1 advised applying the test by seeking a single context for which a sentence of the form "*DP* is *XP*, but *pro* isn't *XP*" is non-contradictory, where '*pro*' is a pronoun understood to pick out an item fixed by "*DP*." Applying the test in this manner reduces the likelihood of a context shift: assessors are instructed to envisage a single context, and any context shift would have to occur in the middle of a simple sentence. The best strategy for evaluating factual pluralism would be to apply the contradiction test as advised, along with other tests that identify ambiguity. Tests that identify context sensitivity can be separately applied later.

Boscolo and Pravato (2016: 48) apply the contradiction test in the correct manner in order to assess Kölbel's view. They conclude that "[i]t does not seem that an ordinary English speaker can utter [(12)] without contradiction":

(12) "Chaplin is funny" is true, but it is also not true.

On the face of it, a factual alethic pluralist who takes "true" to be lexically ambiguous predicts that (12) should pass the contradiction test as smoothly as sentences like "That's a bank, but it's not a bank".

Yu (2016: 225–226)—a paradoxical alethic pluralist—claims that "true" passes the contradiction test when applied to λ_γ, which names the contextual Liar sentence that reads "λ_γ is not true in any context":

Kölbel (2013: 371) presents a third version of this test that involves a single sentence, which he again takes to be coherent:

(iii) It's true that Ali G is funny, though, actually, it's not true, because judgments concerning matters of taste do not admit of truth or falsehood.

22. The context might also shift between the occurrences of (i) and (ii) in fn.21, or midway through (iii). While it is unusual for context to shift midway through a sentence, the number of clauses in (iii) and the inclusion of "though, actually," makes it fairly natural for an assessor to accommodate a change in the speaker's assumptions and a resulting context shift.

(13) "λ_γ is not true in any context" is not true and "λ_γ is not true in any context" is true.

Yu claims that "true" is polysemous between a "correspondence" and "disquotational" character (2016: 172), such that the collection of truth-bearers that count as true in the correspondence sense is a proper subclass of those that count as true in the disquotational sense.[23] He thinks that, relative to a context in which the Liar reasoning is considered, (13) is non-contradictory: the contextual Liar sentence does not say anything true in the correspondence sense, but does say something true in the disquotational sense.

A difficulty with Yu's argument is that sentences such as (13) *are* intuitively deemed contradictory when they occur as the conclusion of Liar-style arguments. Indeed, theorists go to great lengths to either block the derivation of the apparent contradiction, show that there is no genuine contradiction, or argue that the derivation of a contradiction is unproblematic. Were it to be obvious that a sentence like (13) could be understood as non-contradictory, it would be unclear why Liar-style paradoxes would be considered paradoxical in the first place.

In sum, the contradiction test provides no clear evidence that "true" is lexically ambiguous. Indeed, those who are unable to imagine any context in which (12) and (13) can be uttered without contradiction will judge the test to provide some evidence that "true" is *unambiguous*.

3.2. Applying the Zeugma Test

While the only existing application of the zeugma test to factual pluralism takes the results to oppose the ambiguity of "true", an existing paradoxical pluralist reaches the opposite conclusion. First, Boscolo and Pravato (2016: 47) claim that the zeugma test indicates that "true" is not homonymous between a construal that applies to factual truth-bearers and one that applies to non-factual ones concerning what is funny, due to the absence of zeugma elicited by (14):

(14) That Chaplin is funny and that Chaplin died in 1977 are true.

23. Yu claims that "true" is "further polysemous between the meanings corresponding to the subconcepts of the concept *truth* generated by the indefinite extensibility of that concept" (2016: 161–162; also see 2021: 562). In other words, while Liar-style sentences motivate the view that "true" is polysemous between the characters $true_1$ and $true_2$—which Yu takes to give correspondence and disquotational truth respectively—the potential to form revenge paradoxes that involve $true_2$ (etc.) motivates treating "true" as additionally polysemous between $true_3$, $true_4$, etc. Yu (2016: 168–169) also endorses the view that "true" is context sensitive, although he does not develop this aspect of his proposal.

However, they acknowledge that the zeugma test faces difficulties in identifying polysemy for sentences where characters are very closely related, or one character is more general than another (see fn.16 above). For instance, Kölbel's analysis of "true" predicts that (14) may express content that holds at the actual world provided "true" is disambiguated as the more general, deflationary construal.

Next, Yu (2016: 227–228) claims that (15) is clearly zeugmatic, suggesting that "true" is ambiguous between a construal that applies to non-paradoxical sentences and one that applies to the contextual Liar sentence λ_γ:

(15) "Grass is green" is true and "λ_γ is not true in any context" is too.

Even if Yu is correct that (15) seems odd when presented out of context, it is unclear whether it is zeugmatic. An alternative view would be that it displays a form of pragmatic oddness attributable to the lack of obvious thematic relatedness between the two conjuncts and the resulting difficulty in accommodating a natural question under discussion (see §2.2).

There is some evidence in favour of this alternative view. First, providing a natural question under discussion—such as "What are two sentences that are true?"—appears to reduce the oddness, despite the fact that zeugma typically persists when a suitable context is specified. Second, consider a variant involving the sentence "δ is not true in any context" where δ names a non-paradoxical sentence (say, "I am not here now"). Even when presented out of context, (16) does not sound particularly odd:

(16) "δ is not true in any context" is true and "λ_γ is not true in any context" is too.

A natural explanation for the reduced oddness of (16), compared with (15), would be the increased thematic similarity (i.e., the topic of sentences that are arguably not true as used in any context) between the two conjuncts. Nevertheless, a paradoxical alethic pluralist who accepts that (15) is pragmatically odd rather than zeugmatic might reiterate that polysemous words with closely related characters can fail to produce zeugma in some settings.

In sum, if zeugma is absent for some target sentences—such as (14) and (16)—then this would provide evidence against the view that "true" is either homonymous or polysemous between distantly related characters. This absence of zeugma remains compatible with the view that "true" is polysemous between closely related characters. The test only provides evidence that "true" *is* polysemous if zeugma is elicited by some target sentences of the type predicted by factual alethic pluralists and by paradoxical alethic pluralists. No candidates for the former type of sentence have been found, although Yu presents (15) as a candidate for the latter. Yet a plausible alternative explanation attributes any oddness

elicited by (15) to pragmatic factors rather than zeugma. Hence the polysemy of "true" cannot be ruled out by the zeugma test, but receives no clear support from it either.

3.3. Applying the Related Characters Test

The related characters test has not been used to evaluate factual alethic pluralism, although an existing paradoxical pluralist takes it to support the polysemy of "true." Given that the test is insensitive to the sorts of settings in which "true" expresses different contents, it may be used to evaluate factual alethic pluralism and paradoxical alethic pluralism in tandem. At the same time, the fact that the test requires a comparison of hypothesised characters means that its outcome will depend on each linguistic alethic pluralist's specific views about the way in which the characters differ.

Yu (2016: 233) claims that a metaphorical extension relation holds between the two hypothesised characters, because "an initial meaning corresponding to *correspondence truth* gives rise, by a combination of widening and metaphorical extension, to an extended meaning corresponding to *disquotational truth*." Yu does not elaborate on this idea, and it is difficult to see how a truth-bearer that is true in a correspondence or other substantive sense might be deemed metaphorically true in a deflationary sense (or vice versa).

Perhaps a linguistic alethic pluralist could try to identify another typical relation that holds between a deflationary character and a character that yields a more substantive truth property, or between some other hypothesised pair of characters. It seems unlikely that any of the first three types of relations—constitutive, causal or instantiating—could hold between the different characters: any character associated with "true" will yield extensions consisting of truth-bearers, and truth-bearers are presumably not the kind of physical objects that stand in these type of relations. A pragmatic strengthening relation would mean that one character often leads to a pragmatic inference that the relevant truth-bearer is true in the other sense, and this inference was eventually encoded in a separate character. But uses of "true" do not obviously contribute to these sorts of pragmatic inferences (see fn.5), and no theorist has argued otherwise.

Hence the related characters test provides no evidence in support of the polysemy of "true." Part of the difficulty is that the relations that could most plausibly hold between its characters involve metaphorical extension and pragmatic strengthening, which are particularly challenging to identify. An inability to detect such relations might be attributed to this difficulty, or to the absence of any typical relations holding for "true." Of course, a linguistic alethic pluralist might try to argue that some alternative relation holds between multiple charac-

ters for "true"; for instance, perhaps a more general form of resemblance holds between truth-bearers that are true in a deflationary sense and ones that are true in some substantive sense.[24] Yet the absence of any typical relations would also be compatible with the non-polysemy of "true."

3.4. Interim Summary: Evidence that "True" is Unambiguous

The tests discussed so far do not support the view that "true" is ambiguous. At this point, linguistic alethic pluralists who posit ambiguity might try to seek and apply further tests, additional to the ones discussed in §2.1–2.3.[25] The possibility cannot be excluded that further tests could be found that provide support for ambiguity. Yet even if this turned out to be the case, the linguistic alethic pluralist would need to explain why the classic tests used by natural language theorists do not provide this support. On one hand, a lack of evidence for ambiguity does not in itself constitute evidence for non-ambiguity. On the other hand, one might think that in the absence of positive evidence for an expression's being ambiguous, the default assumption should be that it is unambiguous. Yet I believe that a stronger argument can be mounted in favour of the view that "true" is unambiguous.

The argument begins by observing a disanalogy between the interpretation of "true" and paradigm ambiguous expressions. Kölbel (2008: 373) himself mentions this disanalogy, before attempting to mitigate it: if an expression is ambiguous then "interpretation usually requires a decision in favour of one of the readings. Not so in the case of 'true,' it seems."[26] His response is that, in fact, disambiguation is often unnecessary for polysemous expressions like "dog," such as when "Yash is a dog" is interpreted at a context where it is known that Yash is

24. I thank an anonymous reviewer for pointing out the potential for this sort of strategy.

25. For instance, an anonymous reviewer mentions the following test, from Machery and Seppälä 2011: where "*A*" is a plural noun phrase and "*B*" is a potentially polysemous plural noun phrase or adjective, check whether speakers are willing to assent to a pair of sentences of the form "In a sense, *A* are *B*" and "In a sense, *A* are not *B*." A linguistic alethic pluralist might then claim that speakers are willing to assent to "In a sense, sentences like 'Corndogs are tasty' are true" and "In a sense, sentences like 'Corndogs are tasty' are not true" (or to variants where "*A*" is replaced with "non-factual truth-bearers," "claims about taste," "paradoxical sentences," etc.). Though given that Machery and Seppälä (2011) use the test with the aim of identifying words that are associated with multiple concepts, it is unclear whether the test is designed to isolate a particular type of semantic variability.

26. Lynch (2006: 80) raises a similar objection: an advocate of a view like Kölbel's or Yu's "must say what facts about usage determine, for any particular ascription of the truth predicate, *that it is either a robust concept or the minimal concept of truth that is being expressed*." Scharp (2013: 68–72) develops the same kind of argument against the view that "true" is ambiguous, although he also takes it to target the view that "true" is context sensitive (see my comments on this matter below).

a male animal. He claims that treating "true" as polysemous rather than homonymous then "explains why the ambiguity of "true" is not easily recognized, and it also explains neutral cases, i.e., cases where we feel no need to disambiguate" (2008: 375). Initially, it seems that the potential to avoid a decision about how to understand "true" might be explained by—or even motivate—the hypothesis that "true" is polysemous between closely related characters.

According to the theory of meaning set out in §1.1, a sentence can only be interpreted if every expression is assigned some unique character and content. Given the standard view that polysemous expressions are associated with multiple characters, it follows that "both speaker and hearer must select a reading (the same reading) if the sentence is to play its part in a normal conversational exchange" (Cruse 1986: 51).[27] Hence the standard view of meaning and polysemy rules out cases where polysemous words are used without disambiguation. If Kölbel is right that there are "neutral" cases involving "true", then "true" could not count as polysemous.

An alternative view has recently been proposed, where at least some polysemous words are associated with a single, underspecified character that covers all of the more specific construals.[28] The requirement to assign a character could then be satisfied by assigning an underspecified one. Yet advocates of this position grant that further specification of the character will sometimes be necessary for interpretation, such as when plausibility emerges with one specific character but not another. Kölbel (2008: 374–376) states that users will recognise the polysemy of words like "dog" and "true" when they are confronted with appropriate examples. If factual and paradoxical alethic pluralists are right, then plausible interpretations of (18a)–(19b) require distinct disambiguations of "true," just as (17a)–(17b) do for "dogs":

(17) a. Dogs mature later than bitches.
b. Dogs can become pregnant at twelve months.

(18) a. No statements about humour are true.
b. It's true that corndogs are tasty.

27. Expressions from the surrounding discourse often help a hearer to work out what character the speaker intended. When these expressions do not favour a particular disambiguation, and the sentence has plausible interpretations whichever character is assigned, a single character would still be selected: in such cases, empirical evidence suggests that hearers are biased towards the more commonly intended character (Justeson and Katz 1995, Duffy et al. 1988). In cases where any one of the characters would suffice, assessors might not notice their choice of character unless prompted to do so.

28. See Frisson 2009. While some experimental results have been argued to support this position (e.g., Frazier and Rayner 1990; Klepousniotou et al. 2008), other results support the standard view of polysemy (Foraker and Murphy 2012; Klein and Murphy 2001).

(19) a. No paradoxical sentences are true.
b. The Liar sentence *L* is true.

An assessor should recognise the need to disambiguate the target word, and which disambiguation she has selected, for at least one sentence in each pair.[29] While this appears to happen for (17a)–(17b), it is far from clear that it happens for (18a)–(19b).

In sum, if the standard view of polysemy is correct, then the existence of any cases where users do not decide between multiple characters for "true"—as in the "neutral" cases raised by Kölbel—would indicate that "true" is non-polysemous. If the alternative view of polysemy is correct, then assessors' failure to recognise a disambiguation process for "true" in cases where a specific character is required for plausibility—as in (18a)–(19b)—would indicate that "true" is non-polysemous.

We might ask whether parallel considerations raise doubts that "true" is context sensitive. A context-sensitive word has a character that maps different contexts to different contents because some parameter provided by the character takes different values in different contexts. But it is widely thought that the values of at least some of these parameters are fixed by contextual factors that go beyond users' intentions (see Glanzberg 2007; Viebahn 2020). The view that "true" is associated with this sort of parameter would be compatible with claiming that users need not make a decision about the value, or even be aware of which value the context has assigned. On the other hand, it is generally accepted that it is speakers and hearers—not contexts—that select characters. So the preceding argument can only convincingly target the view that "true" is ambiguous. In light of this argument, and the absence of evidence that "true" is ambiguous, the grounds for suspecting that "true" is unambiguous are stronger than merely the claim that this should be the default hypothesis for any expression. The remainder of §3 considers whether there is evidence that "true" is context sensitive.

At this point, it is worth drawing attention to a hypothesis that paradoxical alethic pluralists are likely to deploy when theorists attempt to apply the current tests. The hypothesis is that the tests cannot be used to elicit reliable linguistic intuitions from speakers when applied to Liar-style sentences and paradox-generating contexts. After all, Liar-style sentences are generally not used in ordinary discourse.[30] Yet the tests are designed to probe speakers' linguistic intuitions

29. Perhaps an assessor will select a certain specific character as a default (say, because it is the more common one, or because it is primed by contextual features). Then, she might only detect the need to choose between multiple specific characters when plausibility requires the other one.

30. For instance, Schlenker (2010: 376) observes that "the cognitive system that underlies a speaker's semantic intuitions is not 'designed' to deal with paradoxes. […] the speaker can still come to *some* semantic judgments about sentences that involve paradoxes. And these judgments are undoubtedly constrained by the grammar of his language, though it might well be that the

about the contents expressed by target words, based on their ordinary usage. If the outcome of a test does not support the prediction of a paradoxical alethic pluralist, then this hypothesis might be deployed.

Factual alethic pluralists cannot rely on a similar hypothesis: speakers regularly make claims pertaining to factual and non-factual truth-bearers in ordinary discourse. Also, paradoxical alethic pluralists cannot use this hypothesis in order to maintain that "true" is ambiguous: if characters are selected by language users, then theorists who utter or interpret Liar-style sentences should recognise a disambiguation process for "true", whether or not ordinary users have reliable intuitions about occurrences of those sentences. The described hypothesis is useful only to paradoxical alethic pluralists when they seek to defend the view that "true" is context sensitive.

There is a cost to developing a version of paradoxical pluralism that relies upon this hypothesis; but a discussion of this cost is reserved for §3.7. Now, we return to the tests.

3.5. Applying the Number of Candidate Contents Test

While the candidate contents test has not been used to evaluate factual alethic pluralism, an existing paradoxical alethic pluralist takes it to support the polysemy and context insensitivity of "true". Yu gives the following argument:[31]

> only some of the actual and potential concepts in the hierarchy are actual concepts of truth. Perhaps *truth*, *truth'*, *truth"*, and a few more are actual, but the remaining are merely potential. Accordingly, 'true' may only have a small number of candidate meanings […] Insofar as the potential meanings are not actual, they are not candidate meanings. (Yu 2016: 232)

Yu's idea seems to be that the revenge paradoxes explicitly formulated at any context involving the actual world never surpass some comparatively low "level", hence the number of characters (and thus candidate contents) that are actually associated with "true" are similarly limited.

The trouble is that the proposed analysis of the revenge paradoxes provides the only grounds for thinking that "true" has multiple but few candidate con-

speaker must revise some of his assumptions to treat the problematic sentences." This suggests that any linguistic intuitions that a speaker is able to access will be influenced by higher-level reflection, which might be thought to undermine their reliability.

31. Since Yu claims that "true" is context sensitive in addition to polysemous (see fn.23 above), it is somewhat unclear how this verdict impacts his broader view.

tents. A related version of paradoxical pluralism might hold that *all* of the "concepts in the hierarchy" are "actual concepts of truth", whereupon the number of candidate contents would turn out to be sufficiently high to provide evidence for context sensitivity. Yet applications of the tests are supposed to be independent of post-theoretic considerations. From a pre-theoretic perspective, however, it is far from obvious that there is more than one candidate content for "true". This remains the case whether we focus on uses of "true" in ordinary contexts involving factual and non-factual discourse, or additionally consider paradox-generating contexts.

At this point, paradoxical pluralists might deploy the hypothesis described in §3.4. That is, they might explain the absence of a pre-theoretic recognition of multiple candidate contents by claiming that the test cannot be used to elicit reliable linguistic intuitions when applied to paradox-generating contexts. Still, it would then follow that the candidate contents test could provide no useful evidence regarding the status of "true."

3.6. Applying the Inter-Contextual Disquotation Test

The inter-contextual disquotation test has been used in the literature to evaluate factual pluralism and paradoxical pluralism; in the former case, it was taken to indicate that "true" is context insensitive, and in the latter case, it was taken to indicate the opposite. Boscolo and Pravato (2016: 52–53) present a version where they attempt to describe a scenario in which an individual truthfully asserts that there can be false utterances of "'Chaplin is funny' is true" despite the fact that "Chaplin is funny" is true:

> Smith is saying that "Chaplin is funny" is true and by that he simply means that Chaplin is funny. There is a false utterance of "the judgment that Chaplin is funny is true", not because Smith thinks that Chaplin is not funny but because "Chaplin is funny" is not true in the same sense as "Alghero is in Sardinia" is true. Indeed, "Alghero is in Sardinia" is true because it is an objective fact of the matter; whereas "Chaplin is funny" is true merely because Smith believes it is true, but he is also aware that taste judgments are not objective.

In their judgement, the scenario is unconvincing, so their application of the test does not support the context sensitivity of "true". Unless some sentence that yields truthful utterances of the schema can be found, the test provides evidence that "true" is context insensitive.

Simmons (2018: 30) claims that the inter-contextual disquotation test indicates that "true" is context sensitive in the manner predicted by paradoxical alethic pluralists, although he does not explicitly apply it.[32] If this claim is correct, then a theorist could truthfully utter (20) in the course of paradoxical reasoning (where *L* names the Liar sentence that reads "*L* is not true").

(20) There can be false utterances of "*L* is not true," even though *L* is not true.

As far as I can tell, it is difficult to have any pre-theoretic sense of whether or not a theorist could truthfully utter (20).

Hence the inter-contextual disquotation test does not provide support for the context sensitivity of "true". Paradoxical alethic pluralists might again claim that the test cannot be used to elicit reliable linguistic intuitions when applied to Liar-style sentences. This would entail that the inter-contextual disquotation test can provide no evidence regarding whether "true" is context sensitive in the ways that paradoxical alethic pluralists have maintained that it is. Furthermore, paradoxical and factual alethic pluralists alike might point out that doubts have been raised about the reliability of the test (see §2.5).

3.7. Summary: No Evidence that "True" is Context Sensitive

The last two tests do not support the predictions of linguistic alethic pluralists. The candidate contents test provides no evidence for either context sensitivity or ambiguity, and the inter-contextual disquotation test provides no evidence for context sensitivity. Either "true" does not express different contents in different contexts, or the standard tests employed by natural language theorists are unable to detect the fact that "true" has this feature.

As explained in §3.4, paradoxical alethic pluralists—but not factual alethic pluralists—could provide a plausible explanation of why the tests fail when applied to "true". They hold that the different contents expressed by "true" emerge in contexts involving Liar-style sentences. Since such sentences are not used in ordinary discourse, the tests cannot be used to elicit reliable linguistic intuitions. Perhaps paradoxical alethic pluralism may be upheld, then, whatever the verdicts of the tests. Yet this strategy for upholding paradoxical alethic pluralism has a cost: one must endorse a thesis about natural language that cannot be evaluated via methods that are typically used to test theses about natural language.

32. Simmons (2018: 27–29) does attempt to show that "denotes" passes the test.

4. Further Empirical Methods

The tests discussed up to this point provide no support for factual pluralism or paradoxical pluralism. As mentioned in §2, these tests are typically applied by theorists "from the armchair." The current section considers existing attempts at larger-scale empirical studies. While pluralists might hope that empirical studies provide a more promising strategy for evaluating their view, I argue that significant difficulties surround the design and interpretation of such studies.

Several studies have investigated metasemantic judgements about how English speakers use the word "true," or metaphysical views about truth concepts or properties (see Barnard and Ulatowski 2013; Næss 1938). Such studies gather responses to prompts like "How do you use the word 'true'?" or "If a claim reports how the world is, then it is true." However, these sorts of studies are not well-suited to evaluate linguistic alethic pluralism. The reason is that asking ordinary speakers to reflect on their use of expressions and the nature of those expressions' extensions is different from directly probing their use of language. The former strategy is less likely to provide evidence related to ambiguity or context sensitivity, because the potential for different contents might not be obvious or salient to speakers until they are presented with occurrences of the target expression in contexts that elicit the different contents.[33] For example, responses to prompts like "How do you use the word 'dog'?" or "If something is an abstract literary work, then that thing is a book" might fail to reveal evidence for the polysemy of "dog" or "book."

To my knowledge, the only existing empirical study that attempts to directly probe speakers' linguistic intuitions about "true" is found in Reuter and Brun 2022.[34] Their aim was to investigate whether ordinary speakers apply the word "true" to factual truth-bearers (e.g., the truth-bearer associated with an occurrence of "Jill is at the party") in a way that accords with the predictions of correspondence or coherence theories of truth. They presented participants with vignettes where the main protagonist gives an answer that is either coherent with other relevant beliefs but fails to correspond with reality (in Study 1), or corresponds with reality but is incoherent with other relevant beliefs (in Study 2):

33. Reuter and Brun (2022: 497) raise a similar point in the form of a more general concern: "For many concepts that we possess, we are capable of using them appropriately and without great effort. In contrast, correctly articulating the content of those concepts is difficult and often leads to incorrect or confabulated responses."

34. As mentioned below, the phrasing of the question and responses introduces the risk that the direct target of measurement was still metasemantic judgements concerning "true" or metaphysical judgements about truth.

> **Study 1, Party:** Anne and Robert go to a party late at night. On their way to the party, Anne asks Robert whether any of his friends are at the party. Robert answers that Jill is at the party, because Jill had told Robert a few hours before that she would go. When they arrive at the party, it turns out that Jill had changed her plans, and actually is not at the party.
>
> **Study 2, Party:** Anne and Robert go to a party late at night. On their way to the party, Anne asks Robert whether any of his friends are at the party. Robert answers that Jill is at the party, although Robert had been told by Jill a few hours before that she would not go—a piece of information that Robert completely forgot in that moment. When they arrive at the party, it turns out that Jill had changed her plans, and actually is at the party.

Each study included a pair of vignettes—"Party" and "Rolex"—and 100 participants were randomly assigned to each vignette. Participants were then presented with the question "Was Robert's answer true or false?", and asked to choose between the responses "true," "false," and "not sure". For Study 1, coherence theorists are supposed to predict a significant majority of choices of "true" for both vignettes, whereas correspondence theorists predict a significant majority of choices of "false"; and the predictions for Study 2 are the opposite.

In Study 1, a majority of choices for the Party case (59.6%) and the Rolex case (56.8%) were "true", in accordance with the coherence theory predictions. However, in neither case was there a statistically significant difference from the 50% mark. In Study 2, a majority of choices for the Party case (65.2%) accorded with the correspondence theory prediction of "true," while a majority of choices for the Rolex case (54.2%) accorded with the coherence theory prediction of "false." The results for the Party case, but not the Rolex case, were found to be marginally significantly different from the 50% mark. Overall, Reuter and Brun (2022) conclude that the variance in people's responses indicates that "the term 'true' might be ambiguous: while some people entertain a correspondentist reading of 'true', others hold a coherentist conception" (504).

Interestingly, this conclusion is not one that is typically endorsed by linguistic alethic pluralists. Neither factual nor paradoxical alethic pluralists think that a factual truth-bearer associated with a sentence like "Jill is at the party" could be in two distinct possible extensions for "true". Still, it is debatable to what extent the reported results support the conclusion that "true" is ambiguous in this way. The absence of evidence in support of the predictions of either correspondence or coherence theories does not constitute evidence that "true" is ambiguous between the two senses. More generally, the absence of statistically significant effects in a study should not be interpreted as evidence for any hypothesis. Of course, the unexpected variance in participants' responses

requires an explanation. This variance emerged not only in participants' responses to the same case, but also in participants' responses to the different cases in Study 2, where the studies' sole statistically significant effect yielded some evidence in favour of the correspondence theory's predictions. But an explanation of this variance might take a range of forms other than attributing ambiguity; for instance, methodological issues or task complexity can lead assessors to make incorrect or arbitrary selections. An empirical study could provide direct evidence of ambiguity only by predicting that ambiguity will produce a certain statistically significant effect before showing that the results support this prediction. In short, while the reported results are interesting and surprising, they do not justify any clear conclusions about whether "true" is ambiguous.

Consider a parallel study, where a vignette describing a female member of *canis familiaris* is followed with the question "Is it a dog or not a dog?" and response options "a dog," "not a dog," "not sure." One methodological issue is that the inclusion of the word "dog" in both the question and response options is a potential source of confusion, especially because the polysemy of "dog" would allow it to be understood in different ways. Participants might feel unsure about how to interpret the question and response options. A second methodological issue is that participants are essentially being asked to give metasemantic judgements concerning the applicability of "dog," or metaphysical criteria for doghood. A third issue is that the hypothesis that "dog" is ambiguous does not entail any predictions concerning a significant effect. A study could avoid these issues by including a character in the vignette who says "That is a dog, but it isn't a dog", with participants then required to select a response that measures acceptability or naturalness. Such a study would remove potential sources of confusion from the question and responses, and be a more direct probe of linguistic intuitions. Moreover, the hypothesis that "dog" is ambiguous would predict results that show a significant deviation from the mid-point towards acceptability.

A more promising way of isolating linguistic intuitions about "true" might therefore involve presenting vignettes that include imaginary speakers' utterances of "true", with response options that consist of at least three points on a scale that measures acceptability or naturalness. Hypotheses concerning the ambiguity or context sensitivity of "true" should be formulated that predict significant effects within or across conditions. These hypotheses should also be related to the specific views advanced by existing linguistic alethic pluralists, including factual pluralists and paradoxical pluralists.

Nevertheless, empirical studies along these lines would still face a number of difficulties. First, it is particularly challenging to disentangle linguistic intuitions and metasemantic judgements in the case of "true," since occurrences of it can involve metasemantic evaluation even when uttered by a character in a vignette. Second, it is not straightforward to develop versions of the tests from §2 that

are suitable for empirical studies involving ordinary speakers. A final challenge concerns eliciting reliable linguistic intuitions in relation to the types of contexts required to evaluate specific versions of linguistic alethic pluralism. Paradoxical pluralists would require vignettes that involve Liar-style sentences, but are likely to claim that such sentences go beyond the ordinary uses of "true" about which naive speakers have reliable linguistic intuitions (see §3.7). For all of these reasons, it is far from clear how to design empirical studies that could evaluate linguistic alethic pluralism.

Conclusion

Linguistic alethic pluralists claim that the word "true" expresses different contents in different contexts. Factual alethic pluralists claim that these differences emerge between sentences associated with factual and non-factual truth-bearers, whereas paradoxical alethic pluralists claim that they emerge between non-paradox-generating and Liar-style sentences. The expressing of different contents might be attributed to ambiguity or context sensitivity. A number of tests that natural language theorists use to detect such mechanisms have been applied to "true". These tests produced no clear evidence that "true" is ambiguous or context sensitive. I also gave a further argument for thinking that "true" is unambiguous. Finally, I argued that existing empirical studies provide no support for linguistic alethic pluralism. Moreover, several challenges make it unclear how to design empirical studies that could effectively evaluate pluralism.

In light of these results, it is difficult to see how to uphold factual alethic pluralism. On the other hand, paradoxical alethic pluralists might uphold their view by claiming that tests and studies that target linguistic intuitions produce unreliable results when applied to Liar-style sentences. The cost of this approach is that a pre-theoretic, empirical evaluation of paradoxical pluralism is ruled out. Hence the most promising way to maintain linguistic alethic pluralism is to commit oneself to three claims. First, "true" is context sensitive, but is not ambiguous. Second, "true" expresses the same content when it occurs in any non-paradox-generating sentence, but possibly different contents when it occurs in Liar-style sentences. Third, examining occurrences of "true" in natural language cannot be used to evaluate the first two claims.

Is the resulting version of linguistic alethic pluralism attractive? It is not motivated by observations related to natural language. It will be of no help to those who wish to defend or oppose deflationism as a thesis about occurrences of "true" in ordinary, non-paradoxical discourse. Neither will it be of help to metaphysical alethic pluralists who think that different occurrences of "true" express distinct contents (or properties or concepts) linked to different domains of ordinary

discourse. It is only helpful to those who have theoretical motivations to give a particular analysis of semantic paradoxes, and who do not hope to acquire pre-theoretic evidence for their analysis from observations about natural language.

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