Experiential Content

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Abstract

This paper develops and motivates an Expressivist theory of experiential talk and thought. According to this theory, one way for S to think that o tastes a way w is simply for o to taste w to S. When o tastes w to S (and, therefore, S thinks that o tastes w), S can express this thought, by saying that o tastes w. The speech act of wherein S expresses the thought that o tastes w, so understood, must be distinguished from the speech act wherein S says or asserts that o tastes w *to them*. This paper develops a formal model of these informal claims, and it argues that the resulting theory fits well with the linguistic data—no worse than the best propositional theories when it comes to representing quantificational readings of attitude ascriptions, and strictly better than the best propositional theories when it comes to representing non-quantificational (or "experiential") readings.

1 Introduction

We use language to talk about how our perceptual experiences are. More precisely, we use language to express (degreed or graded) features of our experiences of perceptual stimuli.[1]

(1)   The abgoosht is (less) tasty (than yesterday).

(2)   That tomato looks (more) red (than green).

(3)   The voice on the recording sounds (more) like 'yanny' (than 'laurel').

Although this aspect of language use is of central, even paramount, philosophical interest, our understanding of it remains at a rudimentary level. We are lacking a plausible (and sufficiently general) theory of the *content* of these speech acts, and the *thoughts* or *states of mind* they function to express. Consider the phenomenon known as the Acquaintance Inference (hereafter the "target" phenomenon). For a range of gradable predicates, which I will term Gradable Predicates of Experience (GPEs), predicating a GPE of an object strongly implies one has a perceptual experience, of the right sort, of the object.[2]

(4)   #The abgoosht is tasty, but I haven't tasted it.

(5)   #The tomato looks red, but I haven't looked at it.

(6)   #The voice on the recording sounds like 'yanny', but I haven't heard it.

It is, in some sense, a truism that, when someone is using a sentence to express a feature of their perceptual experience of some stimulus, they are expected to *have* a perceptual experience of that stimulus (which has that feature). And yet accommodating this basic truism has proved a surprisingly recalcitrant task, for those who have proposed theories of what someone expresses—the *content* of the speech act/thought—when they express the way the abgoosht tastes to them.

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[1]This paper deals mainly with autocentric, as opposed to exocentric, readings of such language. As Ninan (2014) explains the distinction (see also Lasersohn 2005): "[S]uppose you ask me how Joe's trip to Chicago is going. I might reply by saying, "He's having a great time. He had a delicious meal at his favorite restaurant last night... *Exocentric* uses [like this] contrast with the more usual *autocentric* uses, wherein the speaker judges the matter by employing *her own* tastes and sensibilities" (291–2, my emphasis).

[2]This problem was first discussed by Pearson (2013); Ninan (2014). I use the '#' annotation to indicate a judgment of *default* unacceptability or infelicity. The annotation should not be taken to indicate that these sentences are unacceptable at any context of utterance whatever. More on this qualification below.

This paper will propose an Expressivist theory of experiential content (and a semantic model for, or formalization of, the theory). The theory's key thesis is that a speaker making a statement with an (unrelativized) GPE is ordinarily interpreted as expressing *a way of experiencing a perceptual stimulus*; the speaker of (1) is ordinarily interpreted as expressing the feature x's taste experience of the abgoosht has, when its *degree of tastiness* in x's taste experience—the degree to which x likes its taste, or finds it tasty—is sufficiently high. The paper pursues this thesis in a semantic model, on which an experiential content—a way of experiencing a perceptual stimulus—is modeled as a degreed feature or property of a perceptual experience (of the right type).[3] The infelicity of cases like (4)–(6) is here accounted for as a pragmatic phenomenon, not unlike pragmatic presupposition, that arises from the compositional semantics of a GPE, as used by a speaker in a standard context of utterance, given plausible norms governing the speech act type of expressing an experiential content.

A theory of GPEs built on what I described as the "key thesis" does far more than accommodate a truism about experiential language. The theory developed here yields: (i) a plausible understanding of the semantic categories of autocentricity and evaluativity, and an explanation of the divergent behavior of sentences of these categories with respect to linguistic expressions of disagreement; (ii) a compositional account of how the acquaintance requirement projects through restrictable situational/intensional quantifiers; (iii) a semantic template for theorizing and representing *experiential* readings of attitude ascriptions embedding GPEs (including syntactically complex GPEs, like 'looks red'), which are attested, but basically untheorized in the semantics literature. This represents progress in the search for a philosophical theory of experiential content (and how it embeds). The Expressivist theory delivers.

Why 'Expressivism'? I will argue that a speaker who says that the abgoosht is tasty should not generally be understood as meaning (or expressing or proffering) a *proposition* (which is true in a context c iff the abgoosht tastes/would taste good to a c-relevant experiencer or experiencers).[4] None of the explanations offered in this paper involve assuming that, when a speaker asserts in c that the abgoosht is tasty, the speaker has said something that is strictly speaking evaluable for truth in c.[5] Instead, they are understood as expressing a feature of a (indeed, their) perceptual experience of the abgoosht. More carefully, they are to be understood as *expressing a way that the abooghst can taste to someone* (and thereby, given a plausible norm on expressing a feature of a perceptual experience, expressing how the abgoosht tastes to them)—a speech act that, I will argue, we must distinguish from the speech act of asserting or informing their addressee that the abgoosht tastes that way to them. Finally, I will argue that the truth conditions of experiential readings of attitude reports (like 'Dad thinks the abgoosht is tasty') do

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[3]In calling these features 'degreed', I mean that these features are to be understood (and will be understood here) in a scalar framework, where properties of perceptual experiences are understood by reference to scale structures (representing, e.g., the degree to which an object of taste experience is good-tasting to someone). The treatment of GPEs as denoting degree measures (and the suggestion that the Acquaintance Requirement be understood as a definedness condition on an experiencer-relative degree measure) owes to Bylinina (2017).

[4]Although this assumption is nigh-on universal in the literature, Clapp (2015) argues directly for an Expressivist semantics and pragmatics for PPTs, on broadly metasemantic grounds. PPTs, he holds, are essentially semantically incomplete—"without supplementation" a PPT "falls short of a *complete* intension", i.e., something evaluable for truth or falsity. Though I am sympathetic to that argument, I don't make it here. Franzén (2018) holds that utterances like 'St Mark's is beautiful' should be understood as expressing affective states that presuppose experience (though he remains agnostic on semantic questions).

[5]*Contextualists* about 'tasty' hold that, when the speaker asserts in c that the abgoosht is tasty, they are asserting the proposition that is true at c iff the abgoosht tastes good to the c-relevant experiencer(s). *Relativists* hold that such a speaker is asserting the proposition that is true at a context of assessment c' iff the abgoosht tastes good to the c'-relevant experiencer(s); Relativists differ from Contextualists in holding that contexts of assessment are to be distinguished from contexts of utterance (and that the truth of an utterance is to be assessed relative to the context of assessment, rather than the context of utterance).

not involve a relation between an agent and a propositional content[6] (a proposition that is true just when the abgoosht tastes/would taste a certain way to a relevant experiencer or experiencers). Instead, they require nothing more than their subjects' *satisfaction* of the experiential features semantically encoded in their complements.

Here is a preview of the paper. §2 presents some pragmatic theories of the target phenomenon, and suggests that such theories leave important aspects of the phenomenon unexplained. After that, I will begin to explore a semantic (in particular, semantically presuppositional) account of the target phenomenon. §3 begins with a presuppositional proposal for lexicalized GPEs like 'tasty' from the semantics literature and proposes a semantic and pragmatic twist to it, by proposing (i) to interpret unrelativized GPEs as *semantically unrelativized* (i.e., as denoting ways *someone* can experience an object of their perception); (ii) a minimal Sincerity-based pragmatics for the speech act of expressing a way someone can experience an object of their sense perception). §4 gives a semantic account of how the presuppositional content of GPEs projects under certain embeddings. §5–6 identify a range of operators (in particular, experiential attitude verbs) through which the acquaintance requirement of a GPE projects, and it offers a semantic account of these embeddings. (I use the opportunity here to extend our theory of GPEs to syntactically complex, or non-lexicalized, GPEs, like 'looks bent'.) On the theory of complex GPEs I propose, verbs like 'thinks', 'looks', 'tastes', 'feels', and 'sounds', have experiential meanings, which allow them to compose with phrases denoting ways someone can experience a perceptual stimulus (as 'bent', 'tasty', 'sour', 'sharp', 'loud', ...) to yield phrases that can be used to attribute *experiential attitudes*—ways of experiencing perceptual stimuli—to their subjects. Experiential readings of attitude reports are attested, but unaccounted for in this literature, so this represents a fairly clear empirical advance. The paper ends with a look at the metasemantic questions raised by our analysis of GPEs like 'looks bent'. I use these reflections to make the point that natural language, understood aright, is not as clearly biased against philosophical theses about the mind, like Physicalism and Intentionalism, as is commonly thought.

2   Pragmatic Accounts

This section briefly looks at two related pragmatic accounts of the target phenomenon—Ninan's Epistemic Account and Kennedy and Willer's Counterstance Contingency Account. In both cases I suggest these theories leave important aspects of the target phenomenon unexplained. So there is some reason to consider a semantic account of the phenomenon, which is what I'll pursue in the remainder of the paper.

2.1   The Epistemic Account

A natural hypothesis about why statements with GPEs imply perceptual acquaintance, as in (4)–(6), is that perceptual acquaintance is the normal epistemic basis for making a statement with a GPE. That is the tentative suggestion of Ninan (2014), which utilizes the following two relatively plausible principles about the GPE 'tasty'.

> **Acquaintance Principle (AP)**: Normally, in an autocentric context c, s_c knows (at t_c in w_c) whether o is tasty only if s_c has tasted o prior to t_c in w_c.

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[6] Here and throughout I use 'proposition' and 'propositional content' to pick out a specific *semantic type*: the type a sentence has when it has a truth condition, relative to a context of utterance. I note in passing that there are other reasonable ways of using 'propositional content'—for example, as picking out a range of semantic types (i.e., as being of polymorphic semantic type). I would not deny that an attitude like thinking the abgoosht is tasty has a propositional content in this second, polymorphic sense.

Knowledge Norm: For all contexts c, s_c must[:] assert p only if s_c knows p at t_c in w_c. (Ninan 2014: 302)

"Together, these two claims predict that, in [normal] autocentric contexts, one can assert that something is tasty only if one has tasted it" (Ninan 2014: 302). On this account, a context in which a speaker asserts that o is tasty, and denies that they have tasted o, is a context in which the speaker represents themself as knowing how o tastes, while expressly denying that they have the normal sort of epistemic basis for knowing how o tastes. This account thus predicts that, absent substantial contextual priming, it will be difficult to coherently interpret a speaker who asserts a claim like (4) (but also that, given the right sort of priming, a coherent interpretation will be available).

Here are two considerations against Ninan's account. An account of the target phenomenon should not take the form of a list of independent stipulations, of the form of AP, for each expression that exhibits the target phenomenon. We require a specification of the *class* of expressions which exhibit the target phenomenon (and for which acquaintance, in the relevant sense, is required). We could try generalizing AP to predicates that are used in a certain "experiential" way, perhaps along the following lines:

Generalized Acquaintance Principle (GAP)

Normally, if T is a predicate that, in c, is used by a speaker s_c to express a feature of s_c's perceptual experience of some o (at t_c in w_c), s_c knows (at t_c in w_c) whether o is T only if s_c has the right kind of perceptual experience of o (at t_c in w_c).

GAP would, however, appear to *short-circuit* the need for an epistemic account of the target phenomenon. If T is an experiential predicate, in the sense suggested by GAP, a speaker appears to violate a prosaic *sincerity condition* on the speech act of expressing a feature of perceptual experience—*don't express perceptual experiences you don't have*—if they say that o is T without having had a perceptual experience of o, at t_c in w_c (more on this below). I am certainly not opposed to isolating GPEs by appeal to features of their use (in particular, the fact that they are used by speakers to express features of their perceptual experiences); this is basically how I will propose to isolate GPEs in this paper. It is just to observe that making use of a principle like GAP would sit more easily with an account of the target phenomenon other from Ninan's.

More worryingly for the epistemic account, *inferential knowledge* of the relevant sort is typically cheap: there is nothing abnormal about supposing that the speaker knows inferentially that a certain apple (say, of the Red Delicious cultivar) looks red.[7] Ordinarily, to have such knowledge, it is enough to know that the apple is typical of the cultivar. It is striking that, even *stipulating* a context in which the speaker knows inferentially, rather than perceptually, that the apple looks red, the target phenomenon remains.

(7)   [The speaker hasn't seen the apple, but has impeccable evidence that it looks red.]
    a. Although I haven't looked at the apple, I know that it looks red.
    b. #Although I haven't looked at the apple, it looks red.

This contrast goes unexplained by the epistemic account.[8]

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[7]For similar objections see Muñoz (2019); Kennedy & Willer (2022) (note that in the next section I will argue that the theory of Kennedy and Willer isn't a clear improvement over Ninan's). A related point, to the effect that embedding GPEs under epistemic 'must' (i.e., an evidential operator signaling knowledge by inference rather than by experience) defeats the acquaintance requirement, is noted by Ninan (2014: 299) and Pearson (2013: 118). More on this below.

[8]It might be said that this case presents a paradox—a case where someone is in a position to assert p but not q, even though p

Kennedy and Willer (2016; 2020; 2022)[9] offer a different riff on a pragmatic theory, on which the target phenomenon arises from a default or normal expectation that a certain type of predication (e.g., predicating 'tasty' of something) is grounded or based on a certain kind of mental state (in the case of a 'tasty'-predication, a taste experience of that thing). Their account does not however make use of a substantive epistemological principle like Ninan's AP, which they (like we) regard as false (and anyway incapable of fully accounting for the target phenomenon). Instead, they say:

> [A] subjective attitude ascription [e.g. of the judgment that something is tasty] asserts belief in the proposition expressed by the complement clause, and presupposes the contingency of this belief across a set of contextually provided alternatives to the attitude holder's doxastic state, all of which agree on the salient facts of the matter but disagree on judgments about those facts. We label these alternatives COUNTERSTANCES and the contingency across them COUNTERSTANCE CONTINGENCY. Each of these contextually generated alternatives constitutes a distinct "pragmatic stance" in the sense that the choice of one rather than another is a practical affair, reflecting (perhaps unarticulated) practical decisions, intentions, and plans about, centrally but not exclusively, language use. (Kennedy & Willer 2022: Sect. 3)

Acquaintance inferences arise in (local or global) contexts at which there is a (locally or globally satisfied) presupposition of the relevant claim/judgment's *counterstance contingency*. For the claim/judgment that something is tasty, this amounts to its failure to be settled by (what are taken as) matters of objective fact in the context, equivalently its variation across a range of alternative 'counterstances', which agree on matters of objective fact, but among which there is disagreement about what things to predicate 'tasty' of. (The disagreement here is *hermeneutic* or *evaluative* in nature: "counterstances represent particular kinds of resolutions of issues... not [about] what the facts are, but how to interpret [or evaluate] them" (Kennedy & Willer 2022: Sect. 4.2).

How do acquaintance inferences arise in such contexts? By assumption disagreement among counterstances is not grounded in factual disagreement. How *is* it grounded? They say: "[W]hat suitable grounding amounts to is a lexical semantic matter: it depends on the kind of predication(s) involved. When the predicate is experiential, counterstance contingency requires experiential grounding, and requires familiarity with experientially relevant features of the predicate's argument" (ibid.). So, when a judgment (e.g., one that amounts to taking a stand on whether something is tasty) fails to be settled by matters of objective fact in a context, an interpreter will tend to conclude that the judgment that that thing is (or is not!) tasty is grounded on a taste experience of that thing (though the inference can be easily defeated or undermined by auxiliary information).

This is an intricate and explanatory account, which, to stress, treats acquaintance as a pragmatic (in some sense epistemological), rather than semantic or presuppositional, phenomenon.[10] But here are

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is logically stronger than *q*. That is not how I would analyze the case. Instead, I would say that the felicity condition on saying 'I know the apple looks red' (roughly, having or knowing you have evidence that it would look red to you, if you looked at it) doesn't imply the truth of the felicity condition on saying 'the apple looks red' (roughly, having a red visual experience of the apple). More on this below.

[9] For other theorizing in this general vein, see Coppock (2018); Muñoz (2019). For critical discussion of these alternatives, see Kennedy & Willer (2022).

[10] It is also impressive in its generality. The Kennedy-Willer account be applied to moral language (and they do so), by assuming that moral predicates conventionally specify "moral sentiments" (e.g., moral disapproval) as the favored bases for resolutions of counterstance-contingent questions about their application (again, Sect. 4.2). This kind of generality does strike me as a desirable

some concerns (from less to more definite).

- An epistemological concern. The theory appears to be saying that a speaker who says "Bob thinks that is tasty" is representing Bob as adopting this view for the "wrong" ("practical", non-epistemic) reasons—reasons that don't relate to the truth of the propositional content of this thought. The theory doesn't explain why this is a sensible or rational cognitive strategy for agents to exploit, in cases where the facts "give out" (i.e., in cases of counterstance contingency). And in fact there is reason to think that it's neither of those, since whether you think a thing is tasty just doesn't seem to depend at all on "practical" decisions/concerns/reasons—all it depends on is how the thing tastes (to you).[11]
- A methodological concern. The Kennedy-Willer theory says that, in representing the judgment that something is tasty, we are, essentially as a matter of brute fact, only interested in the subject's adoption of a doxastic stance that resolves the question of whether to predicate 'tasty' of that thing in the *right* (i.e., suitably grounded) way (where 'suitable grounding' is lexically specified, by the predicate in question). This seems awfully convenient—bordering on ad hoc.[12] I also don't have a good handle on why we should think that this sort of information is *lexically* encoded, but not in the predicate's *semantics*.[13]
- An empirical concern. How strong is the evidence that 'experiential' readings of GPEs are explained by the presupposition of counterstance contingency? We seem able to manage the "space" of counterstances, e.g., by supposing that everything tastes exactly the same to everyone (say COVID eventually destroys everyone's sense of taste). In such a scenario, it seems like everyone who tastes the brownie thinks it's tasteless (and that thinking and saying that it's tasteless in some sense requires having tasted it). It's not clear how the presupposition of counterstance contingency is satisfied with respect to this kind of scenario.

This represents a very tentative assessment of Kennedy and Willer's pragmatic theory of the target phenomenon (and an even more tentative assessment of pragmatic theories in general). But I hope it helps to explain—if only in an introductory fashion—why the development of a broadly semantic theory of the target phenomenon merits theoretical attention, particularly if it can be made to "work".

3   Degreed Features of Sensory Experience

The last section previewed the main thesis I am interested in defending for GPEs. The thesis, in rough form, is that speakers use GPEs to express or register (possibly degreed) features of a perceptual experience (normally, theirs). Now, there is something like a truistic reading of this thesis, according

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feature for a theory of such things, but an Expressivist theory can provide it as well.

[11] Note that Ninan's theory doesn't have this worry: according to his theory, tasting something is a way of knowing, or coming to have evidence that bears on, whether or not it is tasty.

[12] Kennedy & Willer (2022: Sect. 4.2) resist this characterization, by appealing to independent evidence that we simply recognize certain kinds of evidence as strongly preferred as the basis for judging a certain kind of predicate to apply to an object (for example, . In effect this amounts to saying that the predicates in question have precisely the lexical features required to account pragmatically for the target phenomenon. I do think that we might well hope for more out of an explanation here.

[13] Kennedy and Willer, like other advocates of pragmatic accounts of the target phenomenon, are concerned about the fact that acquaintance inferences do not arise in syntactic environments (e.g. under 'must') that are known to be presupposition holes. I'll address this at length below. The relevant point for now is that the Kennedy-Willer theory leaves something substantial unexplained, and so abductive considerations should at least weakly motivate the search for a (possibly semantic) alternative.

to which a speaker who utters either of the following sentences is (at least ordinarily) interpreted as expressing or registering a feature of their perceptual experience of the voice on the recording: namely, that their perceptual experience is such that the voice on the recording sounds a certain way (like 'yanny') to them.

(8)   The voice on the recording sounds like 'yanny'.

(9)   The voice on the recording sounds like 'yanny' to me.

This paper will defend a strong (rather than truistic) reading of this thesis. In uttering (8), a speaker expresses *the way* or *how* the voice on the recording sounds (normally, to them), whereas in uttering (9) they say—in the sense of expressing the proposition—that the voice on the recording sounds a certain way to them. These speech acts can be prima facie distinguished by appeal to their prima facie semantic content (i.e., what content a speaker who performs these speech acts is interpreted as semantically expressing). The content of a speaker's utterance of (8) is, ordinarily, a *property* (that someone has just when their perceptual experience of the voice of the recording is a certain way). The content of a speaker's utterance of (9) is, ordinarily, a *proposition*—something that is true or false of a situation of evaluation, rather than an individual's perceptual experience.

   This section develops the core semantic account we will use in providing a general theory of GPEs. It begins with a semantics for GPEs with explicit ⌜to/for x⌝ relativizations, like (5). The basic idea, due to Bylinina (2017), is to treat relativized GPEs within the framework of degree semantics: like other gradable items in natural language, relativized GPEs like 'tasty to Stanley' express mappings from objects to degrees on a scale. This section proposes a twist to this basic compositional thesis for unrelativized GPEs. I will argue for representing unrelativized GPEs as *semantically unrelativized*, in the following sense: an unrelativized GPE like 'tasty' denotes a two-place function from experiencers and objects of their experience to degrees of tastiness. A sentence like 'the abgoosht is tasty' denotes, I will say, a feature of perceptual experience, modeled as a one-place function from experiencers to truth values (i.e., a property that an experiencer x satisfies iff the abgoosht's degree of tastiness to x meets x's standard of tastiness). This section also proposes a minimal pragmatics for the speech act of expressing a feature of one's perceptual experience.

3.1   Relativized GPEs

On the standard compositional semantics of gradable adjectives (see a.o. Cresswell 1976; Kennedy & McNally 2005; Kennedy 2007), a gradable adjective like 'tall' denotes a **degree measure $tall(\cdot)$**, typed as a function from an individual (type e) to a degree on a scale (type d), representing an individual's (maximum[14]) degree of tallness (relative to a c-specified comparison class, which I will subsequently suppress for simplicity):

$$[\![\text{tall}]\!]^c = \textbf{\textit{tall}}_c :: \langle e, d \rangle$$

Gradable adjectives in the positive (i.e., non-comparative) form are interpreted, additionally, with respect to a **standard function std_c**, such that $\textbf{\textit{std}}_c([\![\text{tall}]\!]^c)$ is a minimum degree (of height) above which an object's height is sufficient to count as tall in c. The standard function is introduced by a phonologically null "positive form" morpheme $pos :: \langle \langle e, d \rangle, \langle e, t \rangle \rangle$.

$$[\![\text{is } pos \text{ tall}]\!]^c = [\![pos]\!]^c([\![\text{tall}]\!]^c) = \lambda x \,.\, \textbf{\textit{tall}}_c(x) \geq \textbf{\textit{std}}_c(\textbf{\textit{tall}}_c)$$

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[14]Hereafter whenever I refer to something's degree of F-ness, I am referring to its *maximum* degree of F-ness.

A sentence like 'Steph is tall' is then true at c iff Steph's degree of tallness, $\boldsymbol{tall}(\text{Steph})$, meets a c-determined standard of height $\boldsymbol{std}_c(\boldsymbol{tall}_c)$.

$$[\![\text{Steph is tall}]\!]^c = 1 \text{ iff } \boldsymbol{tall}_c(\text{Steph}) \geq \boldsymbol{std}_c(\boldsymbol{tall}_c)$$

An explicitly relativized GPE like 'tasty to Stanley' is obviously gradable. So it is straightforward to analyze a GPE ⌜tasty to x⌝ as expressing a degree measure $\boldsymbol{tasty\ to\ x}_c :: \langle e, d \rangle$, such that

$$\boldsymbol{tasty\ to\ x}_c(y) = d \text{ iff } d \text{ is the degree to which } y \text{ is tasty to } x \text{ in } c$$

Since semantically providing an explicit relativization of type e yield a degree measure of type $\langle e, d \rangle$, this in turn suggests that we treat the semantic value of the bare GPE 'tasty' as of higher type $\langle e, \langle e, d \rangle \rangle$.[15]

$$[\![\text{tasty}]\!]^c = \boldsymbol{tasty}_c :: \langle e, \langle e, d \rangle \rangle$$

Treating GPEs like 'tasty' as denoting experiencer-relative degree measures makes a lot of intuitive sense. The degree to which some y is experienced as tasty clearly depends on *whose* taste experience we mean to be talking about.

In providing a degree-semantic treatment of 'tasty to x', we appealed in the metalanguage to the notion of a 'degree to which' some object of x's perceptual experience is tasty to x in c. Although there are other theoretical possibilities for understanding this locution within the metalanguage, here is a straightforward (if somewhat rough) proposal: the degree to which y is tasty to x in c is determined by some feature of x's taste experience of y in c. The partitive 'some feature of x's taste experience of y in c' is naturally read presuppositionally, so that $\boldsymbol{tasty}_c(x)(y)$ is defined only if x has a taste experience of y in c (i.e., it is true in c that x has tasted y). The suggestion, then, is that $\boldsymbol{tasty}_c(x)(y)$ is the degree of tastiness characterizing x's taste experience of y in c—a degree defined only if x has a taste experience of y in c.

$$[\![\text{tasty}]\!]^c = \lambda xy \text{ . the degree of tastiness characterizing } x\text{'s taste experience of } y \text{ in } c$$

On the intended understanding, the degree measure $[\![\text{tasty}]\!]^c$ is undefined for any x, y such that it is false in c that x has a taste experience of y.[16] This lexical entry (combined with Kennedy's analysis of gradable adjectives in the positive form) yields the following (partial) truth condition for sentences of the

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[15]For a similar model of the gradability of GPEs, see Bylinina (2017) and Muñoz (2019). Like the account I will go on to propose, Bylinina argues that GPEs carry a presupposition to the effect that the experiencer has undergone an experience of the right sort. Unlike our account, Bylinina's account is indirectly compositional (in the sense explained in the next section). Bylinina takes the experiencer to function semantically as an *obligatory argument* of a GPE like 'is tasty': when not supplied explicitly, it is supplied by the context of utterance (on a Relativistic construal, by the context of assessment).

[16]Intuitively, theoretical locutions like 'the degree of tastiness characterizing an experience for x' refer to an *experiencer-relative quantity* of tastiness—how tasty (very? extremely? just a bit?) the object of that experience was experienced by x to be. For all I am willing to say at present, this degreed feature of x's experience may be an intrinsic non-representational (maybe even non-concept-involving) feature of x's experience. Or, it may be a feature the agent's experience has in virtue of the agent perceptually representing the object of her experience as being some way (as, e.g., having some complex quality Q such that if an object has Q, it is tasty to degree d). For further discussion, see §6.2.

form 'y is tasty to x':

$$\llbracket y \text{ is tasty to } x \rrbracket^c = (\llbracket pos \rrbracket^c(\textbf{\textit{tasty}}_c(x)))(y)$$
$$= 1 \text{ if } \textbf{\textit{tasty}}_c(x)(y) \geq \textbf{\textit{std}}_c(\textbf{\textit{tasty}}_c(x))$$
$$= 0 \text{ if } \textbf{\textit{tasty}}_c(x)(y) < \textbf{\textit{std}}_c(\textbf{\textit{tasty}}_c(x))$$
$$= \text{undefined if } \textbf{\textit{tasty}}_c(x)(y) \text{ is undefined}$$

On this proposal, $\llbracket y \text{ is tasty to } x \rrbracket^c$ has a truth value only if x has tasted y: that is to say, the sentence carries a semantic presupposition that x has tasted y.[17] And so this proposal predicts the target phenomenon, in cases of *explicitly relativized* GPEs. For any context c such that c's speaker lacks a taste experience of the abgoosht in c (i.e., any context in which the right conjunct of (11) is true), the left conjunct of (11) is neither true nor false in s.[18] Thus, (11) is not true at any context.

(11)   #The abgoosht is tasty to me, although I haven't tasted it.

3.2   Unrelativized GPEs

That is the semantic template for cases with explicitly relativized GPEs. For cases with *unrelativized* GPEs, like (8), this template is compatible with two different compositional treatments how unrelativized GPE compose with a phrase denoting an object of experience (i.e., the subject NP).

   i. Indirectly compositional: in such cases we interpret the GPE as *relativized to an implicit experiencer*, i.e., as being of semantic type $\langle e, d \rangle$. The semantic type of a sentence like (8) is thus of ordinary type t.
   ii. Directly compositional: in such cases we do not treat the GPE as implicitly relativized. Instead, we model it as an *experiencer-relative* degree measure of higher semantic type $\langle e, \langle e, d \rangle \rangle$. The semantic type of a sentence like (8) is also of higher type $\langle e, t \rangle$.

While there is evidently a preference for what I have termed indirectly compositional treatments in the

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[17]The presuppositional component of this account is similar to that of Pearson (2013); Bylinina (2017). It bears noting that Pearson proposes, like the account proposed here, that 'the abgoosht is tasty' denotes a *property of experiencers*, rather than a truth condition. The key difference between our accounts: for Pearson, the property of experiencers is not an *experiential* content—it is a way of *self-locating* among possible experiencers, rather than a way of *experiencing*. For Pearson, this property consists in being such that any experiencer with whom you identify (by default, this includes you—hence the acquaintance inference) finds the cake tasty; in short, when you say that something is tasty, you are *self-ascribing* the property of liking its taste (132). On our theory, this property is simply the property of liking its taste (to a high enough degree); at no point does the theory invoke (unexplained) semantic primitives like 'self-ascription' and 'identifies with' (§3.2). Pearson represents disagreement-in-taste as disagreement-in-fact—specifically, as disagreement about how something would taste to a generic experiencer (136). We do not (§3.4). Finally, Pearson represents the propositional content of x's thought that the abgoosht is tasty as a thought whose content is a de se proposition (i.e., a set of centered worlds) (132). On the account proposed here, you can think the abgoosht is tasty simply by finding the abgoosht tasty; thinking the abgoosht tasty in this way is not generally to be understood as bearing a representational relation to a set of centered worlds. On the general question of whether Expressivism or *de se* Relativism is to be preferred as a theory of the contents of thought, see [redacted].

[18]Although our focus here is on autocentric uses of GPEs, it is worth noting that this proposal (in contrast to the epistemic account) explains why the "acquaintance inference" persists in the "third person":

(10)   #The abgoosht is tasty to Petrous, although he hasn't tasted it.

On this proposal, (10) is true iff the abgoosht's degree of tastiness *to Petrous* meets a standard (and is neither true nor false if Petrous lacks a taste experience of the abgoosht of the appropriate sort).

literature, a directly compositional treatment is workable (and, I will suggest, lends itself naturally to a plausible and explanatory Expressivist pragmatics).[19] The remainder of this section fleshes out the core semantic and pragmatic components of a directly compositional account (while the remainder of the paper will put the resulting account of GPEs to work).

According to what I have termed the directly compositional proposal for the semantic value of ⌜y is tasty⌝, it is simply a λ-abstract over the "missing" experiencer-relativization, as displayed in what I will call the Finding Tasty Condition.

Finding Tasty Condition (FTC)

$$[\![o \text{ is tasty}]\!]^c = \lambda x \,.\, ([\![pos]\!]^c(\boldsymbol{tasty}_c(x)))(o)$$
$$= \lambda x \,.\, \boldsymbol{tasty}_c(x)(o) \geq \boldsymbol{std}_c(\boldsymbol{tasty}_c(x)) \quad :: \langle e, t \rangle$$

On this proposal, the semantic content of ⌜o is tasty⌝ is a property of experiencers (as opposed to a proposition or a truth value). Roughly, it is the property an experiencer has when they find o to be tasty. Somewhat more precisely, it is a *perceptually individuated* property of experiencers. In particular, it is the property an experiencer x has just when the degree of tastiness characterizing x's taste experience of o is sufficiently high (relative to x's threshold or standard for finding something tasty). This property corresponds to a condition on *someone's perceptual experience*, rather than to a condition on possible worlds or situations of evaluation.

3.3 The Pragmatics of GPEs

Whether a GPE is relativized is independent of the target phenomenon: (8) and (9) are equally bad when conjoined with 'I haven't heard it'. I propose a simpleminded explanation of this symmetry (which also avoids the implausible commitment that (8) and (9) have the same semantics). Although a speaker of (8) and a speaker of (9) mean different things, there is a sort of "pragmatic entailment" between (8) and (9): a speaker who says (8) *commits themself* to the truth of (9) (although they do *not* express/assert a proposition that is true just when (9) is). The commitment is violated, inter alia, when (9) lacks a truth value. This section fleshes out this basic picture.

Given the TTC (and the suggestion of the previous section that $\boldsymbol{tasty}(x)(y)$ is the degree of tastiness characterizing x's taste experience of y, undefined if x lacks a taste experience of y), $[\![y \text{ is tasty}]\!]^c$ is a property that an experiencer x can have (or lack!), only if x has a taste experience of y. On the present account, a speaker s_c who expresses $[\![y \text{ is tasty}]\!]^c$ (and who denies they have tasted y), finds themself in a facially incoherent position: s_c expresses a condition on someone's perceptual experience, which an experiencer x satisfies iff $[\![y \text{ is tasty}]\!]^c(x) = 1$, but s_c is such that $[\![x \text{ is tasty}]\!]^c(s_c)$ is undefined.

The incoherence is readily explained, provided we adopt the following minimal rule on assertion for sentences that semantically encode perceptually individuated experiential properties.

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[19] For a related analysis of sentences with "unspecified" constituents (e.g., pronouns and ellipsis), as well as an appropriate compositional system for directly composing meanings, see Jacobson (1999). Treating semantic values as *polymorphic* in type (so that some declaratives are of semantic type t, while other declaratives are of higher semantic type $\langle e, t \rangle$), may raise eyebrows, but it is routinely observed in "Variable-Free" or "Directly Compositional" systems like Jacobson's. Relevant here is Dowty (1985)'s identification of an "implicit assumption [in compositional semantics] that properties... must invariably be combined with NP-meanings to form propositions before they can be further employed in compositional semantics: this can alternatively be described as a prohibition against using properties as arguments of functions in compositional semantics." This is an assumption that the sort of proposal developed in this paper will have to jettison. An examination of this issue would take us too far afield here.

Sincerity. If $[\![\phi]\!]^c$ is an experiential property of type $\langle e, t \rangle$, then normally s_c may not say that ϕ in c unless $[\![\phi]\!]^c(s_c) = 1$.

Sincerity is a plausible norm on a speaker's expression of an experiential property (supposing speakers can express experiential properties, in the sense I am suggesting here).[20] Sincerity says simply that, when you express a property of a perceptual experience, it should be a property of *your* perceptual experience. Sincerity is what explains why a speaker who expresses a property of *a* perceptual experience is normally interpreted as expressing a property of *their* perceptual experience.

A speaker s_c violates Sincerity if $[\![\phi]\!]^c(s_c) = 0$, i.e., they express a feature of perceptual experience that is falsified by their own perceptual experience (if, say, they tasted the abgoosht, found it awful, but say anyway in c that it is tasty). They also violate Sincerity if $[\![\phi]\!]^c(s_c)$ is undefined; if, for example, they have have no taste experience of the abgoosht. Given Sincerity, it is easy to see why sentences in the target class like (4) (repeated here) are marked.

(12) #The abgoosht is tasty, but I haven't tasted it.

By Sincerity, s_c's claim that the abgoosht is tasty is inappropriate unless $[\![$the abgoosht is tasty$]\!]^c(s_c) = 1$. The truth of (12)'s right conjunct thus *entails* the inappropriateness of its left conjunct.[21] Like (11), (12) is inappropriate to say, at any context whatever. But the source of its general inappropriateness is different: (12) is degraded because expressive speech acts (e.g., expressing a property of one's perceptual experience) are governed by a norm of Sincerity.

3.4 Disagreement in Fact and Attitude

I have said that (i) a speaker who says the abgoosht is tasty expresses how the abgoosht tastes (to them), (ii) expressing the way the abgoosht tastes (to you) is to be distinguished from saying that the abgoosht tastes that way to you. Though I believe readers will be generally comfortable with the basic distinction, I would like to supply some further empirical motivation for drawing it.

We said an interpretation of a GPE like 'tasty' is *autocentric* if the speaker is interpreted as expressing a judgment that they would evaluate as true, from the vantage point of their own taste experience. I will say that a use of a GPE is *evaluative*, simply, if it licenses a linguistic expression of disagreement. Evaluativity in this sense crosscuts autocentricity. Consider this minimal pair. By assumption, in each case, A uses the GPE autocentrically. But A's use of a GPE is evidently evaluative in (13) and nonevaluative in (14).

(13) A: The abgoosht is tasty.
      B: No it isn't.

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[20]Franzén (2018) likewise uses a norm of Sincerity in his Expressivist account of the acquaintance requirement for statements involving aesthetic predicates. Franzén also underlines the distinctiveness of Sincerity-based explanations of cases like (12) vis-a-vis truth-based explanations, as I am trying to do here. As he notes, it is common in the literature to theorize so-called expressives (like 'that bastard Kaplan!') in terms of their use/sincerity conditions (see, e.g., Searle & Vanderveken 1985; Kaplan 1999; Potts 2007; Richard 2008; Predelli 2013; Gutzmann 2015). According to such approaches, 'that bastard Kaplan' is used to express a psychological state/feature (some kind of negative attitude toward Kaplan), and is felicitous or conversationally appropriate only when the speaker is in fact in such a state. (Similarities aside, Franzén does not develop his account as a semantic proposal for aesthetic statements, and he registers skepticism about the workability of an Expressivist account of attitudes embedding aesthetic statements.)

[21]The explanation extends to cases like '#The abgoosht is tasty, but I found it terrible'. Here too the truth of the right conjunct entails the inappropriateness of its left conjunct.

(14) A: The abgoosht is tasty to me.
      B: ?No it isn't.

On the account I have sketched, although the speaker decides whether the abgoosht is tasty in the same way they decide whether the abgoosht is tasty to them, $[\![(13\text{A})]\!]^c$ and $[\![(14\text{A})]\!]^c$ are of distinct semantic type (in particular, the former is neither true nor false in c). The former is a property of an experiencer (and may be used by a speaker to express a property of their taste experience of the abgoosht). The latter is a proposition about the experiences of c's speaker (and is used by a speaker to express an assertion that is true in c iff this proposition is true in c).[22]

It is no surprise that linguistic disagreement with a speaker who purports to state a fact about herself, qua experiencer, is marked by default, if speakers are normally presumed to be unchallengeable— because, e.g., epistemic authorities—on assertions of propositions about their own experiences. This well-enough explains why linguistic disagreement is *unlicensed* in (14).

Why though *is* linguistic disagreement licensed in (13)? On our account, after all, it is not as if the two speakers are expressing incompatible claims about what the "facts" are like: A is "merely" expressing a feature of her experience of tasting the abgoosht, and B is doing the very same thing. Since A and B are not expressing incompatible claims about what the "facts" are like, in what sense do they disagree? What licenses B to challenge A, if A was "merely" expressing a feature of her experience of tasting the abgoosht?

This concern assumes a questionable, albeit theoretically entrenched, commitment to analyzing linguistic disagreement as disagreement-in-fact.[23] We have reason to think that linguistic disagreement far outstrips the kind of disagreement countenanced by this entrenched notion. In particular, there is a well-known (if somewhat elusive) notion of *disagreement in attitude*, according to which two agents disagree in attitude in a context c when (i) they are in *incompatible* states of mind M_1 and M_2 in c, and (ii) there is pressure (e.g., social pressure) in c for them to *coordinate* on either M_1 or M_2.[24] Applying this distinction, notice that, in (13), the attitude expressed by A is, in an obvious sense, *incompatible with* the attitude expressed by B: on the present proposal, these attitudes are modeled as *logically-non-co-instantiable* properties of experiencers, in particular (spotting myself the obvious treatment of

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[22]As noted in §2, some GPEs do not easily permit certain ways of saturating the open experiencer slot (e.g., with an explicit 'to/for me'). That said, GPEs do seem generally to permit saturation of the open experiencer slot *in some fashion or other* (which is consistent with maintaining that there is no general syntactic criterion for semantic relativity to experiencers in predicates) (cf. McNally & Stojanovic 2017). This is how I would suggest understanding the truth condition of 'I find *Guernica* moving': 'find' expresses the relation of Property Satisfaction (by the speaker, of the property $[\![Guernica \text{ (is) moving}]\!]^c$). (I do not provide an account of why certain ways of making an experiencer syntactically explicit are prohibited.)

[23]Relativists like MacFarlane (2011, 2014) appeal to such an understanding to motivate relativizing notions in the theoretical metalanguage like *fact* and *true* to perspectives or contexts of assessment (for Relativist analyses of PPTs see Lasersohn 2005; Stephenson 2007; MacFarlane 2014). Although there are certainly affinities between Expressivist and Relativist accounts of GPEs, this is a major theoretical difference between them: very roughly, Expressivists (who are not also quasi-Realists) tend to be fastidious about the distinction between the factual and the evaluative (more generally, between the factual and the nonfactual). For a more substantial comparison of Expressivism and Relativism, see §5.

[24]This account of disagreement with GPEs is in much the same spirit as the "non-alethic" approach to disagreement with PPTs of Clapp (2015). Although Clapp is more focused than I am on understanding the relevant speech acts in terms of how they update the context, he holds that "the illocutionary point of John's assertion of 'Licorice is tasty' is concerned with the contextual coordination of John and Mary's evaluative states concerning how the taste of licorice is to be evaluated" (538). The locus classicus for the notion of disagreement in attitude is Stevenson (1944), but see Gibbard (1990) for a contemporary analysis in this general vein. For other appeals to disagreement as disagreement in attitude—each, however, offered in defense of Contextualism about predicates of personal taste—see (a.o.) Huvenes (2012); Marques (2014); López de Sa (2015).

negation):

$$[\![\text{the abgoosht is tasty}]\!]^c = \lambda x \,.\, \textbf{\textit{tasty}}_c(x)(a) \geq \textbf{\textit{std}}_c(\textbf{\textit{tasty}}_c(x))$$

$$[\![\text{the abgoosht is not tasty}]\!]^c = \lambda x \,.\, \textbf{\textit{tasty}}_c(x)(a) < \textbf{\textit{std}}_c(\textbf{\textit{tasty}}_c(x))$$

And, though there is something unfathomable, often palpably ridiculous, about this, it seems clear that human beings experience substantial (especially social) pressure to coordinate—i.e., *agree*—on *how they experience* a shared object of sense perception.[25]

On the assumption that disagreement in attitude is (experienced as) genuine *disagreement*, the speech act of expressing a property of one's perceptual experience would be expected to license linguistic expression of disagreement in contexts *where there is pressure to coordinate perceptual experiences, but not otherwise*. This seems in line with the facts: contexts in which it is presupposed that perceptual coordination is for whatever reason impossible seem to render linguistic disagreement markedly less available.

(15)   [Common Ground: A is red-green colorblind and B is not.]
       A: That fire engine looks green.
       B: ?No, it looks red.

(16)   [Common Ground: A has OR26A variation, which makes cilantro taste like soap.]
       A: Cilantro tastes like soap.
       B: ?No, it doesn't.

Although there is probably a great deal more to say about the pragmatics of disagreement in attitude, this rough sketch suits my present purposes.

3.5   Signpost

This section proposed a package of related theses about GPEs:

- GPEs denote experiencer-relative degree measures, which map an experiencer and object of their perceptual experience to a degree—a degree that is fixed by the nature of the experiencer's perceptual experience of that object, and which is undefined in the event that the experiencer lacks a perceptual experience (of the right type) of that object.
- Relativized GPEs are interpreted as saturating a GPE's experiencer argument. The semantic type of $[\![\text{the abgoosht is tasty to me}]\!]^c$ is t.
- Unrelativized GPEs are interpreted 'directly'. The type of $[\![\text{the abgoosht is tasty}]\!]^c$ is $\langle e, t \rangle$. This property is undefined for s_c whenever s_c lacks a taste experience of the abgoosht.
- If the speaker s_c expresses $[\![\text{the abgoosht is tasty}]\!]^c$, their speech act is inappropriate whenever $[\![\text{the abgoosht is tasty}]\!]^c(s_c) \neq 1$.
- *A* and *B* disagree about whether the abgoosht is tasty in c iff $[\![\text{the abgoosht is tasty}]\!]^c(A) \neq [\![\text{the abgoosht is tasty}]\!]^c(B)$ (both defined), and there is pressure in c to agree on whether the abgoosht is tasty.

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[25]Examples truly abound, but for recent viral examples of apparent (and quite absurd) disagreements-in-attitude, apparently rooted in nothing more than incompatible perceptual experiences of a shared stimulus (and some sort of presumption that our perceptual experiences of a shared stimulus are supposed to be coordinated), see http://knowyourmeme.com/memes/thedress-what-color-is-this-dress; http://knowyourmeme.com/memes/yanny-or-laurel.

This theory was developed to predict the target phenomenon. So far as that goes, it seems to do the job. The next test for this theory is to see how/whether it works in a more general compositional setting (a task that may seem particularly pressing, given the somewhat unconventional way I've proposed thinking about the semantic content of GPEs here). I turn to this in the next section.

4 How Perceptual Acquaintance Projects

We have, following Bylinina (2017), encoded the "acquaintance" requirement of GPEs as a *definedness condition* on the degree measure denoted by the GPE. A clear point in this strategy's favor is that the requirement projects under negation.

(17) #The abgoosht isn't tasty, but I haven't tasted it.

On the present account, 'the abgoosht is not tasty' expresses a property an experiencer satisfies just when their taste experience of the abgoosht is less than tasty:

$$[\![\text{the abgoosht is not tasty}]\!]^c = \lambda x \,.\, \textbf{\textit{tasty}}_c(x)(a) < \textbf{\textit{std}}_c(\textbf{\textit{tasty}}_c(x))$$

Given Sincerity, s_c may express $[\![\text{the abgoosht is not tasty}]\!]^c$ only if $[\![\text{the abgoosht is not tasty}]\!]^c(s_c) = 1$. And this requires that s_c has tasted the abgoosht. So the acquaintance requirement behaves like a semantic presupposition, in the sense that it displays scopelessness with respect to negation.

But it is just as clear that the acquaintance requirement does *not* project under any of the following embeddings (as noted by Ninan 2014: 299). (Notice that each sentence remains felicitous if we imagine that the speaker has denied tasting the abgoosht.)

(18) Is the abgoosht tasty?

(19) If the abgoosht is tasty, it will sell out.

(20) The abgoosht [might be/must be/is probably] tasty.

If perceptual acquaintance is a semantic presupposition of the GPE, these constructions ought to presuppose that the speaker has tasted the abgoosht (in the same way that the following constructions presuppose that the abgoosht is vegetarian). Evidently, however, they do not.

(21) Does Petrous realize that the abgoosht is vegetarian?

(22) If Petrous realized that the abgoosht was vegetarian, he should have said so.

(23) Petrous [might have/probably has/must have] realized that the abgoosht is vegetarian.

The rest of this section will offer an account of why the acquaintance requirement projects when it does project (and why it does not project when it fails to project).

4.1 Questions

Projection in questions with GPEs presents something of a distinct issue, so I will separate it out. Although a speaker can pose (18) without implying they have tasted the abgoosht, notice:

(24) [Common Ground: A doesn't know whether B has tasted the abgoosht.]
A: ??Is the abgoosht tasty? (Compare: Do you know if the abgoosht is tasty?)

(25) A: Is the abgoosht tasty?
      B: #Yes/#No, although I haven't tasted it.

Although A asking B whether the abgoosht is tasty does not require that *A* has tasted the abgoosht, it
does in some sense seem to require that *B* has tasted it.[26] It is already roughly clear why this would be:
in asking this question, A is inviting B to say whether the abgoosht is tasty (to her) (as also observed by
Lasersohn 2005; Pearson 2013). But we already understand why B is not permitted to say whether the
abgoosht is tasty—i.e., to express a feature of their taste experience of the abgoosht—unless B has tasted
it.

Let me try to state the explanation in fuller detail. As is standard, let us identify the semantic value of
A's question with the set of its answers. Then A's question is represented with this set:

$$\{ \; [\![\text{the abgoosht is tasty}]\!]^c \; , \; [\![\text{the abgoosht is not tasty}]\!]^c \; \}$$

In asking B if the abgoosht is tasty, A invites B to express a response in this set (i.e., to express one or the
other of these features of her taste experience of the abgoosht). Given Sincerity, B cannot express either
feature unless B has tasted the abgoosht. It is generally infelicitous for a speaker to pose a question when
it is common ground that the addressee is unable to felicitously answer it—if, for example, it is common
ground that the addressee cannot answer the speaker's question without violating a norm of assertion.

(26) [Common ground: B has no idea if A's keys are on the kitchen table.]
      A: #Hey B, are my keys on the kitchen table?

4.2 Quantification

That leaves cases like (19) and (20), in which the acquaintance requirement appears to be filtered out
by an intensional quantifier (which I will here take to be quantifiers over situations of evaluation, in a
philosophically noncommittal sense). To be clear I think there is no mystery why, in (19) and (20), it
is not the case that *the speaker* presupposes they have tasted the abgoosht. We know that intensional
quantifiers (e.g., adverbial quantifiers over situations) *unselectively bind* free variables in their scope
(Lewis 1975; Kamp 1981; Heim 1982), as in (27).

(27) Whenever a farmer$_x$ owns a donkey$_y$, he$_x$ beats it$_y$.

On the present account, 'the abgoosht is tasty' is interpreted as if containing a free variable over
experiencers, which an unselective intensional quantifier over situations may be interpreted as *binding*.
The semantic presupposition of the degree measure is "borne" by the *value of this variable*. Although it

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[26]I hasten to note that the question can display alternative readings in certain contexts (and that this may ultimately provide
evidence that a meaning like the one defended by Pearson (2013) is *attested* in certain contexts). Consider a judge for a cooking
competition, who is aware that no one in the room, including the chef, has tasted the abgoosht; it is natural to imagine the judge
quizzing the chef: "Is the abgoosht tasty?". Hypothesis: the answers to this question are represented, à la Pearson (2013), with a
silent quantifier (with the ability to bind free variables in its scope; for further detail, see §4.2). I will not take a stand on the nature
of this quantifier here, but it is natural to follow Pearson in supposing that it is a *generic* quantifier; on this proposal, if the chef
answers the judge's question with a "yes", the chef is asserting, approximately, that, in general, if someone (with tastes like the
judge's) tastes the abgoosht, they will like the abgoosht. (For discussion of how GPEs embed under unselective quantifiers, and
how this interacts with the acquaintance inference, see §4.2.) The compositional flexibility of this account is one of its virtues:
although unrelativized GPEs denote λ-abstracts over individuals, such λ-abstracts can *also* be embedded under operators that bind
their free variables (again see §4.2).

is not yet clear how this semantic presupposition should be expected to project, there is zero pressure to say that what projects in a case like this is the presupposition that the speaker has tasted the abgoosht.

Let's now look more closely at cases (19) and (20). Begin with these rough paraphrases:[27]

(28)   If the abgoosht is tasty, it will sell out.
    ≈If the abgoosht is the sort of thing I would find tasty, it will sell out.

(29)   The abgoosht [might be/must be/is probably] tasty.
    ≈It [might/must/probably] be the case that I would find the abgoosht tasty.

The challenge lies in how, on the present account, to generate meanings for (19) and (20) with approximately the same semantics as these rough paraphrases. A simple unselective binding-type account gets us closer, but not all the way there.[28] To see why, consider 'the abgoosht might be tasty'. Let us assume that epistemic 'might' is an unselective existential quantifier over epistemically possible situations (compare Heim 1982; Portner 2009; Gagnon & Wellwood 2011). This yields roughly the following truth condition for 'the abgoosht might be tasty':

(30) $$\exists w \exists x : x \text{ finds the abgoosht tasty in } w$$

To evaluate a condition like this, we will treat intensional operators as quantifiers binding the situation subscript of an agent-relative degree measure, so that $\textbf{\textit{tasty}}_w(x)(o)$ gives the degree of tastiness characterizing x's taste experience of o in w—a degree that is defined iff x has a taste experience of o in w. This yields:

(31) $$\exists w \exists x : \textbf{\textit{tasty}}_w(x)(a) \geq \textbf{\textit{std}}_w(\textbf{\textit{tasty}}_w(x))$$

But (31) is *too weak* a truth condition: (31) says it is epistemically possible that someone finds the abgoosht tasty. But this does not guarantee—as it should, in line with the above paraphrase—that it is epistemically possible that the speaker would find the abgoosht tasty. Were this the correct truth condition, the following would be sensible (evidently it is not).

(32)   #The abgoosht tastes awful, but it might be tasty.

Although (31) isn't the right truth condition, we aren't far off. Though I've assumed that the context of utterance is autocentric,[29] this assumption has played no role in the account to this point. So I will propose representing the autocentric 'flavor' of the GPE as imposing an (implicit) domain restriction on

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[27]These are close to the paraphrases provided by Ninan (2021) (who also provides an account on which intensional quantifiers obviate the acquaintance requirement of PPTs). Although the model theory (and compositional machinery) Ninan uses is more intricate than what I avail myself of here (and there is nothing Expressivist about Ninan's analysis), we are both driving at analyses which deliver approximately the truth conditions represented in these rough paraphrases.

[28]Thanks to an anonymous referee for this observation.

[29]Although autocentric contexts are my focus here, of course the context of utterance is not always autocentric—experiential predicates like 'tasty' come in a range of different "flavors". Note that different "flavors" for experiential predicates like 'tasty' will be represented in the present theory as inducing different domain restrictions when embedded under quantifiers like 'must'—when we're talking about what cat food must be the tastiest, we're presumably talking about how the cat food will/would taste to an experiencer who tasted it (and whose tastes are just like the relevant cat). I don't offer any theory of the various non-autocentric and not-quite-autocentric flavors of experiential predicates like 'tasty' here.

the quantifier:

(33) $\exists wx[\textbf{\textit{tasty}}_w(x) \sim \textbf{\textit{tasty}}_{w_c}(s_c)] : \textbf{\textit{tasty}}_w(x)(a) \geq \textbf{\textit{std}}_w(\textbf{\textit{tasty}}_w(x))$

(33) is comparatively strong: it says it is epistemically possible that someone *with tastes just like the speaker's* finds the abgoosht tasty. If the speaker has tasted the abgoosht and found it less than tasty, then it is (at least ordinarily) not epistemically possible for the speaker that someone with tastes just like theirs would like the abgoosht if they tasted it. This accounts for the judgment in (32).[30]

The explanation for 'the abgoosht must be tasty' is similar, but highlights a different theoretical wrinkle. On the present treatment, this sentence says: for any epistemically possible w and experiencer x (implicitly, with tastes like the speaker's), x finds the abgoosht tasty in w.

(36) $\forall wx[\textbf{\textit{tasty}}_w(x) \sim \textbf{\textit{tasty}}_{w_c}(s_c)] : \textbf{\textit{tasty}}_w(x)(a) \geq \textbf{\textit{std}}_w(\textbf{\textit{tasty}}_w(x))$

(36), however, appears to be *too strong*. After all, many experiencers with tastes like the speaker's are bound not to have tasted the abgoosht.

This phenomenon—apparent "filtration" of semantic presuppositions by an intensional operator—isn't unique to GPEs under 'must'. Imagine Mary, who only drives convertibles, is shopping for cars, but you don't know if Mary actually has/will decide to buy one. You can say:

(37) The car Mary buys [must/has to] be a convertible.

This sentence has a reading (commonly referred to as "de dicto") which we can gloss like this: for any epistemically possible w such that Mary buys a car in w, her car in w is a convertible in w. As (37) shows

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[30]How can this analysis accommodate the plain fact that 'the abgoosht might be tasty' can be used, evidently to say something true, in contexts where it is known that no one with tastes relevantly like the speaker's has tasted and liked (or will taste and like) the abgoosht? In such contexts—since there are no epistemic possibilities compatible with the modal's restrictor—won't the analysis be required to treat the LF in (33) as false? In fact no.

Plausibly 'if'-clauses (equivalently, restrictor clauses for unselective generalized quantifiers) carry the presupposition that their contents are compatible with some contextually relevant domain of possibilities. When that presupposition isn't satisfied by the relevant domain of possibilities, the domain of possibilities is typically expanded to include such possibilities (see esp. von Fintel 2001; Gillies 2007). Thus, on von Fintel's account, in a context where the contextually relevant domain entails that Sophie didn't go to the parade, 'if Sophie went to the parade, she might have seen Pedro dance' is interpreted as a 'might'-claim whose restriction is filled by 'Sophie went to the parade', and which (like any generalized quantifier) presupposes the compatibility ("entertainability") of its restrictor with respect to the contextually relevant domain (and thus induces the relevant domain to expand, by a mechanism of presupposition accommodation, when it does not satisfy this presupposition). Similarly, 'the abgoosht might be tasty', as uttered in a context where there are no relevant possibilities compatible with the restrictor (e.g., it is presupposed that no one with tastes like the speaker's will taste the abgoosht), is typically evaluated by expanding the domain of quantification to include at least one possibility that satisfies the restrictor's possibility presupposition. In such a context, the sentence asserts there there is at least one possibility *compatible with this expanded domain of quantification* in which someone with tastes like the speaker's likes the abgoosht. The sentence 'the abgoosht might be tasty' can thus receive either of the following glosses, depending on whether there are possibilities compatible with the 'if'-clause in the contextually relevant domain.

(34)   If someone with tastes like mine were to taste the abgoosht, they might like it.

(35)   If someone with tastes like mine tastes the abgoosht, they might like it.

The fact that this theory, together with an independently plausible understanding of the presuppositional behavior of 'if'/restrictor-clauses, generates these glosses for these contexts is, I think, a mark in its favor. (Similar points hold by the way for 'the abgoosht must be tasty': in a context where there are no relevant possibilities in which someone whose tastes are like the speaker's tastes the abgoosht, we interpret the claim by expanding the relevant domain to include them. Contra an anonymous referee, then, the theory doesn't evaluate this claim, or other universal unselective quantifiers over possibilia, as vacuously true in such a context.)

restrictable intensional quantifiers, like $\ulcorner must(\phi)\urcorner$, can be interpreted as expressing a condition on each member of a domain of situations and individuals, *restricted* to those situations and individuals that satisfy the semantic presuppositions of ϕ. That yields (38).

(38) $\forall wx[\exists d : \textbf{\textit{tasty}}_w(x)(a) = d \land \textbf{\textit{tasty}}_w(x) \sim \textbf{\textit{tasty}}_{w_c}(s_c)] : \textbf{\textit{tasty}}_w(x)(a) \geq \textbf{\textit{std}}_w(\textbf{\textit{tasty}}_w(x))$

(36) can be directly interpreted as in (38), assuming a grammatical mechanism of local accommodation (in the sense of Heim 1983). On a Heim-ian account, a presuppositional truth condition of the form $\textbf{\textit{tasty}}_w(x)(a) \geq \textbf{\textit{std}}_w(\textbf{\textit{tasty}}_w(x))$ imposes a condition that must be satisfied by every contextually relevant w, x (i.e., it projects globally), or else on every w, x in the domain of quantification of some intermediate quantifier (i.e., it is locally accommodated). For (36) to be true—in a context, like this one, where a global projection reading is not something the speaker can reasonably be interpreted as meaning—$\textbf{\textit{tasty}}_w(x)(a)$ must be defined for each w, x over which 'must' quantifies. In this case we automatically interpret the speaker in this case as meaning to exclude from the domain of quantification those w, x such that $\textbf{\textit{tasty}}_w(x)(a)$ is undefined.

The account is similar for the other acquaintance-filtering environments ('if', 'will', 'probably'), all of which can filter/bind presuppositions like those associated with definite NPs:[31]

(39)   If the car Mary buys is a convertible, it will be red. $\nrightarrow$ Mary will buy a car.

(40)   The car Mary buys will be a convertible. $\nrightarrow$ Mary will buy a car.

(41)   It's probable that the car Mary buys is a convertible. $\nrightarrow$ Mary will probably buy a car.

I'll move quickly through these syntactic environments. Conditionals are standardly taken to express (restricted universal) quantification over situations (see esp. Kratzer 1986, 2012). As with 'must', the conditional's domain of quantification can be taken as restricted to possibilities w, x such that x's tastes in w match the speaker's tastes and x tastes the abgoosht in w. Relative to such a domain, (19) is true iff for

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[31]These examples allow projection readings (on which they presuppose that Mary will buy a car). Does the same hold for 'the abgoosht might be tasty'—can it presuppose that the speaker will taste the abgoosht? Yes: this is the sort of meaning a speaker can reach for in a context where, roughly, they are presupposing that they will get to taste the abgoosht, and they they want to assert or express the possibility that they will find it tasty. (Such a meaning is therefore excluded as a possible interpretation in contexts where this is neither presupposed nor easily accommodated—for example a context where it is presupposed that the speaker won't get to taste the abgoosht.)

To semantically generate this meaning, treat the experiencer variable as free (i.e., unbound by 'might'). Then 'the abgoosht might be tasty' will express the property $\lambda x.[\![$the abgoosht might be tasty to $x]\!]^c$. By Sincerity, a speaker s_c who expresses this property must be such that is true of them in c (i.e., it is true of s_c in c that the abgoosht might be tasty to them). But for this property to be true of s_c in c , its semantic presuppositions must be either locally or globally satisfied in c. If the former, then, for each $w \in D_{ep}$, s_c tastes the abgoosht in w (i.e., it is known they will taste the abgoosht). If the latter, then it is simply presupposed that s_c will taste the abgoosht. Either way, on this parse, s_c presupposes that they will taste the abgoosht.

Similarly, if someone says 'the abgoosht must have been tasty', they can mean to express the property of, roughly, ruling out the possibility that they didn't find the abgoosht tasty, while presupposing they've tasted it (here I omit the formal details). This is a meaning you might reach for when you know you tasted and liked the abgoosht, but you *no longer have* an experience of how it tasted to you—i.e., when, at c, you *can't sincerely express how it tasted to you*, by expressing $[\![$the abgoosht is tasty$]\!]^{c'}$ (your pleasant taste experience of the abgoosht at c'), for some c' prior to c.

The past tense case is interesting, in addition, because it indicates that Sincerity is too weakly formulated: to express $[\![$the abgoosht is tasty$]\!]^{c'}$ at c, it is not enough that (you know that) it is true of you at c. Instead, it seems like the (past) experience must in some sense be *occurrent* or *in your possession* at c, for you to happily express what that experience *was like* at c. Note that this point does not seem to hold for the speech act of reporting/saying at c that your experience was a certain way at c'. (This raises interesting and difficult questions about how to theorize the speech act-type of expressing non-occurrent (i.e., certain past and all future) perceptual experiences, which I will not attempt to address here.)

all (relevant) $\langle w, x \rangle$ in this domain such that x finds the abgoosht tasty in w, the abgoosht sells out in w.

Future auxiliaries like 'will' are plausibly intensional quantifiers (Klecha 2014; Cariani & Santorio 2018). If that is right, we can explain why sentences like 'the abgoosht will be tasty' fail to require speaker acquaintance with the abgoosht in the same sort of fashion (as also noted by Klecha 2014). Interestingly, since 'will' quantifies (unselectively) over *future* (rather than counterfactual or merely possible) situations, our account predicts that 'the abgoosht will be tasty' presupposes that someone with tastes like the speaker's (ordinarily, I think this *is* just the speaker) *will find the abgoosht tasty*. This prediction seems correct:

(42)   ?The abgoosht will be tasty, but no one will taste it.

In saying 'the abgoosht will be tasty', you say someone (with tastes like yours) *will find it tasty*.[32]

Finally, for everyday cases, we can model probability operators as cardinality quantifiers over epistemically possible situations; 'probably ψ, given ϕ' says, roughly, that the number of ϕ and ψ-possibilities (in domain D) is greater than the number of ϕ and $\neg\psi$-possibilities (in D) (for relevant discussion, see Égré & Cozic 2011). Here too the presupposition of the GPE can understood as imposing a restriction on D (to situations w and experiencers x such that x has tasted the abgoosht in w and x's tastes in w match the speaker's). Against such a domain, 'the abgoosht is probably tasty' is true just when most $\langle w, x \rangle \in D$ are such that x finds the abgoosht tasty in w.

Let's end this section by observing that, as desired, the truth conditions proposed here for GPEs under intensional quantifiers deliver the rough paraphrases in (28) and (29). Quantifiers embedding autocentric GPEs are parsed unselectively, and thereby quantify over possibilities (represented as tuples $\langle w, x \rangle$ of situations w and experiencers x) such that w and x satisfy the GPE's semantic presuppositions. Such embeddings express that an experiencer relevantly similar to the speaker who experienced the relevant object would experience that object as having a certain (degreed) experiential feature. To say that the abgoosht must be tasty is to say that, were an experiencer with tastes like yours to taste the abgoosht, they would find it tasty; so, holding your tastes fixed, it is the sort of thing you know you'd find tasty (were you to taste it).

5   Experiential and Representational Attitudes

Embedding 'the abgoosht is tasty' under a doxastic attitude verb, like embedding under 'must', can defeat the acquaintance requirement: someone may *believe* or *think* that the abgoosht is tasty, without taking themself to have tasted it (as observed by Pearson 2013; Franzén 2018).

(44)   I think the abgoosht is tasty, although I haven't tasted it.

It would be tempting here to wheel in an analysis of 'think' on which it is a restrictable intensional quantifier, apply the account of the last section, and call it a day. But, though that is part of the story, there is more to say. This section argues that doxastic verbs (like 'think') behave differently from modal quantifiers with respect to whether (and how) they imply speaker acquaintance. I will argue that 'think'

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[32]Ninan (2014) says that (43) is acceptable (and so he would presumably not agree with what I am saying here).

(43)   The cookies in the oven will be tasty. It's a shame that we will have to throw them out.

For me (43) is (at best) ? (though it becomes more acceptable, the more I read 'will be tasty' as 'would have been tasty'). Since this reading involves quantification over possibilities that are not presumed to be *the future*, there is no mystery why this reading (43) wouldn't imply that anyone will actually taste the cookies.

has an experiential meaning on which it composes directly with a experiential property. The existence of experiential readings is puzzling for any theory which takes 'thinks' to select for only proposition-type complements (and which take thoughts to have as their invariable objects propositional contents or representations). They are more grist for the Expressivist mill.

5.1 Representational Attitudes

As I've suggested, the present account already generates an acceptable reading of:

(45)   The abgoosht must be tasty (given what I think), but I haven't tasted it.

This is just the phenomenon accounted for in §4.2. Assuming cases like (44) involve restricted (and unselective) quantification over a domain of situations,[33] we predict that they have acceptable readings. This quantificational reading of 'I think the abgoosht is tasty' is represented with (46).

(46) $\forall w_{\in dox_{s_c}} x \, [\exists d : \textbf{tasty}_w(x)(a) = d \wedge \textbf{tasty}_w(x) \sim \textbf{tasty}_{w_c}(s_c)] : \textbf{tasty}_w(x)(a) \geq \textbf{std}_w(\textbf{tasty}_w(x))$

This differs from (38) only in the quantifier's restriction to doxastically possible (for the speaker) situations. According to this truth condition, (45) is true in c iff for every doxastic alternative (every situation compatible with what s_c believes) w and any experiencer x with tastes like s_c's such that x tastes the abgoosht in w, x finds the abgoosht tasty in w.[34]

But we need to exercise care in drawing a theoretical parallel between modal quantifiers and attitude verbs embedding GPEs. Note in particular the following contrasts.

(47)   [The speaker tastes the abgoosht and finds it tasty.]
    a.   #It must be tasty!
    b.   I think it's tasty!

(48)   a.   The abgoosht must be tasty. $\hookrightarrow$ I haven't tasted the abgoosht.
    b.   I think the abgoosht is tasty. $\not\hookrightarrow$ I haven't tasted the abgoosht.

These contrasts evidently have *something* to do with the fact that 'must' is an evidential that conventionally marks the modal prejacent as unsettled by direct (e.g., perceptual) evidence (see a.o. von Fintel & Gillies 2010). Assuming that 'must' is an evidential, the reading of 'the abgoosht must be tasty' on which the experiencer variable is resolved to *the speaker*—i.e., the speaker is saying that they know they find the abgoosht tasty—is unavailable. Even if (49) is true, a speaker cannot express this by uttering (47a).

(49) $\forall w \in D_{ep} : \textbf{tasty}_w(s_c)(a) \geq \textbf{std}_w(\textbf{tasty}_w(s_c))$

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[33]This is a standard assumption in the formal semantics of attitude-verbs (in particular, see Hintikka 1962; Heim 1992). Even if attitude-verbs are not *literally* quantifiers over possibilia, it is clear that (i) they provide for local satisfaction of presuppositions in broadly the same way that explicit quantifiers over possibilia provide for local satisfaction of presuppositions, and (ii) *modeling* them as quantifiers over possibilia allows us to model this rather fundamental aspect of their meaning.

[34]This is quite close—approaching equivalence—to how de se Relativists like Stephenson (2007); Egan (2010) construe the content of the state one is in when one believes that the abgoosht is tasty. For the de se Relativist, this content is the set of centered worlds $\langle w, t, x \rangle$ such that the abgoosht tastes good by the standards of x in w at t. To have a belief with this content is, according to Egan (2010) (following the general outline of Lewis 1979), to self-ascribe a kind of dispositional property: the disposition to find the abgoosht tasty if you were to taste it. The "Expressivist" view I propose here distinguishes itself from de se Relativism, *not* as a theory of quantificational readings of attitude reports, but rather as a theory of *non-quantificational* readings.

(49) implies that, for each epistemic possibility w, the speaker found the abgoosht tasty in w (i.e., the speaker knows the abgoosht is tasty because they've tasted it and found it tasty). In that event, the speaker has direct evidence that settles the question of whether the abgoosht is tasty (to them), and the evidential is prohibited.

5.2 Experiential Attitudes

Case (47b) shows that, when someone has tasted and liked the abgoosht, it may still be appropriate for them to say 'I think the abgoosht is tasty'. That roughly accounts for the contrast between (48a) and (48b), but it does not yet fully explain why 'thinks' *has* the usage we see in (47b).

Why does this require explanation? 'Think' and 'believe' are alike in the following sense: neither is conventionally evidential. (I believe I am wearing a watch, and there is no suggestion whatever here that I do not have direct evidence that I am wearing a watch.) But *unlike* 'think', 'believe' nevertheless carries what we might call an *implication of indirectness* when its complement contains a GPE.[35]

(50) [The speaker tastes the abgoosht and finds it tasty.]
    ??I believe it's tasty!

(51) I believe the abgoosht is tasty. $\hookrightarrow$ I haven't tasted the abgoosht.

(50) and (51) have standard Gricean explanations (which arise, in the expected way, from the literal semantics of the $\ulcorner$believes $\phi\urcorner$ construction): given the Maxim of Quantity, there is an expectation that a speaker say how the abgoosht tastes (to them), when it is at issue, when they are in a position to do so without violating other norms of conversation. The present challenge is to explain why Quantity-type explanations of this shape do *not* apply in (47b) and (48b).

A natural semantic hypothesis to account for the contrasts between (47b) and (50) and between (48b) and (51) is that 'think', unlike its close semantic relative 'believe', can be used by a speaker to *talk directly about the way someone's (e.g., their) perceptual experience is* (and that when a speaker avails themself of this meaning for 'think', the Quantity-based derivation in question is blocked).[36] The suggestion, more explicitly, is that 'think' is ambiguous (possibly, polysemous) between:

- A *representational meaning*, according to which $\ulcorner$s thinks $\phi\urcorner$ is true roughly when s is representing a set of doxastic alternatives, all of which satisfy ϕ. On this meaning, $\ulcorner$s thinks $\phi\urcorner$ is equivalent to $\ulcorner$s believes that $\phi\urcorner$.
- An *experiential meaning*, according to which $\ulcorner$s thinks $\phi\urcorner$ is true roughly when s's experience *is a certain way*, namely, ϕ. On this meaning, the truth of $\ulcorner$s thinks $\phi\urcorner$ does not logically imply the truth of $\ulcorner$s believes that $\phi\urcorner$.

These different meanings yield truth conditionally distinct interpretations of 'x thinks the abgoosht is tasty'. In case (47b) the idea is that the sense in which A thinks the abgoosht is tasty is just the following: *A liked the abgoosht*; *A found it tasty*. The availability of the experiential meaning for 'think', but not for 'believe', is, I suggest, what ultimately accounts for the contrast between (47b) and (50) and between (48b) and (51).

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[35]Thanks to an anonymous referee for bringing the contrast between 'think' and 'believe' to my attention.

[36]This somewhat resembles a suggestion of Sæbø (2009) for the semantics of the "subjective" attitude verb 'find', according to which the truth condition of 'I find the abgoosht tasty' is that the speaker judges the abgoosht to be tasty. Compositionally, according to Sæbø, 'find' does nothing beyond setting the judge parameter for evaluating the complement sentence.

My semantic proposal for the experiential meaning of 'think' is a simple one: the experiential attitude of thinking the abgoosht tasty, as held by (an experiencer-type) subject s, involves nothing more than s's satisfaction of the relevant instance of the Finding Tasty Condition.

$$[\![s \text{ thinks}_{exp} \text{ the abgoosht is tasty}]\!]^c = 1 \text{ iff } s \in [\![\text{the abgoosht is tasty}]\!]^c$$
$$\text{iff } \textbf{\textit{tasty}}_c(s)(a) \geq \textbf{\textit{std}}_c(\textbf{\textit{tasty}}_c(s))$$

The compositional proposal for 'thinks$_{exp}$' is that relates an experiencer to a *way of experiencing* (as opposed to a representation, e.g., a propositional content). Per the FTC, the semantic type of a way of experiencing is a property of experiencers, i.e., $\langle e, t \rangle$.[37]

$$[\![\text{thinks}_{exp}]\!]^c = \lambda E_{\langle e,t \rangle} \lambda x. E(x)$$

On this proposal, a speaker who says 'I thinks$_{exp}$ the abgoosht is tasty' (like the relativized 'the abgoosht is tasty to me') *reports* their possession of the attitude that they would *express* with the unrelativized 'the abgoosht is tasty'. What the former reports, and the latter expresses, is modeled as a feature or property of someone's perceptual experience: the property of finding the abgoosht tasty. More generally, the truth of the experiential reading generally implies the truth of representational reading, but not vice versa: although finding the abgoosht tasty typically (but probably not necessarily) implies believing that someone with tastes like yours who tastes it would like it, believing that someone with tastes like yours who tastes the abgoosht would find it tasty will *not* generally imply that you find the abgoosht tasty.

6 Complex GPEs

Although they are undiscussed, to my knowledge, in the linguistic literature, experiential readings of knowledge ascriptions embedding what I'll call "Complex GPEs" have received sustained attention in the philosophy of mind. Consider Jackson's Knowledge Argument (1982; 1986).

> Mary is a brilliant scientist who is, for whatever reason, forced to investigate the world from a black and white room via a black and white television monitor. She specialises in the neurophysiology of vision and acquires, let us suppose, all the physical information there is to obtain about what goes on when we see ripe tomatoes, or the sky, and use terms like 'red', 'blue', and so on... What will happen when Mary is released from her black and white room or is given a colour television monitor? Will she learn anything or not? It seems just obvious that she will learn something about the world and our visual experience of it. But then it is inescapable that her previous knowledge was incomplete. But she had all the physical information. Ergo there is more to have than that, and Physicalism is false. (Jackson 1982: 130)

I will read this case as showing that there is a way of reading (52) according to which its truth requires Mary having a (color) visual experience of the tomato (of a certain experiential character, namely, red).

(52) Mary knows the tomato looks red.

On this reading, (52) is false while Mary is confined. In a context in which (52) has this reading, (52) reports that Mary's visual experience of the tomato has a certain feature: Mary's visual experience of the

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[37]It would be natural to assume that 'thinks$_{exp}$' is selective about the sorts of properties that it composes with (e.g., that $[\![\text{thinks}_{exp}]\!]^c(E)(x)$ is undefined when x is not an experiencer or E is not an experiential property).

tomato puts her in position to answer a question 'does the tomato look red?' (e.g., by expressing *that it looks red*) in a way that respects Sincerity.[38]

In this spirit, I propose the following rough truth condition for the relevant reading of (52).[39]

$$[\![(52)]\!]^c = 1 \text{ iff } \boldsymbol{looks\ red}_c(m)(t) \geq \boldsymbol{std}_c(\boldsymbol{looks\ red}_c(m))$$

The gist of the truth condition is that (52) is true just when the degree of redness in Mary's visual experience of the tomato is sufficiently high.

Of course, the proposed truth condition isn't yet well-defined. In particular, I haven't said how **looks red**$_c$ is composed (I take for granted that it is semantically complex). The way to fill this gap is to extend our account to *Complex GPEs*—VPs composed of a verb of experience (associated with a specific perceptual modality, e.g., 'looks'), an adjective phrase ('red'), and optionally an experiencer relativization (e.g., 'to/for *x*'), like 'looks red', 'feels sharp', 'sounds like 'yanny'', and so on. Treating complex GPEs introduces semantic and philosophical complexities, but meaningfully broadens the account's empirical coverage. (It also suggests a new way of looking at debates within the philosophy of mind from which much of the data I am trying to account for here is drawn.[40])

6.1   Composing Complex GPEs

A core fact about complex GPEs is that they are structurally ambiguous (in a fashion resembling the representational/experiential ambiguity identified above). Notice in particular that there are two ways of

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[38]This suggests a possible affinity with Lewis's analysis of the Knowledge Argument (Lewis 1990). Lewis holds that (52) attributes to Mary the state of having a particular kind of *ability* (or *know how*), a state that he distinguishes from a state of having "propositional knowledge" of some distinctive phenomenal fact. One kind of ability or know-how that (52) attributes to Mary, according to account I have pursued here, is the *ability to (appropriately) express a feature of her color experience of the tomato*. This is somewhat reminiscent of the view of Conee (1994), according to which Mary's "knowledge consists in acquaintance with the experience. Acquaintance with an experience does not require having either information or abilities. Acquaintance constitutes a third category of knowledge, irreducible to factual knowledge or knowing how. Knowledge by acquaintance of an experience requires only a maximally direct cognitive relation to the experience" (136).

[39]This truth condition might seem to downplay the *epistemic* character of what Mary knows; I have said basically that Mary knows the tomato looks red just if the way the tomato looks to Mary is red. This might seem insufficient for Mary *knowing* how the tomato looks. Suppose that Mary has a "defeater" for her color experience, e.g., she knows the tomato is being lit misleadingly. Then, when she looks at the tomato and experiences it as looking red, it seems that Mary does not know (or learn) how the tomato looks (and so she does not know or learn that it looks red). In this case, I would agree that Mary's color experience does not amount to knowing how the tomato looks. I would add that this suggests we need a notion of knowledge on which a color experience of the tomato, which also possesses certain epistemically desirable properties (e.g., the experience occurs in normal perceptual conditions), amounts to knowledge of how the tomato looks. Although I do not pursue such a notion of knowledge here, see Moss (2013, 2018) for the development of a generalized notion of knowledge, according to which certain ways of being in cognitive states, which are not equivalent to belief in a propositional content (e.g., being in a state of partial belief), can amount to knowledge.

[40]On the rough proposal above, what grounds (52)'s truth is *not*, as Jackson suggests, Mary's being directly acquainted with some special phenomenal fact. It is instead the fact that Mary has a color experience of the tomato with a certain experiential feature. Of course it remains open to the opponent of Physicalism to argue that visual color experiences themselves *do* involve acquaintance with special phenomenal facts. Still, the Knowledge Argument is supposed to obviate the need for this kind of argument. If the semantic account given here is correct, there is no clear semantic motivation for positing an *additional, phenomenal fact* that Mary comes to know when she sees the tomato, to account for the fact (52) changes its truth value when Mary sees the tomato, and the Knowledge Argument rests on a kind of semantic fallacy. More on the connection to Physicalism below.

reading sentences in the mold of (53) (as observed by Breckenridge 2018).

(53)   *o* looks/feels/sounds/smells/tastes *W* to *x*.

    a. The way *o* looks/feels/sounds/smells/tastes to *x* is *W*.

   b. To *x*, it looks/feels/sounds/smells/tastes like *o* is *W*.

Gloss (53b) reflects that cases in the mold of (53) can be read as attributing to *x* a state of believing that *o* is *W* (typically, on the basis of how *o* looks, feels, sounds, smells, or tastes). Adopting Breckenridge's idiom, gloss (53a) reflects that (53) can be read as attributing to *o* the property of being perceived *in a certain qualitative way* (namely, way *W*) by *x*.

These readings are usually truth-conditionally distinct, their distinctness tending to emerge when we imagine cases where an experiencer experiences *o* as appearing way *W*, while being aware that the way *o* appears to them is not a reliable guide to how *o* in fact looks. For example, imagine that Mary is viewing a rod she knows to be straight while it is submerged in a glass of water, and consider (54):

(54)   The rod looks bent to Mary.

(54) has both a true and a false reading in this situation. On the (53a) way of reading (54), it says something true: that Mary's visual experience of the rod has a certain qualitative *look*, namely, looking *bent* (I will shortly propose a degree semantic understanding of this truth condition). On the (53b) way of reading (54), it says something false: that Mary believes that the rod is bent (on the basis of how it looks to her).

I will propose representing this truth-conditional distinction as arising from a structural difference at logical form. The left tree, for (53a), represents what I'll call (53)'s *experiential* reading. The right tree, for (53b), represents what I'll call its *representational* reading.
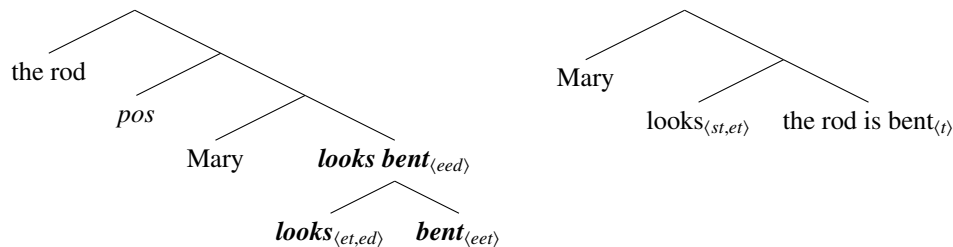
The proposed representations treat 'looks', like 'thinks', as ambiguous between what I'll call experiential and representational semantic values.[41] The representational meaning for 'looks' composes (via Intensional Functional Application; see von Fintel & Heim 2011) with a truth condition. This yields a function of type $\langle et \rangle$ as output, which maps an individual to true iff they judge the rod to be bent, on the basis of how it looks.

The *experiential* meaning for 'looks' composes, by Function Composition, with a way an object of (visual) perception *y* can look to an experiencer *x* (type $\langle eet \rangle$), yielding an experiencer-relative degree measure (type $\langle eed \rangle$) as output.[42] The suggestion here is basically to analyze 'bent', under experiential

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[41] While there may be some way of linking these semantic values to one another (e.g., via metonymy or polysemy), I will assume 'looks' is just lexically ambiguous for purposes of this paper.

[42] I am suppressing some compositional complexities here—in particular, the fact that ***bent***$_{\langle eet \rangle}$ is composed from ***bent***$_{\langle eed \rangle}$ and *pos*, via Function Composition (for a compositional system that allows composition by Function Composition, see Jacobson 1999). (Note, too, that experiential 'looks' composes with ***bent***$_{\langle eet \rangle}$ via Function Composition.) Since complex GPEs appear to be "doubly" gradable (it seems possible for the rod to *sort of* look *very* bent to Mary, if Mary's visual phenomenology is "ambiguous"),

'looks', as akin to a GPE like 'tasty': as denoting a way an object of an experience can be experienced by an experiencer. Semantically, experiential 'looks' does very little (besides requiring its sister to denote a way an object of perception can look to someone); it works very much like experiential 'thinks'. Relative to inputs Mary and the rod, the experiencer-relative degree measure denoted by 'looks bent' outputs a degree: for now, we will say that it is the degree to which Mary's visual experience of the rod has the feature of bent-ness. Given *pos*, the left tree is true in c iff this degree is sufficient for the rod to appear or seem bent to Mary in c; iff, that is to say:

$$\textbf{\textit{bent}}_c(m)(r) \geq \textbf{\textit{std}}_c(\textbf{\textit{bent}}_c(m))$$

Here is some brief, but fairly compelling, motivation for treating 'bent' under experiential 'looks' as denoting a semantic value of the sort of I have suggested here. Consider:

(55)   The rod is bent to/for Mary.

(56)   The voice on the recording is (like) 'yanny' to/for Mary.

It is easy to read (55) as saying that the way the rod looks to Mary is bent—as having the same truth condition as the experiential reading of (54) and, so, as saying something true. Similarly, it is easy to read (56) as saying that the way the voice on the recording sounds to Mary is (like) 'yanny'. There is good reason to treat phrases like 'bent' and '(like) 'yanny'' as semantically ambiguous between something experiencer-relative (a way an object of perception can look/sound to an experiencer, namely, bent or like 'yanny') and something non experiencer-relative (an "objective" physical feature an object can have, namely, being physically bent or being similar (in phonological form) to 'yanny').

6.2   The Metasemantics of Complex GPEs

This proposal raises some obvious metasemantic questions.[43] *In virtue of what* does a degree measure like **_looks bent_**$_c$ associate an experiencer and object of their perceptual experience with a particular degree (in c)? More to the point, since we are here treating 'bent' under experiential 'looks' as denoting a way an object of visual perception can look to someone: in virtue of what does **_bent_**$_c$ associate an experiencer and object of their perceptual experience with a particular degree (in c)? (A related question, which I will also attempt to address here: is there any meaningful degree of context-dependence in the metasemantics of complex GPEs? Yes, I will suggest, and it is philosophically significant.)

A metasemantic proposal I like (because it involves quite modest commitments in the philosophy of mind) is that this degree is a measurement of *qualitative resemblance*, so that $\textbf{\textit{F}}_c(x)(o) \geq d$ iff, for some c-relevant o' and y, x's visual experience of o qualitatively resembles to degree d y's visual experience of o' (and $\textbf{\textit{F}}_c(y)(o')$ is high). When a speaker says the rod looks bent to Mary, they are *comparing Mary's visual experience* of the rod to what we might call a contextually relevant ("paradigm") experience of visual bent-ness, and proffering that the degree of resemblance between these experiences is high.[44]

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there is reason to distinguish two layers of gradability in our semantics for 'the rod looks bent to Mary', as I do implicitly here.

[43] Some of my remarks here will be speculative, but I include them because they help to show how a semantic analysis of experiential attitudes can be relevant to the debates in the philosophy of mind that center such attitudes.

[44] Martin (2010) defends a "comparative" account of claims like '*x* looks red to *y*', on which they "convey information... both about the looks of objects, and about sensory episodes in which things look some way or other to us through the use of implicitly comparative claims: that the object, or the sensory state, is relevantly similar to some other, paradigm case" (161). Here it is at least suggestive that philosophers of mind often attempt to explicate experiential readings of attitude reports in *explicitly comparative*

Although something in this vein seems to me the most plausible metasemantics for complex GPEs, my present purposes don't require me to assume it, and so I won't. Instead I want to use this metasemantics to illustrate a point about the kinds of mental entities and events we can reasonably construe ourselves as being semantically committed to, given the *presumptive* or *prima facie* truth of certain claims of "folk psychology"—for example, the claim that there is a way the rod looks to Mary, which is distinct from the way Mary believes the rod to look; that there is a way the tomato looks to Mary (when she has seen it) that is distinct from the way Mary believes the tomato to look (when she has not).

Suppose we adopted a metasemantics of this sort. There would obviously remain a further question about what *in fact grounds* the relevant degree of qualitative resemblance between a perceptual experience and a paradigm perceptual experience. Some opponents of Physicalism would, I imagine, prefer a metasemantics stated in terms of degrees of similarity between intrinsic phenomenal characters, so that $\textbf{bent}_c(m)(r) \geq d$ iff the phenomenal character of Mary's visual experience of the rod *intrinsically resembles* the phenomenal character of y's experience of o' (for c-relevant y and o') to degree d.

Since Physicalists are generally opposed to the idea of phenomenal characters which stand in relations of intrinsic resemblance to one another, they will opt for an alternative metasemantics. My own inclinations in this regard, for what they are worth, are Intentionalist, in the following, I will admit vague, sense: degrees of (relevant) similarity between perceptual experiences are ultimately grounded in degrees of (relevant) similarity in those experiences' intentional contents.[45] The point that is relevant here is that the folk psychological notion of the "qualitative character" of an experience (i.e., the way that experience is) is semantically innocent: Physicalists can take it one way, anti-Physicalists another. (Of course this also means that the existence of qualitative experiential characters is itself no argument against Physicalism.)

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terms that invoke qualitative notions like "what it is like" (e.g., what it is like for someone to visually perceive a red tomato). Although Martin does not envision his comparative account of 'looks red' as applying to "phenomenal" GPEs like 'salty', 'sweet', 'tasty', and similar, a uniformly comparative metasemantics for GPEs strikes me as the default option.

Rudolph (2020), however, identifies a range of cases involving what she calls evaluative appearance predicates—'looks splendid', 'tastes great'—for which this metasemantics of resemblance seems clearly inapt. To a first pass, cases like these can be handled by distinguishing between representational and experiential meanings for verbs like 'looks' and 'tastes'—as we already have for 'think', and, as we have seen above, we should do anyway, to account for ambiguities in the mold of (53). The suggestion, then, is that *splendid* is not strictly a way that the dress can *look* to Mary: when the dress looks splendid to Mary, that seems to imply that Mary believes (or is of the opinion) that the dress looks splendid. Generally speaking, if W is a way o can *look* to x, o can look W to x without it being the case that x believes, or is of the opinion, that o looks W (as noted above, we only have to imagine that x is aware that the way o looks to them isn't a reliable guide to how o in fact looks). Now consider:

(57)   ??The dress looks splendid to Mary, but she doesn't believe that it looks splendid.

(58)   ??The soup tastes great to Bobby, but he doesn't believe that it tastes great.

If we shouldn't think of *splendid* as a way the dress can *look* to Mary, how should we think of it? Notice that 'looks splendid', like 'looks red', seems to semantically require acquaintance, and to be semantically experiencer-relative. The difference is that it doesn't encode a property of someone's perceptual experiences; instead it encodes a property of an experiencer's *perceptually grounded evaluative judgments*: roughly, a way an experiencer can rank an object of their sense perception (given a perceptual experience of that object of the right type). Developing this account further is something I'll leave to future work.

[45]Intentional content, as I understand it, is distinguished from propositional content. On my view, the state of thinking$_{exp}$ the abgoosht is tasty differs in intentional content from the state of thinking the abgoosht is tasty to you—because these states have different functional roles, and difference in functional role implies a difference in intentional content. (As I use the phrase 'intentional content', a state like desiring that you taste the abgoosht has an intentional content roughly like 'see to it that you taste the abgoosht'. The state of believing you'll taste the abgoosht shares a propositional content with the state of desiring that you taste the abgoosht, but differs in its intentional content.) Of course we can opt to use 'propositional content' as applying to more than just the objects of intentional cognitive states (like desire and belief). I am just noting that if we stick with standard usage, intentional content is prima facie distinct from propositional content.

To similar effect, let's consider inverted spectra. Suppose Mary is a spectral invert: from the point of view of her visual phenomenology, the way the "go" signal on a traffic light looks to her is the way the "stop" signal looks to someone with normal visual perception (this way of characterizing inverted spectra follows Thau 2002: 20). When Mary is viewing a red fire engine, the following sentence seems to have three different readings—two true, one false.

(59) The fire engine looks red to Mary.
    a. Mary believes the fire engine is red. (Representational: True)
    b. The way the fire engine looks to Mary is the way red things look to her.
       (Autocentric/Subject-centric Experiential: True)
    c. The way the fire engine looks to Mary is the way red things look to ordinary visual perceivers.
       (Exocentric/Non-Subject-centric Experiential: False)

Appealing to the context-sensitivity of *a way of looking*—and more generally the notion that GPEs can be used both autocentrically and exocentrically—is a plausible way of theorizing the ambiguity between (59b) and (59c). Sometimes by 'red' we mean roughly the way red things look to Mary when she looks at them, other times we mean roughly the way red things look to ordinary visual perceivers when they look at them.

This suggestion might seem troubling for an Intentionalist metasemantics. For nothing about Mary being a spectral invert seems to necessitate that there is any difference in intentional content between Mary's visual experience of the fire engine and an ordinary visual perceiver's experience of the same.

Let's try on the stipulation that *there is no such difference*, and see what follows. In that event, if Intentationalism is true, the "folk" judgment that there is a difference in truth value between (59b) and (59c) would be mistaken, but understandable (more importantly, explicable). That is because, in that event, the way red things look to Mary *just is* the way red things look to ordinary visual perceivers (although of course the modes of presentation associated with these descriptions, in this sort of case, are very different). If Intentationalism is true, divergent judgments about (59b) and (59c) are, on the supposition that there is no difference in intentional content between Mary's visual experience of the fire engine and an ordinary visual perceiver's experience of the same, just an example of Frege's Puzzle.

This calls to mind Harman's response to the use of inverted spectra to argue against Intentionalism about qualitative experiential character, namely, that this begs the question against Intentionalism (Harman 1990). The theory I've suggested here offers a different spin on Harman's point. On that theory, the notion of a way something can look to someone (e.g., $\textit{red}_{\langle eet \rangle}$) is, like any other context-dependent notion, semantically two-dimensional (in the following, theoretically innocent sense). A speaker "refers" to a specific way something can look to someone, partly in virtue of *contextually supplied* information that suffices to fix a specific semantic value for (GPE) 'red' in context (and, at least ordinarily, allows speaker and audience to coordinate their understandings of that semantic value[46]).

It is a familiar point that semantic two-dimensionality, in this sense, provides fertile ground for cases of Frege's Puzzle (see e.g. Perry 1977; Kaplan 1989). If GPEs are semantically two-dimensional, our "folk" judgments that there is a difference in truth value between (59b) and (59c)—even stipulating no difference in intentional content between Mary's visual experience of the fire engine and an ordinary visual perceiver's experience of the same—are no more an argument against Intentionalism than the following is an argument that the speaker is referring to two ships, not one, when the bow and the stern

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[46]On this understanding of the metasemantics of supplementives, see e.g. King (2014); MacFarlane (2016).

of the ship at which he is pointing are the bow and stern of the *Enterprise* (cf. Perry 1977: 483).

(60) This [pointing at a ship's bow] is the *Enterprise*. This [pointing at a ship's stern] is not.

I would grant that, in both of these cases, a speaker would be logically compelled to relinquish the judgment in question, *conditional on* the truth we are supposing to hold in their respective contexts (that Intentionalism is true, or that the speaker is pointing at the bow and stern of the *Enterprise*). That is why *we* do not share the imagined speaker's sense that (60) is true: we know better. In case (59) though—quite unlike case (60)—it is difficult to imagine what it would take for someone to be in a position to genuinely conditionalize on Intentionalism (indeed, it is hard to really understand what conditionalizing on the truth of a vague philosophical thesis like Intentionalism would actually involve). We are extremely unlikely ever to be in an epistemic position with respect to Intentionalism that is akin to that of the speaker of (60), when he simply *sees that* the bow and the stern of the ship at which the speaker is pointing are the bow and the stern of the *Enterprise* (and which is akin to the epistemic position that *we theorists* occupy, by assumption, in evaluating (60) for truth/falsity). If Intentionalism is correct (as I am confident it is... in one form or another) this is a Frege Puzzle that will be with us for the duration.

7 Conclusion

There have been some twists and turns, so let us conclude with a birds-eye view. The idea that drove this paper was a simple one, of an Expressivist character: there is a class of *experiential thoughts*, which a sizable chunk of natural language has as its subject matter, and which are not well-modeled with standard "propositional" content.

(61) Thinking$_{exp}$ the abgoosht is tasty.
(62) The fire engine looking$_{exp}$ red to you.
(63) The submerged rod looking$_{exp}$ bent to you.
(64) The voice on the recording sounding$_{exp}$ like 'yanny' to you.

This paper proposed a semantic and pragmatic theory for constructions in natural language that, it argued, *conventionally express* as well as *report* an experiencer's "possession" of experiential thoughts. Because expressions of experiential thoughts are governed by a norm or convention of Sincerity, experiential thoughts cannot generally be expressed in the absence of the corresponding experience. Because an experiential thought $\ulcorner F(o) \urcorner$ denotes a way *any* experiencer x can experience o in their sense perception, the (semantically encoded) acquaintance requirement undergoes compositional "transformation" when a GPE is composed with an intensional operator (we provided an account of the mechanics of this transformation in §4).

It would be surprising if there were no downstream philosophical "applications" for a well-designed formal semantic theory of experiential language, given the centrality of (discourse about) experiential thoughts in the philosophy of mind. Certain positions/conditions in the philosophy of mind (e.g., Intentionalism and qualiaphilia) are naturally associated with different metasemantic understandings of the formal theory I have given here (and can therefore be evaluated, in a fashion, by examining the corresponding metasemantics more closely). I have tried here to suggest that natural language is not so prejudiced against Physicalism and Intentionalism as we have been led to believe.

Conflict of Interest.   No.

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