

Vagueness and Subjective Attitudes*

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Abstract: I explore the thesis that vague sentences akin to *Jones is tall* are attitude dependent. After I situate attitude dependence in the setting of semantic theories that Gottlob Frege influenced, I show how to formulate attitude dependence in terms of two contemporary approaches. While contextualists claim that attitudes contribute to a sentence's content, relativists claim that they merely contribute to its truth or falsity. I turn to subjective attitude ascriptions akin to *Charlie finds Sam amusing*, and I investigate whether compositionality considerations with respect to subjective attitude ascriptions support an attitude-dependent approach to vagueness. From a compositionality perspective, felicity considerations about subjective attitude ascriptions with vague complements are a crucial motivation for the thesis that vague sentences are attitude dependent. Since some attitude ascriptions with vague complements are infelicitous, we should worry about the compositional motivation for an attitude-dependent approach to vagueness.

1. Attitude-Dependent Approaches to Vagueness

1.1. Attitude Dependence

Frege (1897/1979:133) compares scientific discourse to a deserted island. Just as the deserted island's existence does not depend on whether an explorer sees it, so too a scientific sentence's content and truth-value does not depend on human attitudes toward it. Consider Kepler's first law of planetary motion.

- (1) The planets elliptically orbit the Sun, where the Sun is at one focus.

While the astronomer accepts that Kepler's first law is true, that attitude is orthogonal, both to the law's content and its truth-value. As Frege (1897/1979:133) emphasizes, a "law of nature is not invented by us, but discovered." In compositional semantic theories that Frege influenced, human attitudes regarding a sentence have little or no sway over it. What controls both a sentence's content and its truth-value is not our attitudes, but the attitude-independent world. When we are dealing with a sentence for which Fregean slogans akin to "discovered truth" are appropriate, that

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that he has no hair. It is also a determinate truth that Jerry Garcia is not bald (or at least he was not at the height of his musical career). Yet there are borderline cases where not only is it not a determinate truth that a given man is bald, but also it is not a determinate truth that he is not bald. Since some sentences that contain the expression *bald* have a borderline status, the associated discourse is vague.

The attitude-dependent approach to vagueness is likely due to Raffman (1994b), even though she attributes the approach to Wright (1987). Raffman (1994b:43) claims, "where vague predicates are concerned, logic and semantics are more intimately entwined with psychology than one might have otherwise supposed." She (1994b:44) also emphasizes that "a semantics for vague predicates will find its roots in the churning machinery of the mind-brain." Raffman even claims that language is not vague unless it is attitude dependent. For instance, she (1994a:132n7) claims, "if a predicate's application does not vary with psychological factors then it is not vague" (see Raffman 1996:190 for further discussion).

As Raffman (2005b:248) emphasizes in a response to Stanley (2003), she has changed her views about vagueness. However, Raffman's original conception of vagueness in terms of attitude dependence remains influential. For instance, following Raffman's lead, Shapiro (2006:40) claims that "every vague predicate is judge-dependent in its borderline area (at least)" (see also Shapiro 2003, 2008). Shapiro also echoes Raffman's worry that language is not vague unless it is attitude dependent. For instance, Shapiro (2006:41) argues that "vagueness turns on judgment-dependence. If there is no judgment-dependence, there is no vagueness." For expository simplicity, I primarily focus on Shapiro's (2006) attitude-dependent approach to vagueness, though the discussion applies *mutatis mutandis* to Raffman's view, too. Shapiro's views are easily misunderstood without attention to background considerations about the different semantic roles that human attitudes might occupy with respect to an attitude-dependent sentence. As such, I address the germane semantic issues before I turn to Shapiro's account of vagueness.

2. The Semantics of Attitude-Dependent Sentences

When attempting to clarify how a sentence is attitude dependent, perhaps Fregean slogans about invention and fabrication are useful, at least as a preliminary. However, these slogans give us no concrete answer to a tricky semantic issue. How should we understand the semantics of attitude-dependent sentences? Of course, there are several theoretical approaches that we might consider, but I focus on the two alternatives that contemporary discussions often address, namely, contextualism and relativism (see Lasersohn 2005 for a discussion of other alternatives). While a contextualist accounts for attitude dependence in terms of a connection between our attitudes and semantic content, a relativist accounts for it in terms of a connection between our attitudes and truth-value.

2.1. Kaplanian Semantics

Most contextualist and relativist approaches to attitude-dependent sentences are closely aligned with Kaplan's (1989) two-fold model of meaning (see also Lewis 1980). In Kaplanian semantics, a sentence expresses a semantic content, in particular, a content in a loosely classical sense that is

rich enough to issue a truth-value with respect to both a possible world and a time. Kaplan (1989:494) calls a time-world pair an *evaluation circumstance*. However, there is another twist in Kaplan's approach, especially given the attention that he gives to sentences that contain either an indexical expression (e.g., the sentence *I am hungry*) or a demonstrative expression (e.g., the sentence *this room is cold*). Kaplan shows that the content of a sentence that contains either an indexical or a demonstrative expression depends on the extra-linguistic situation in which either it occurs or a speaker uses it. For instance, the content of the sentence *I am hungry* shifts in situations where different speakers use it. Kaplan (1989:494) calls a situation in which either a sentence is used or occurs the *use context*.

While a sentence's semantic content might depend on an extra-linguistic context, Kaplan suggests that a dimension of sentential meaning remains constant across contextual shifts, namely, what he (1989:494) calls *character*. For instance, Kaplan (1989:505) claims that we should understand the character of the word *I* in terms of the following rule: “‘I’ refers to the speaker or writer.” A two-fold model of meaning emerges. A sentence's character is a rule or function from a use context c to a (classical) semantic content, and a sentence's content with respect to c is a rule or function from an evaluation circumstance to a truth-value, where an evaluation circumstance is an ordered pair $\langle w, t \rangle$ that includes a possible world w and a time t .

2.2. Contextualist Semantics

A contextualist approach typically draws directly on Kaplanian semantics to shed light on attitude-dependent sentences. For a contextualist, an attitude-dependent sentence's semantic content depends on the context of use, especially the human attitudes that the sentence's character deems germane. For instance, Lasersohn (2005:648) addresses a contextualist alternative where an attitude dependent sentence contains an argument that is an implicit pronoun, or what I call *pro*. The contextualist claims that an extra-linguistic context supplies the value of the implicit pronoun in an attitude-dependent sentence (see also Cappelen and Hawthorne (2009:103n4)). When a contextualist goes the implicit pronoun route, we model the semantics of the sentence *Roller coasters are fun* in terms of (3).

- (3) The sentence *Roller coasters are fun pro* is true with respect to both c and $\langle w, t \rangle$ if and only if c supplies a judge j as the value of *pro*, *Roller coasters are fun pro* expresses a classical content at c , especially given j 's attitudes, and that content is true with respect to $\langle w, t \rangle$.

Of course, a contextualist might allow that there are cases akin to *Roller coasters are fun to Jones*, where the linguistic context makes explicit the value of *pro*. As we might expect, there are also ways that we might work out how an attitude-dependent sentence depends on an extra-linguistic context other than postulating an implicit pronoun (e.g., see Glanzberg 2007, as well as Cappelen and Hawthorne 2009). Even though a contextualist might reject the implicit pronoun route, there remains an assumption that contextualist approaches share. For a contextualist, an at-

titude-dependent sentence's character looks to the extra-linguistic context to supply the germane human attitudes, and it issues a classical content relative to those attitudes.

2.3. Relativist Semantics

A relativist approach to attitude dependence draws on Kaplanian semantics, though it requires that we modify Kaplan's (1989) original model. The Kaplanian picture is that a sentence expresses a content with respect to an extra-linguistic context, in particular, a classical content that is rich enough to issue a truth-value with respect to a circumstance of evaluation that includes a world-time pair. Yet for a relativist, a sentence's content in a context of use is not even loosely classical, since it is insufficient to issue a truth-value with respect to a world-time pair alone. After all, a relativist claims that the truth-value of a sentential content (in a context) is given not only by an evaluation circumstance, but also by what Stanley (2005:139) calls an *assessment circumstance*. While an evaluation circumstance includes parameters akin to a possible world and a time, the assessment circumstance supplies a judge whose attitudes are also germane to a content's truth-value. Since a classical content does not demand an assessment circumstance to issue a truth-value, let us call a content that demands assessment a *relativist content* (see Stanley 2005:140, as well as Recanati 2007).¹

Given the modifications above, the semantic picture that a relativist defends is slightly different from Kaplanian semantics. A sentence's character is a rule or function from an extra-linguistic context of use c not to a classical content but to a relativist content. A sentence's relativist content (with respect to c) is a rule or function from both an evaluation circumstance and an assessment circumstance to a truth-value. Let $\langle\langle w, t \rangle, j\rangle$ be an ordered pair that contains both an evaluation circumstance and assessment circumstance, where j is the judge of the assessment circumstance. A relativist utilizes a modified Kaplanian semantics to shed light on attitude-dependent sentences. Given the relativist's modification, an attitude-dependent sentence expresses a relativist content in an extra-linguistic context of use. Since relativists claim that what is at issue is a relativist content, the truth-value of an attitude-dependent sentence depends not merely on an evaluation circumstance, but also on an assessment circumstance. The assessment circumstance supplies a judge whose attitudes sway an attitude-dependent sentence's truth-value. Given a relativist framework, we may utilize something akin to (4) to model the semantics of an attitude-dependent sentence.

- (4) The sentence *Roller coasters are fun* is true with respect to both c and $\langle\langle w, t \rangle, j\rangle$ if and only if *Roller coasters are fun* expresses a relativist content at c , and that content is true with respect to $\langle\langle w, t \rangle, j\rangle$, especially given the judge j 's attitudes.

¹ Kaplan (1989:504) notes that an evaluation circumstance for a strictly classical content includes only a possible world. However, he allows that an evaluation circumstance might also include a time (and perhaps even a location). In this respect, the notion of content that Kaplan utilizes is only loosely classical, as I emphasize above. Even so, I call Kaplan's conception *classical* in order to contrast it with a relativist notion of content. I should also emphasize that the terminology that I adopt above—for instance, both *assessment circumstance* and *relativist content*—is not universally shared, since competing relativist approaches often use different terminology (cf. MacFarlane 2005 and Recanati 2007).

3. Attitude-Dependent Semantics for Vague Sentences

Given the brief survey of both contextualist and relativist semantics for attitude dependence, I turn to the thesis that vague sentences are attitude dependent. As I mention above, I concentrate on Shapiro's approach, in particular, his informal account of vague sentences and their meanings. Shapiro (2006:vi) calls his approach a *contextualist* account, though it is not a contextualist semantics in the sense that I address above. After all, Shapiro (2008:314) admits that in "contemporary philosophical jargon, a 'contextualist' [...] holds that [...] the same sentence [...] expresses different propositions on different occasions," and he emphasizes, "I do not think my view is contextualist," at least in that sense. In addition, Shapiro (2008:315) calls attention to a similarity between his approach and the relativist approach, i.e., the view that an expression's content is "constant across contexts of utterance, but extensions are sometimes determined only with respect to some (sometimes non-standard) features of the context of utterance or the context of evaluation." Even though he calls his approach a *contextualist* account, it is evident that Shapiro favors something akin to a relativist account of the semantic connection between vagueness and human attitudes.

3.1. Determinate Truth is Relative to a Comparison Circumstance

As I briefly mention above, Shapiro (2006) accounts for vagueness in terms of a borderline status, where a sentence's borderline status is due to a shortcoming with respect to determinate truth. When a sentence is a borderline case, neither it nor its negation is determinately true. In a preliminary formulation, Shapiro (2006:6) claims that a sentence is determinately true if and only if the extra-linguistic facts determine that sentence's truth conditions are satisfied, where the thoughts and practices of the (actual) language users establish those truth conditions. Shapiro favors fact talk over Kaplan's (1989) terminology. However, when Shapiro addresses how the extra-linguistic facts determine a sentence's truth-value, it is evident that it occupies either the same or a similar semantic role that Kaplan's evaluation circumstance occupies. For continuity's sake, I use Kaplan's terminology in my exposition of Shapiro's view.

Since Shapiro claims that a vague sentence's status with respect to determinate truth is not merely a function of an evaluation circumstance, he quickly drops his preliminary formulation. Shapiro (2006:32) recommends that when "it comes to vagueness, determinacy is sensitive to the comparison class, the paradigms, or the contrasting cases." Given Shapiro's relativist perspective, his view is that a vague sentence's status with respect to determinate truth is partially dependent on what I call a *comparison circumstance*. While the evaluation circumstance supplies both a world and a time, the comparison circumstance provides a comparison class (e.g., a collection of paradigmatic or contrasting cases). Accordingly, a vague sentence expresses a relativist content with respect to a context of use, that is, a rule or function from both an evaluation circumstance and a comparison circumstance to a determinate truth-value. For instance, when the vague sentence *Jones is tall* is determinately true, it is a function of two factors: Jones' height in the evaluation circumstance and paradigm cases that the comparison circumstance supplies (e.g., the class of professional basketball players).

3.2. Borderline Truth is Relative to an Assessment Circumstance

While Shapiro adopts a relativist semantics to account for the semantic role of comparison classes with respect to vague sentences that are determinately true, attitude dependence does not come into play until Shapiro considers borderline sentences and their truth-values. Since Shapiro claims that a sentence's borderline status is due to the fact that neither it nor its negation is determinately true, he adopts a nuanced notion of borderline status that complements his thesis that determinacy is sensitive to comparison circumstance. Imagine, for argument's sake, that *Jones is tall* is a borderline sentence, and let '*b*' indicate a comparison circumstance that includes professional basketball players. On Shapiro's more nuanced formulation, the sentence *Jones is tall* is borderline with respect to both *c* and $\langle\langle w, t \rangle, b \rangle$ if and only if not only is the sentence not determinately true with respect to both *c* and $\langle\langle w, t \rangle, b \rangle$, but also its negation (*Jones is not tall*) is not determinately true with respect to both *c* and $\langle\langle w, t \rangle, b \rangle$.

While borderline sentences display a shortcoming with respect to determinate truth, Shapiro claims that some borderline sentences are true, or at least they might be true. The truth-value of a borderline sentence is a function of the attitudes that we have toward it, and Shapiro conceives this dependence in relativist terms. For this reason, Shapiro (2006:40) claims, "every vague predicate is judge-dependent in the borderline area (at least)." Suppose, for example, that the sentence *Jones is tall* is borderline, and let '*b*' again indicate a comparison circumstance that includes professional basketball players. Since *Jones is tall* is borderline, neither it nor its negation is determinately true with respect to $\langle\langle w, t \rangle, b \rangle$. Despite the sentence's shortcoming with respect to determinacy, Shapiro claims that it might nevertheless be true. On Shapiro's view, the truth-value of a borderline sentence akin to *Jones is tall* depends not merely on the evaluation circumstance—and not merely on the comparison circumstance—but also on an assessment circumstance, in the sense that I introduce above. The upshot is that just as matters of taste are attitude dependent, so too are borderline sentences. An assessment circumstance provides a judge *j*, and the truth-value of *Jones is tall* is partially a function of *j*'s attitude toward it. Setting aside the comparison circumstance parameter, Shapiro's view is that the borderline sentence *Jones is tall* is true with respect to both *c* and $\langle\langle w, t \rangle, j \rangle$ if and only if the assessment circumstance provides a judge *j*, *Jones is tall* expresses a relativist content in *c*, and that content is true with respect to $\langle\langle w, t \rangle, j \rangle$, especially given that *j* accepts that Jones is tall.

4. Euthyphro Interpretations and Subjective Attitude Ascriptions

If vagueness is somehow attitude dependent, even just the borderline cases, as both Raffman (1994b:70) and Shapiro (2006:40) claim, human attitudes occupy a central role with respect to vague sentences, their semantic interpretation, and their status with respect to truth. After all, it means that our attitudes have a semantic authority over vague sentences. Shapiro (2006) adopts a relativist approach, where a borderline vague sentence's truth-value is partially a function of an assessment circumstance. Yet as Shapiro (2008:324) acknowledges, there are alternative contextualist accounts not only of comparison classes, but also attitude dependence. A contextualist claims that a comparison class contributes not to a vague sentence's determinate truth-value, but to its content. In addition, it is the use context that supplies a comparison class, not the compari-

son circumstance (see Richard 2004). A contextualist tells a similar story about the semantic role of human attitudes with respect to vague sentences, or at least the sentences with a borderline status.² As a result, a contextualist claims that the semantic authority that accounts for a borderline vague sentence's status as attitude dependent is how its content depends on an extralinguistic context of use, especially the attitudes of a contextually supplied judge. Since contextualists and relativists disagree over whether our attitudes influence either a borderline sentence's content or its truth-value, there is a question about the kind of semantic authority that matters for attitude dependence.

4.1. Euthyphro Interpretations

While the semantic authority that matters for attitude dependence deserves careful consideration, we should not let that disagreement draw attention away from a commitment that both alternatives share. Contextualists and relativists agree that the attitudes of a judge are crucial to either the semantic interpretation or evaluation of attitude-dependent sentences. Setting aside the contextualist-relativist disagreement, the semantic authority to which attitude dependence gives rise reminds us of something from Plato's well-known dialogue between Socrates and Euthyphro, where Euthyphro agrees that something is pious because the gods love it (see Wright 1992). For both contextualists and relativists, human attitudes occupy a position with respect to attitude-dependent sentences that—according to Euthyphro—the gods' attitudes occupy with respect to what is pious. Given the analogy, let us say that Raffman, Shapiro, and their contextualist counterparts are both defending a Euthyphro interpretation with respect to vague sentences, or at least the borderline ones. In particular, whether it is contextualist or relativist, an attitude-dependent approach to vagueness entails something akin to the following *Euthyphro* interpretation: Either a sentence's semantic content with respect to a context of use c is partially a function of a judge j that c supplies, or the truth-value of that sentence (given its content in c) is a function of $\langle\langle w, t \rangle, j \rangle$, where j is the judge in the assessment circumstance. I submit that a Euthyphro interpretation is the core semantic assumption that contextualist and relativist accounts of attitude dependence share.

We have in view several different attitudes regarding a Euthyphro interpretation in different domains. Since Frege suggests that human attitudes have no semantic authority over scientific discourse, he rejects a Euthyphro interpretation with respect to the scientific domain. Neither do human attitudes influence the content of Kepler's first law of planetary motion, nor do they influence the law's truth-value. As I suggest above, a Euthyphro interpretation is more plausible with

² Shapiro (2006:43) addresses examples akin to *Jones looks bald*, where it is plausible that a contextually supplied judge is a constituent of the sentence's semantic content. In terms of the implicit pronoun approach, we might say that the sentence *Jones looks bald pro* is true with respect to both c and $\langle w, t \rangle$ if and only if c supplies a judge j as the value of *pro*, *Jones looks bald pro* expresses a content with respect to c , given how Jones looks to j , and that content is true with respect to $\langle w, t \rangle$. Even granting a contextualist story about *looks bald* is plausible, Shapiro worries that when we focus on paradigmatic vague sentences akin to *Jones is bald*, there is no apparent reference to either a comparison class or a judge (e.g., see Shapiro's (2006:43) discussion of *bald* and its definition). Perhaps the implicit pronoun variety of contextualism is under some pressure to concede Shapiro's observation. After all, the view is that vague sentences contain a pronoun that is implicit.

As both Borkin (1973:45) and Sæbø (2009) emphasize, there is another interpretation of the verb *find* that more closely resembles how we interpret the verb *discover*. An example from Halliday (1967:74-75) illustrates the two interpretations. In the sentence *He found her alive*, there is an ambiguity in the word *found* that corresponds to an ambiguity in the word *alive*. On one customary interpretation, as Halliday (1967:74-75) recommends, it means something akin to *He found her, and she was alive (not dead)*. I call this a *fact-finding* interpretation, but there is a subjective interpretation, too. On that interpretation, *He found her alive* means something close to *He found her lively*. Halliday's (1967:74-75) example is evidence that some *find* ascriptions are ambiguous between a fact-finding and a subjective interpretation, even when the ascription's complement is a small clause.⁴

Granting that there are ambiguous cases, it remains true that small clauses help control for the ambiguity between a fact-finding interpretation and a subjective interpretation. In other words, while acknowledging examples akin to Halliday's *He found her alive*, there remains a rough-and-ready correspondence between the intended interpretation (fact-finding *v.* subjective) and the type of complement clause (that-clause *v.* small clause). As an illustration, consider some examples in (6) due to Borkin (1973:46), where the complements are different clause types.

- (6) a. I find that this chair is uncomfortable.
b. I find this chair uncomfortable. (due to Borkin 1973:46)

As Borkin (1973:45) notes, when reporting the results of a consumer reaction survey, a competent speaker is likely to use not (6b) but (6a), where the complement is a that-clause. Consider, as an illustration, an alternative context where a couple is shopping together for home office furniture. When one asks the other how a chair feels, a competent speaker makes a different choice. In response, a competent speaker uses not (6a) but (6b), where the complement is a small clause. As a rule of thumb, a competent speaker customarily uses a *find*-ascription with a that-clause, at least when it is a fact-finding interpretation that is intended. When a subjective interpretation is intended, a competent speaker uses a *find*-ascription with a small clause.

A Euthyphro interpretation entails that there is a semantic connection between human attitudes and an attitude dependent sentence. Given the contextualist and relativist alternatives under discussion, it is a connection between either a sentence's content in a context, or its truth-value in an assessment circumstance. Since there is evidence that the compositional semantics of a subjective attitude ascription exploits the semantic connections that accompany a Euthyphro interpretation, they are a useful place to look for linguistic evidence regarding whether a Euthyphro interpretation is correct. In particular, semantic studies suggest that a subjective attitude ascrip-

⁴ There is another fact-finding interpretation of the sentence *He found her alive*. Halliday (1967:74-75) focuses on a reading where the sentence means *He found her, and she was alive (not dead)*. However, on another reading, it means something akin to *He found her, while he was alive*. Even if there are two possible fact-finding interpretations, the contrast that I am emphasizing is between fact-finding and subjective interpretations. Thanks to Stefan Huber for this observation.

tion is infelicitous unless not only is the complement clause attitude dependent, but also the ascription's subject occupies the semantic role of the judge.

5. Judge-Shifting Semantics for Subjective Attitude Ascriptions

The semantics of subjective attitude ascriptions that I consider is due to Sæbø (2009) (see also Stephenson 2007a,b). Sæbø does not draw inspiration from quintessential accounts of propositional attitude ascriptions such as Hintikka's (1962) study of doxastic attitude ascriptions. Instead, his approach draws from a somewhat unexpected source, namely, Lasersohn's (2005) remarks about prepositional phrases akin to *to Charlie*. However, it is the connection to prepositional phrases that puts Sæbø in a better position to account for some well-known felicity considerations. Even as far back as the nineteen seventies, there is widespread agreement that a subjective attitude ascription is infelicitous when the embedded complement contains what I call an *offending prepositional phrase*. As Borkin (1973:44) emphasizes, while a speaker might felicitously assert the sentence *Jones finds Sam amusing*, it is infelicitous for a speaker to assert a sentence akin to (7), where the complement contains an offending prepositional phrase. For similar reasons, Stephenson's (2007b:62) illustration—i.e., the sentence *Sam finds the hamster wheel fun for the hamster*—is infelicitous. (The sign [#] indicates infelicity.)

- (7) [#] Jones finds Sam amusing to Charlie. (inspired by Borkin 1973:44)

5.1. To Charlie is a Judge-Shifting Expression

When considering prepositional phrases akin to *to Charlie*, Lasersohn (2005:666-668) suggests that they function semantically to fix who occupies the semantic role of the judge. Following Sæbø (2009), let us call this model a *judge-shifting* semantics. Since Lasersohn (2005) favors a relativist semantics, let us first consider how to understand the phrase *to Charlie* within that framework. As I address above, a relativist claims that the truth-value of an attitude-dependent sentence akin to *Sam is amusing* is partially a function of a judge that an assessment circumstance gives us. When we put the sentence *Sam is amusing* together with the phrase *to Charlie*, the prepositional phrase shifts the assessment circumstance, so that Charlie is the judge whose attitudes are germane. When we formulate a judge-shifting semantics in relativist terms, as (8) illustrates, the truth-value of the sentence *Sam is amusing to Charlie* is the truth-value of the sentence *Sam is amusing*, except where Charlie is the judge in the assessment circumstance.

- (8) The sentence *Sam is amusing to Charlie* is true with respect to both c and $\langle\langle w, t \rangle, j \rangle$ if and only if *Sam is amusing* expresses a relativist content at c , and that content is true with respect to $\langle\langle w, t \rangle, \text{Charlie}\rangle$, where Charlie is the referent of *Charlie* with respect to both c and $\langle\langle w, t \rangle, j \rangle$.

As we might expect, there is disagreement over whether the relativist framework is the best account of prepositional phrases akin to *to Charlie*. It follows from a relativist perspective that a *to*-phrase shifts (or might shift) the person who occupies the semantic role of the judge in the as-

assessment circumstance. While Kölbel (2009:384) suggests that the relativist framework is similar to how we use such phrases in natural language, there are others who support a contextualist approach (see also Stephenson (2007a:500)). For example, Stanley (2005:143n8) suggests that prepositional phrases function to fix the comparison class, where the comparison class is presumably a constituent of the sentential content that a use context provides.

Setting Lasersohn's favored framework aside, let us consider a parallel contextualist approach in the spirit of Stanley's (2005) suggestion. A contextualist claims that an attitude-dependent sentence's content varies with respect to the judge that a context supplies. On one approach that I address above, this shift in content is due to an argument whose constituent is an implicit pronoun, where that pronoun's value varies according to the extra-linguistic context. Yet, as I mention above, there are cases where the linguistic context explicitly sets the value of the pronoun. As (9) illustrates, when someone says, *Sam is amusing to Charlie*, the linguistic context contains the phrase *to Charlie*, and that phrase makes explicit the value of the argument that is implicit in a sentence akin to *Sam is amusing pro* (see Lasersohn 2005:648).

- (9) The sentence *Sam is amusing to Charlie* is true with respect to both c and $\langle w, t \rangle$ if and only if c supplies Charlie as the value of *pro*, *Sam is amusing pro* expresses a classical content at c , and that content is true with respect to $\langle w, t \rangle$.

5.2. *Find* is a Judge-Shifting Expression, Too

As I mention above, Sæbø's (2009) semantics for subjective attitude ascriptions is based on a judge-shifting model. Like the prepositional phrase *to Charlie*, Sæbø claims that attitude ascriptions akin to *Charlie finds Sam amusing* serve to fix who occupies the semantic role of the judge. Given that we are dealing with a contextualist framework, a judge-shifting semantics entails that a subjective attitude ascription's content is equivalent to the content of the complement clause, except where the ascription's subject is the value of the implicit pronoun. As (10) illustrates, the content of the ascription *Charlie finds Sam amusing* is the content of a sentence akin to *Sam is amusing pro*, except where the value of *pro* is the referent of *Charlie*.

- (10) The sentence *Charlie finds Sam amusing* is true with respect to both c and $\langle w, t \rangle$ if and only if c supplies Charlie as the value of *pro*, *Sam is amusing pro* expresses a classical content at c , and that content is true with respect to $\langle w, t \rangle$.

It follows from a contextualist framework that a subjective attitude ascription makes linguistically explicit the value of the implicit pronoun in the ascription's attitude-dependent complement. However, as (11) illustrates, we might also formulate a judge-shifting semantics for subjective attitude ascriptions in relativist terms. In particular, a relativist claims that the person to whom the attitude is attributed is the judge that the assessment circumstance provides for the ascription's complement, and the attitude ascription's truth-value is partially a function of that judge's attitude toward the complement.

- (11) The sentence *Charlie finds Sam amusing* is true with respect to both c and $\langle\langle w, t \rangle, j\rangle$ if and only if *Sam is amusing* is true with respect to c and $\langle\langle w, t \rangle, \text{Charlie}\rangle$, where Charlie is the referent of *Charlie* with respect to c and $\langle\langle w, t \rangle, j\rangle$.

5.3. Offending Prepositional Phrases

As I mention above, there is a motivation for Sæbø's (2009) judge-shifting semantics, namely, how it accounts for the infelicity considerations regarding offending prepositional phrases. Suppose for argument's sake that *amusing* is an attitude-dependent expression, and that a Euthyphro interpretation of sentences akin to *Sam is amusing* is correct. In other words, either the sentence's content depends on the judge that an extra-linguistic context supplies, or its truth-value depends on the judge in an assessment circumstance. When we put *amusing* together with the prepositional phrase *to Charlie*, the expression that results from concatenation is not attitude dependent. From a contextualist perspective, since the phrase *to Charlie* is a judge-shifting expression, the content of *amusing to Charlie* in a context is the content of *amusing* except where the context supplies the referent of *Charlie* as the judge. In relativist terms, the extension of *amusing to Charlie* is the extension of *amusing* except where the assessment circumstance gives the referent of *Charlie* as the judge. Either way, *amusing to Charlie* is not an attitude-dependent expression, and a Euthyphro interpretation of sentences akin to *Sam is amusing to Charlie* is incorrect.

Given that a Euthyphro interpretation is unsuitable for *Sam is amusing to Charlie*, let us consider how this accounts for the infelicity of illustration (7) *Jones finds Sam amusing to Charlie* (see Borkin 1973:44). Suppose, for argument's sake, that something akin to judge-shifting semantics is appropriate for subjective attitude ascriptions, as Sæbø (2009) argues (see also Kennedy 2010). Given that *find* is a judge-shifting expression, a subjective attitude ascription is infelicitous unless the complement clause satisfies two semantic requirements. One requirement is that a Euthyphro interpretation of the complement is correct, and the other requirement is that the judge role is assigned to the attitude ascription's subject. Given that a Euthyphro interpretation is inappropriate for *Sam is amusing to Charlie*, subjective attitude ascriptions akin to *Jones finds Sam amusing to Charlie* are infelicitous.

6. Are Borderline Vague Sentences Attitude Dependent?

While the judge-shifting model sheds light on the semantics of subjective attitude ascriptions, it also provides an insight into attitude-dependent approaches to vagueness. In conjunction with a judge-shifting semantics, an attitude-dependent approach to vagueness entails that a vague complement plays a specific role in a subjective attitude ascription's compositional semantics. However, when a competent speaker makes felicity judgments about a subjective attitude ascription, these judgments partially reflect that speaker's grasp on the role that the ascription's complement plays in compositional semantics. It follows that we should look to our felicity judgments to confirm whether vague complements occupy the compositional semantic role that we would expect them to occupy, at least if an attitude-dependent approach is correct. Since our felicity judgments help establish whether a vague complement plays a suitable compositional semantic role with respect to a subjective attitude ascription, an attitude-dependent approach to vagueness must an-

swer to our felicity judgments. The rough-and-ready upshot is that an attitude-dependent approach to vagueness is compositionally motivated only if other things being equal, competent speakers judge that every subjective attitude ascription that has a vague complement is felicitous. Since competent speakers judge that some subjective attitude ascriptions with complements that are vague are infelicitous, as I argue below, the compositional motivation for an attitude-dependent approach to vagueness is threatened.

6.1. Subjective Attitude Ascriptions with Vague Complements

Let us concentrate on Shapiro's (2006) attitude-dependent approach to vagueness, so that it is evident how it fits together with a judge-shifting semantics for subjective attitude ascriptions. Since Shapiro takes for granted that there are borderline cases, we may assume that the sentence *Carla is rich* is a borderline case. If Bill Gates is our paradigm, our assumption amounts to the thesis that neither is the sentence *Carla is rich* nor is its negation determinately true with respect to $\langle\langle w, t \rangle, \text{Bill Gates}\rangle$. However, Shapiro (2006) allows that there are scenarios where a sentence is true, even when it is a borderline case. In particular, he favors a relativist account where a borderline sentence's truth-value is partially a function of an assessment circumstance.

Consider, as an illustration, a simple scenario where the domain of judges contains two individuals: Anna and Carla. Since we may assume that they are both competent speakers, let us take for granted that they both judge that the sentence *Bill Gates is rich* is true. Yet while Anna considers herself rich, she does not feel the same way about Carla. Since Carla feels like they are both rich, her attitude is different. We are assuming that *Carla is rich* is a borderline vague sentence. On Shapiro's approach, the word *rich* expresses a rule or function from $\langle\langle w, t \rangle, \text{Anna}\rangle$ to another function, namely, a function that maps Anna onto the value t (truth) but that maps Carla onto the value f (falsity). The word *rich* also expresses a rule or function from $\langle\langle w, t \rangle, \text{Carla}\rangle$ to a further function that maps both Carla and Anna onto the value t . It follows that while the borderline sentence *Carla is rich* is true when Carla is the judge in the assessment circumstance, it is false when Anna is the judge.

Given Shapiro's approach to borderline vague sentences akin to *Carla is rich*, we should expect that the rule or function that it expresses is suited to play a role in the compositional semantics of subjective attitude ascriptions, at least on a judge-shifting model. Since Shapiro's approach is relativist, let us consider a parallel account of subjective attitude ascriptions. From a relativist perspective, a subjective attitude ascription semantically expresses a rule or function that maps an argument (i.e., the referent of the attitude's subject) to a truth-value. In particular, the truth-value of a subjective attitude ascription is a function of the truth-value of the ascription's complement clause, except where the judge in the assessment circumstance is the referent of the ascription's subject. In other words, *Anna finds Carla rich* expresses a rule or function that maps Anna to the value f (falsity). Given our assumptions above, the ascription *Anna finds Carla rich* is false because the sentence *Carla is rich* is false with respect to $\langle\langle w, t \rangle, \text{Anna}\rangle$. In contrast, the sentence *Carla finds Anna rich* is true, since *Anna is rich* is true when Carla is the judge.

While I give special attention to Shapiro's (2006) relativist thesis that the truth-value of a borderline vague sentence is partially dependent on the assessment circumstance, we may draw

similar conclusions *mutadis mutandis* from the core interpretation that is common among attitude-dependent approaches to vagueness. On a Euthyphro interpretation, for every borderline vague sentence, either that sentence's semantic content with respect to a context of use is partially a function of a judge that the context supplies, or that sentence's truth-value is partially a function of a judge that the assessment circumstance supplies. While the line that Raffman, Shapiro, and their contextualist counterparts defend is that a Euthyphro interpretation is correct for every borderline vague sentence, this line suggests a parallel thesis that holds for complement clauses, namely, that a Euthyphro interpretation is correct for every borderline vague complement. Generally speaking, on a judge-shifting semantics, either a subjective attitude ascription's semantic content is the content of the ascription's complement with respect to a context where the ascription's subject is the judge, or the ascription's truth-value is the truth-value of its complement with respect to an assessment circumstance where the ascription's subject is the judge. It follows that a borderline vague complement plays a role in the compositional semantics of a subjective attitude ascription. After all, what a Euthyphro interpretation guarantees is that borderline vague complements semantically express the relevant rule or function in terms of which we compute either a subjective attitude ascription's content or its truth-value.

6.2. What We Learn About Vagueness from Subjective Attitude Ascriptions

When we reflect on whether the complement of a subjective attitude ascription plays a suitable role in the ascription's compositional semantics, we can look to the judgments that competent speakers make concerning the status of the ascription as felicitous. Our felicity judgments partially reflect our grasp on whether an ascription's constituents are working together correctly, compositionally speaking. Other things being equal, when an ascription's complement plays a suitable compositional semantic role, a competent speaker judges that the ascription is felicitous. When a speaker judges that an ascription is infelicitous, it is evidence that the ascription's complement does not play the right role, at least other things being equal. It follows that we can test whether a Euthyphro interpretation of a borderline vague complement is correct against our felicity judgments regarding subjective attitude ascriptions that contain borderline vague complements. In particular, let us say that an attitude-dependent approach to vagueness is compositionally motivated, at least *vis-à-vis* subjective attitude ascriptions, only if other things being equal, competent speakers judge that every subjective attitude ascription with a borderline vague complement is felicitous.

Since the considerations about offending prepositional phrases that I address above give us an independent motivation for Sæbø's (2009) judge-shifting semantics, I concentrate on whether an attitude-dependent approach to vagueness is compositionally motivated with respect to subjective attitude ascriptions. Kennedy (2010) calls attention to a range of felicity judgments that are germane to the issue under discussion, especially judgments that concern subjective attitude ascriptions whose complements contain vague dimensional words akin to *big*, *large*, *small*, *rich*, *thin*, *short*, and so forth. Following Kennedy's (2010) illustration in (12a), while competent speakers judge that sentences akin to *Anna finds her bowl of pasta delicious* are felicitous, competent speakers judge that sentences akin to *Anna finds her bowl of pasta big* are infelicitous.

Similarly, as Kennedy's (2010) illustration in (12b) shows, while we judge that sentences akin to *Anna finds Carla amusing* felicitous, we judge that sentences akin to *Anna finds Carla rich* are infelicitous.

- (12) a. # Anna finds her bowl of pasta big.
b. # Anna finds Carla rich. (due to Kennedy 2010)

Sæbø (2009) also draws attention to a range of felicity judgments that further corroborate Kennedy's (2010) illustrations. Sæbø (2009) shows that competent speakers judge that a subjective attitude ascription is infelicitous, even when the ascription's complement contains a vague dimensional word that is coordinated with another word that is paradigmatically attitude dependent. For instance Sæbø (2009:328) mentions that sentences akin to *She finds him handsome and below forty-five* are infelicitous.

When we focus exclusively on familiar attitude verbs akin to *know* and *believe*, perhaps the illustrations due to both Kennedy (2010) and Sæbø (2009) are somewhat unexpected. After all, sentences akin to either *Anna knows that her bowl of pasta is big* or *Anna believes that her bowl of pasta is big* do not raise similar felicity considerations. Yet when we consider a wider class of verbs, there are many cases where competent speakers make fine-grained judgments with respect to felicity, and a compositional semantic theory must answer to these judgments. As an illustration, consider an observation that is due to McCawley (1971). While competent speakers judge that (13a) is felicitous, they judge that (13b) is infelicitous.

- (13) a. He hammered the metal flat.
b. # He hammered the metal ugly. (due to McCawley 1971:29-30)

Similarly, Green (1972) calls attention to the fact that while we judge (14a) is felicitous, we judge that (14b) is infelicitous.

- (14) a. He wiped it clean.
b. # He wiped it dirty. (due to Green 1972:83)

Of course, neither is *hammer* an attitude verb, nor is *wipe*. Still, they illustrate fine-grained felicity judgments that resemble the felicity judgments to which Kennedy (2010) draws our attention. Just as we accept that the felicity judgments regarding both *He hammered the metal ugly* and *He wiped it dirty* as evidence that the words *ugly* and *dirty* do not play a suitable compositional semantic role with respect to the verbs *hammer* and *wipe* respectively, so too we should take our felicity judgments regarding *Anna finds her bowl of pasta big* and *Anna finds Carla rich* as evidence that complements that contain vague dimensional words do not play a suitable compositional semantic role with respect to subjective attitude ascriptions. However, given an attitude-dependent approach to vagueness, this is precisely the compositional semantic role that we would expect them to play. As a result, I submit that attitude-dependent approaches to vagueness

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are not compositionally motivated, at least when we concentrate on subjective attitude ascriptions that contain borderline vague complements.

7. Conclusion

The discussion aims to shed light on semantic issues about attitude dependence, especially attitude-dependent approaches to vagueness. When we concentrate on the compositional semantic role of borderline vague complements, there is linguistic evidence that an attitude-dependent approach to vagueness is incorrect. Competent speakers judge that some subjective attitude ascriptions with vague complements are infelicitous. Yet, given an attitude-dependent approach to vagueness, we should expect otherwise. While this threatens the compositional motivation for an attitude-dependent approach to vagueness, it does not undermine that approach. After all, compositionality considerations give us evidence that should ultimately be weighed against other germane considerations, including the sorites paradox and human psychology.

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