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CONTEXT DEPENDENCE, DISAGREEMENT, AND PREDICATES OF PERSONAL

TASTE¹

ABSTRACT. This paper argues that truth values of sentences containing predicates of “personal taste” such as *fun* or *tasty* must be relativized to individuals. This relativization is of truth value only, and does not involve a relativization of semantic content: If you say roller coasters are fun, and I say they are not, I am negating the same content which you assert, and directly contradicting you. Nonetheless, both our utterances can be true (relative to their separate contexts). A formal semantic theory is presented which gives this result by introducing an individual index, analogous to the world and time indices commonly used, and by treating the pragmatic context as supplying a particular value for this index. The context supplies this value in the derivation of truth values from content, not in the derivation of content from character. Predicates of personal taste therefore display a kind of contextual variation in interpretation which is unlike the familiar variation exhibited by pronouns and other indexicals.

¹Most of the work for this paper was completed before I became aware of Kölbel (2002), which argues for a very similar position (though without the Kaplan-style formalization I develop here). Readers are referred to Kölbel’s book for a fuller philosophical defense of this position, and for programmatic suggestions of a slightly different approach to formal implementation.

1. PERSONAL TASTE AND RELATIVE TRUTH

To many of us who teach introductory semantics courses, the following may be a familiar experience: Early in the course, when one introduces the idea of truth conditions, and of trying to formulate rules assigning truth conditions to sentences in a systematic way, students will frequently ask, “But what about sentences that aren’t about matters of fact, but are really just matters of opinion?” And generally they have in mind sentences like (1) or (2):

(1) Roller coasters are fun.

(2) This chili is tasty.

The concern is that with sentences like these, there really is no fact of the matter, so it is not clear what to say about whether sentences like these are true or false, or what their truth conditions are.

I used to give an answer to this sort of question that was designed to resolve the matter quickly and allow the class to move on to the other issues that the course was really about: quantification, anaphora, intensionality, and so on. The answer was to draw an analogy to sentences like (3):

(3) My name is Peter Lasersohn.

If I utter this sentence, it is true; if almost anyone else utters it, it is false; and so we need to relativize its truth value to speakers: it is true relative to me and false relative to you. In the same way, we could relativize the truth values of sentences like (1) and (2), so that they might be true relative to one individual but false relative to another.

Part of that story still seems right. In particular, I think we do need to relativize the truth values of sentences like (1) and (2) to individuals. But I don’t think we should do this in a way which is analogous to what we do for examples like (3) at all. In fact, I think that if we work

through our options for treating examples like (1) and (2), and rule out those that doesn't work, the most plausible remaining option will be one that requires a significant adjustment to our theoretical representation of semantic content and how it relates to truth values.

Before looking at specific ways to analyze these examples, let us settle on some terminology: I will call predicates like *fun* or *tasty* "predicates of personal taste." I want to say that the truth values of sentences like (1) and (2) depends on the "personal tastes" of the speaker (or whomever the relevant individual might be). I prefer this over using the term *opinion*, because we can have opinions about matters of fact. For example, if I taste the chili, I might conclude from the flavor that it contains pork, and utter (4):

(4) The chili contains pork.

In saying this, I am in some sense expressing my personal opinion; but it is a very different case from examples (1) and (2), because intuitively, there is a fact of the matter as to whether the chili contains pork. So the predicates we're concerned with here, such as *fun* and *tasty*, are ones that express personal tastes, and not just personal opinions.

Exactly which predicates qualify as predicates of personal taste is an interesting question. The status of predicates such as *good* or *beautiful* immediately raises fundamental issues for ethics and aesthetics; and indeed many of our options in analyzing predicates of personal taste in general may be seen as variants of ideas that have already been explored in these fields. But in such discussions, the main focus is naturally on the ethical or aesthetic theory, which the semantic theory serves merely to support, advance, or make precise. If one is studying semantics for its own intrinsic interest, it seems best to set such programs aside. Accordingly, we will concentrate here on relatively mundane predicates such as *fun* and *tasty*, and leave open the status more

philosophically “charged” predicates like *good* and *beautiful*.² I do not offer here any firm diagnostic criteria for identifying predicates of personal taste, though I will return to this question briefly in Section 7.2, below. Despite the absence of such criteria, I think the intuitive idea should be reasonably clear, and that at least some examples, including *fun* and *tasty*, may be identified on that basis.

2. INDEXICALITY AND DISAGREEMENT

Before considering how to analyze examples (1) and (2), let us first briefly review techniques for handling examples like (3). What has been the most popular approach for a long time now is due mainly to David Kaplan (1989), and involves distinguishing what he calls the “character” of an expression from its “content.” The formal details of Kaplan’s theory need not concern us for the moment, but the basic idea is that the character and the content of an expression both serve as its meaning, but in different senses of the word *meaning*. If, as in (5), John says “I am a doctor,” and Mary also says “I am a doctor,” then in some sense both their utterances have the same meaning. *Character* is meaning in this sense.

(5) *John*: I am a doctor.

Mary: I am a doctor.

²This is not to claim that *fun* and *tasty* are devoid of moral or aesthetic content, of course. My point in remaining neutral as to the status of *good* and *beautiful* is not that these predicates are too complex to deal with here, or that the size of the existing literature is too large, but that a semantic theory should be motivated by (and evaluated on the basis of) semantic considerations, rather than by its implications for ethical or aesthetic theory.

But in another sense, it is clear that these utterances *don't* have the same meaning, since when John says "I'm a doctor," it means that *he* is a doctor, and when Mary says "I'm a doctor," it means that *she* is a doctor, not him. *Content* is meaning in this sense.

In certain circumstances, sentences with different characters can have the same content, as in (6).

(6) *John*: I am a doctor.

Mary, to John: You are a doctor.

When Mary says to John "You're a doctor," in some sense she makes the same claim as when John says "I'm a doctor," and so we say that both utterances express the same content. We can identify the contents of declarative sentences with propositions, but their characters are something a little more abstract.

Characters and contents relate to each other in a fairly direct way: Simplifying somewhat, Kaplan treated characters as functions from contexts to contents. It won't matter much for our purposes now if we model them as functions in this way; the main point is just that we can think of characters as coming with various contextual parameters that can be set in various ways, and fixing the settings for those parameters gives you the content. Among the parameters which may be contextually set is a specification of who the speaker and addressee are, determining the value for first and second person pronouns. Thus, the two utterances in (5) have different contents because the value for the pronoun *I* is fixed differently; while the two utterances in (6) have the same content, because the value for *I* in John's utterance is the same as the value for *you* in Mary's utterance.

Essentially, then, we get a picture like that in (7):

(7) **Character** \Rightarrow Resolve indexicality \Rightarrow **Content** \Rightarrow Evaluate truth value

This picture suppresses a lot of formal detail, but the crucial point to note is that the resolution of indexicals comes in only in the mapping from characters to contents. Once we have established the content, the truth value is fixed by the facts of our world of evaluation, with no more indexicality. (Of course if we are doing possible world semantics, we might still obtain different truth values in different worlds, or time-world pairs, but this is normally taken to be a rather different kind of contextual dependence from that involved in fixing the referents for indexicals like *I*.) There is no indexicality still to be resolved at the level of content; that all has to be taken care of in order to get to the content in the first place. A variety of problems have been pointed out for this claim (see especially Doron 1991, Schlenker 2003), and I will suggest that it is also problematic for the idea of analyzing predicates of personal taste on the model of ordinary indexicals.

Next, note that *contradiction* is a matter of conflicting contents. If one speaker utters a sentence, and a second speaker utters its negation, there is no contradiction if the sentence expresses different contents relative to the two speakers. This is illustrated in (8):

(8) *John*: I'm a doctor.

Mary: No, I'm not a doctor!

Although John says "I'm a doctor," and Mary asserts the negation of this sentence, "I'm not a doctor," there is no conflict or contradiction between their utterances at all — so it sounds strange that Mary starts out with "No," as though she were disagreeing. To really disagree with John, Mary would have to negate a sentence that expresses the same content as his utterance, not

one that expresses the same character,³ as in (9):

(9) *John*: I'm a doctor.

Mary: No, you're not a doctor!

3. CONTENT AND TASTE

Now let us return to examples like (1) and (2), *Roller coasters are fun* and *This chili is tasty*. As a first attempt at analyzing these, we might say something like the following: It may be true for one person that roller coasters are fun, but it is false for others, so there must be a hidden contextual parameter in these sentences; when I say them, I express a different content than you do when you say them, thus they may differ in truth value from person to person. Let us call this approach *Option 1*.

(10) *Option 1*: Let the character of *fun* yield different contents in different contexts, depending on the speaker; likewise with *tasty*, etc.

One way of working this idea out in more detail would be to claim that predicates like *fun* and *tasty* have a hidden argument place, which is filled by some sort of implicit indexical pronoun. The value of this indexical would be fixed pragmatically to the speaker, again yielding different contents for different speakers. This is given in (11):

³This is an obvious simplification, since one may express disagreement with a previous utterance by asserting any sentence which contradicts it (or perhaps, any sentence which contradicts the result of adding it to the common ground), and not just by asserting the negation of its content.

- (11) *Option 1.a.:* Analyze *fun*, *tasty*, etc. as having a hidden indexical argument, set pragmatically to the speaker.

Of course we need not require that this argument *always* be implicit, and at least with *fun*, it seems plausible to claim that it sometimes appears overtly, marked with the preposition *for*, as in *Roller coasters are fun for John*. In effect, under this option we would be analyzing *Roller coasters are fun* as meaning “Roller coasters are fun for me,” and *The chili is tasty* as meaning something like “The chili is tasty for me” or “The chili is tasty to me.”⁴

⁴These last two sentences do not sound as natural to some speakers as *Roller coasters are fun for me*, suggesting a difference between *fun* and *tasty*. I agree that there is something slightly odd-sounding about these sentences, but it is not difficult at all to find naturally occurring sentences of this type. The following examples came up in a quick internet search: (**boldface** added)

- (i) In this listing we provide common names we have found in the literature and have heard in the area, and note which parts of each species — or genus if all species can be treated similarly — are edible or at least **tasty to some people!**
(<http://www.plantbio.ohiou.edu/epb/facility/edibleplants/edibleintro.htm>)
- (ii) Some garden plants are **tasty to hungry deer**.
(<http://semissourian.rustcom.net/story/147059.html>)
- (iii) The recipes are astounding — simple to make, wonderfully healthy, **tasty for the whole family**, and there’s a little bit of everything in there.
- (iv) An adult walrus weighs several hundred kilos and the boiled meat is very **tasty for the**

A variant of this idea would be to analyze these sentences using an “unarticulated constituent” instead of a “hidden argument.” We might also consider analyses which do not relativize content to individuals but to standards of evaluation, so that they mean something like “Roller coasters are fun according to my criteria for judging fun,” and “The chili is tasty according to my criteria for judging tastiness.”

This solution cannot be right, however — neither the general idea in (10) or the more specific version of it in (11), because of the relation between contents and contradiction discussed in the last section. If I say “Roller coasters are fun,” and you say “No, roller coasters are not fun,” on this analysis, you are not contradicting me, because the negated sentence doesn’t express the same content for you as it does for me. In effect, my utterance means roller coasters are fun for me, and your utterance means roller coasters aren’t fun for you, and there is no conflict or contradiction between those at all — indeed, there is no reason to think we disagree in any way, on this analysis.

This is easy to see on the version of the analysis which uses hidden arguments. Consider (12) through (15):

(12) *John*: The chili is tasty.

(13) **tasty(the-chili, John)**

(14) *Mary*: No, the chili is not tasty.

(15) **~tasty(the-chili, Mary)**

Inuit also. (<http://www.geocities.com/TheTropics/Resort/9292/usfangst.html>)

If John says the chili is tasty, on this analysis he is expressing the proposition expressed by (13); and if Mary then says the chili is not tasty, she is expressing the proposition expressed by (15), which does not contradict (13) at all.

But in this situation, Mary *is* contradicting John — in fact it seems like a very overt, direct contradiction. This example doesn't have anything like the anomalous flavor of (8), but in this analysis, we are treating both examples in exactly the same way, and so we would expect them to elicit similar intuitions.

This is our central dilemma. It seems intuitively like sentences containing predicates of personal taste could be true relative to one person but false relative to another, but if we analyze them in this way, it appears to force us into claiming that they express different contents for different speakers, and then we no longer seem to be able to explain accurately which utterances contradict each other and which don't.

4. EXPLORING OPTIONS

In this section we review various options for trying to solve this dilemma. The analysis I will ultimately argue for may appear a little unusual, so it will be worth first establishing that more “normal-looking” options are not really tenable. Of course it would be impossible to work through every conceivable analysis, so I will not claim to have eliminated all possibilities other than my own analysis. But if the more obvious choices must be discarded, perhaps an unusual analysis will start to seem plausible.

In considering these options, I assume that our primary goal is to give an analysis of

sentences containing predicates of personal taste which assigns them a coherent semantics,⁵ and which can also simultaneously account for the intuition that such sentences vary in truth value from person to person, and for the intuitions about contradiction sketched above.

4.1. Indexical Analysis without First Person Restriction.

We might suspect that the problem with Option 1 was that it drew the analogy to first-person pronouns too tightly. Sentences like (1) and (2) will vary in truth value from context to context as long as we analyze predicates of personal taste as involving *some* kind of implicit indexical reference; there is no particular reason to suppose that this reference must always be to the speaker. Suppose instead that predicates of personal taste contain some hidden indexical element whose value is fixed to potentially any pragmatically relevant individual or group. We may call this Option 2:

(16) *Option 2:* Analyze sentences containing *fun*, *tasty*, etc., as making indexical reference to some relevant individual or group, not necessarily the speaker.

Here again we might claim more specifically that the predicate takes some sort of hidden indexical argument, or we might implement this idea in some other way; the details need not concern us now.

This approach allows us to make sense of certain cases of disagreement which were problematic under Option 1. Suppose John and Mary are riding the roller coaster, John says “This is fun!” and Mary says “No, this isn’t fun!” We assume that John and Mary both make

⁵Therefore I do not consider “error” theories, which assign such sentences incoherent or automatically false readings.

implicit reference to some relevant group — the group consisting of just John and Mary themselves, for example, or perhaps a group containing John, Mary and others like them in relevant respects. So long as the reference is to the same group for both speakers, their utterances will contradict each other, as desired. Moreover, we can make good pragmatic sense of Mary's response, at least if we assume that something can be fun for a group only if it is fun for (all) the members of the group: Since Mary is riding the roller coaster, she knows first-hand that it is not fun for her; it follows from this that it is not fun for any group of which she is a member; hence she is in a perfect position to refute John's claim that the roller coaster is fun for the group.

But now, consider an example in which the order of the utterances is reversed:

(17) *Mary*: This is not fun.

John: Oh, yes it is!

If we continue to assume that John and Mary both make implicit indexical reference to the same group, that this group contains both John and Mary, and that something is fun for the group only if it is fun for all the members of the group, it becomes quite hard to see make sense of John's response. Mary knows the roller coaster is not fun for her, it follows that it is not fun for the group, and John is in no position to deny this. By contradicting her, John must be acting irrationally, or ignoring what Mary said, or claiming to know her own mind better than she does herself, or something similar. But in fact in this example John does not seem to be doing any of these things; he is simply expressing his disagreement with Mary's claim that the roller coaster is not fun.

We might make sense of John's response by positing some sort of context shift between the two utterances, so that John and Mary make indexical reference to different groups or

individuals — but then, of course, we are back to a similar problem as we encountered with Option 1: there is no contradiction.

Alternatively, we could deny that something must be fun for all the members of a group in order to be fun for the group as a whole; it might be enough if it is fun for almost all — or even just for most — of the group. Then we could make pragmatic sense of John's utterance if he believes that Mary is exceptional among members of the group as a whole; we analyze John and Mary's disagreement as being about whether roller coasters are fun for most of the members of the relevant group.

It is, perhaps, not unreasonable to claim that something can be fun for a group as a whole without being fun for every single member of the group.⁶ However, it does not seem right that in order to analyze John and Mary as contradicting each other in examples like (17), we must treat their disagreement not as a matter of their own conflicting views about the roller coaster, but as a disagreement about what the majority view is within some group. If Mary has ridden on the roller coaster and knows that she does not like it, surely John will not be able to convince her that it is fun by showing her the results of a survey! Intuitively, we may interpret John and Mary in (17) as each asserting his or her own perspective over and against that of the other, and Option 2 does not seem able accommodate this intuition.

4.2. No Relativization.

Another approach we might try would be to say that the truth values of sentences like (1) and (2) do *not* vary from individual to individual, but instead are in some sense absolute, or

⁶But see Lasersohn (1999) for contrary arguments in related examples.

objective. Let us call this Option 3.

(18) *Option 3*: Derelativize the truth values of sentences containing predicates of personal taste, so that they do not vary from person to person.

I can think of at least three ways to work out Option 3 in more detail. First, we could continue to treat predicates of personal taste as having an implicit argument, and claim that this implicit argument is an existentially quantified variable.

(19) *Option 3.a.*: Existentially quantify the hidden argument.

This is certainly the way many implicit arguments are interpreted, and I know of at least one analysis in the literature which treats *fun* along these lines, namely Chierchia (1984: 404 ff.) Chierchia does not address most of the issues I've talked about here, but he does suggest a formula like (20) for the sentence *Dancing is fun*:⁷

(20) $\exists x[\mathbf{fun}'(x)(\hat{\ } \mathbf{dance}')$

Under this analysis, the sentence is true as long as there is at least one individual for whom dancing is fun. The existence of such an individual is presumably a fixed fact for everyone, so the truth value will not vary from person to person. Thus, if Mary says *Dancing is not fun*, she will be directly contradicting John's assertion of *Dancing is fun*.

However, this analysis cannot be right, because the truth conditions are simply much too weak. Suppose Mary doesn't like roller coasters at all. Then I think she can sincerely say *This is not fun* as she rides a roller coaster, even if she knows that many other people do enjoy them. But

⁷In the interest of clarity, I omit the generic tense operator included in Chierchia's original formula, expand his "ADROP" operator, and reduce the formula by λ -conversion. The $\hat{\ }$ -symbol in (20) is a nominalization operator, corresponding to the *-ing* affix.

under this analysis, she could not say that, at least not sincerely. So it is implausible simply to existentially quantify the hidden argument.

If existential quantification gives too weak a reading, we might consider using some other sort of quantification to get a stronger reading. One plausible idea might be to claim that there is some sort of generic quantification, rather than existential quantification.⁸

(21) *Option 3.b.:* Generically quantify the hidden argument.

This possibility is suggested by Bhatt and Izvorski (1995), for example. The idea is that a sentence like *Roller coasters are fun* means something like, *Roller coasters are fun for people in general*, or perhaps, *Roller coasters are fun for an arbitrarily selected person*.

Here again, by removing the indexical reference, the analysis eliminates variation in truth value from person to person, so that John and Mary would be making the same claim in uttering *Roller coasters are fun*, and overtly disagreeing if John says they are fun and Mary says they are not.

But this approach suffers from a similar problem we to one we encountered in Option 2: You can sincerely describe something as fun as long as it's fun for *you*, even if you know that most people would not enjoy it. For example, suppose John is compiling a detailed catalog of his paper clip collection — the 2005 model paper clips have just come out, and he's very excited. He's enjoying himself — having fun — so I think he can say (22)a., even if he is fully aware that no one else would find this activity enjoyable at all. But according to Option 3.b., he shouldn't

⁸One might also consider universal quantification, as suggested by Epstein (1984), for example; but the arguments given below against generic quantification apply straightforwardly to universal quantification as well.

say this, but instead something like (22)b.:

- (22) a. This is fun!
b. This is not fun at all, although I'm having fun doing it.

But of course it would be ridiculous to talk this way, so I think there is something wrong with this analysis.

Notice also that under Option 3.b., it should be contradictory to say something like (23):

- (23) This is fun, but most people would hate it.

But in fact this is a perfectly sensible and coherent thing to say. I've actually heard people many times say things like *Most people have no idea what real fun is*, which should not make much sense under Option 3.b.

All of the options we've discussed so far have assumed that predicates like *fun*, *tasty*, etc., are basically 2-place predicates, and that when they appear as overtly 1-place predicates, we define that 1-place use in terms of the 2-place use, by fixing the value of an implicit argument in some way.

We could, instead, claim that these predicates are basically 1-place, with no implicit argument, and no indexation or other relativization to speakers or experiencers. Taking this position amounts to claiming that *fun*, *tasty*, etc., are completely objective predicates, which hold or fail to hold of an object absolutely, without any reference to who (or how many people) would find that object fun or tasty, etc. I'll call this "Option 3.c."

- (24) *Option 3.c.*: Treat the 1-place use as basic, with no indexing, implicit arguments, or relativization.

In a loose sense, this approach could perhaps be regarded as the analog in the area of

predicates of personal taste to Williamson's (1994) analysis of vague predicates. Williamson argues that the meanings of apparently vague predicates actually have sharp boundaries, so that, despite appearances, there is a definite fact of the matter as to whether someone is thin or not, for example; and we would likewise be claiming that there really is a definite fact of the matter as to whether roller coasters are fun or not.

There is a crucial difference between our examples and Williamson's, however, which prevents this approach from carrying over. Williamson's analysis depends on the fact that with vague predicates, we have no way of knowing, or even discovering, where the boundaries fall. But with predicates of personal taste, we actually operate from a position of epistemic *privilege*, rather than the opposite. If you ride the roller coaster, you are in a position to speak with authority as to whether it is fun or not; if you taste the chili, you can speak with authority as to whether it is tasty. I don't mean to deny that these predicates display vagueness, and maybe this vagueness is due to ignorance, as Williamson argues; but that is a separate issue from the kind of apparent interpersonal variation in truth value that we have been concerned with in this paper. This variation is not due to ignorance, but on the contrary seems to be tied up with the fact that we each have a privileged perspective on our internal affective states. Notice that this is a stronger privilege than we get even from direct observation. For example, if I see a car, I can say that it is red; but there is still the possibility that I could be in error — for example if I am color-blind. But even if I have an unusual tongue defect that makes me experience flavors differently from most people, if I try the chili and like it, it seems to me that I am justified in saying *The chili is tasty*.⁹

⁹An anonymous referee points out that in some cases we defer to authorities for judgments

There is also a more mundane problem with treating predicates of personal taste as simple predicates with no implicit arguments or relativization, and that is that it is completely unclear on this assumption how to deal with the experiencer argument when it is expressed overtly. For example, how do we treat the *for*-phrase in (25) on this analysis?

(25) This is fun for Mary.

There is no argument place for it, no indexing — nothing in the meaning of the predicate for it to “grab onto,” and so it seems a little mysterious on this analysis why we can even get a *for*-phrase. Option 3.c. therefore seems problematic.

4.3. *Expressivism.*

Having ruled out Options 1 and 2, which treated predicates of personal taste as having a hidden indexical element, thereby allowing them to express different contents in different contexts, _____ of taste; for example we may recognize that a wine connoisseur has a more refined palate than our own, and therefore consider a wine tasty based on the connoisseur’s judgment rather than our own subjective experience. My own intuitions are that although we may defer to experts on judgments of “quality,” it would be rather unusual for someone who tasted a wine and disliked the taste to consider it “tasty” out of deference to an expert — suggesting that something other than tastiness contributes to judgments of quality. Moreover, as the referee points out, we seem much less inclined to defer to experts for judgments regarding what is fun. As long as such examples can be found, where we regard our own subjective experience as conferring authoritative judgment, but where judgment varies from individual to individual, Option 3.c. seems problematic.

and having also ruled out Options 3.a., b. and c., which were designed to assign a definite truth value that does *not* vary from person to person, what options remain?

One possibility, reminiscent of a move sometimes made in “irrealist” metaethical theories, would be to claim that the problem is in assuming that our examples are true or false at all. If we encounter trouble assigning a truth value, maybe the trouble comes from our assumption that these examples even have truth values. This leads to Option 4:

(26) *Option 4:* Deny that truth and falsity are involved.

The categories of truth and falsity apply only to certain illocutionary acts (assertions, or statements), so the obvious way to pursue Option 4 is to deny that utterances of the kind with which we are concerned involve the performance of such acts. The most obvious alternative illocutionary act we might appeal to here is what we might call an act of “affective expression”; this gives us Option 4.a.:

(27) *Option 4.a.:* Treat utterances of sentences like *This is fun* or *This is tasty* as non-assertive acts of affective expression.

To clarify what I mean by “non-assertive acts of affective expression,” consider examples like those in (28) to (30):

(28) Whee!

(29) Mm-mm.

(30) Oh, boy!

Utterances like these don’t make assertions; they just express some inward mental or emotional state. In Option 4.a., we would be assimilating sentences like *This is fun* or *This is tasty* to these.

An obvious problem with this idea is that we can deny sentences like *This is fun* or *This is*

tasty, say they're not true, etc.; but you can't do the same thing with these non-assertive utterances of affective expression. There is nothing very strange about (31), for example:

(31) *John*: This is fun!

Mary: That's not true! This isn't fun at all!

Example (32), in contrast, is pretty bizarre:

(32) *John*: Whee!

Mary: ??That's not true! This isn't fun at all!

Mary's utterance is anomalous even though John's utterance of *Whee!* strongly implicates that whatever activity they're engaged in is fun.

Additionally, sentences like *This is fun* or *This is tasty* can appear embedded under truth-functional connectives and other logical operators, and participate in the usual logical consequence relations which such embeddings give rise to. One would like to preserve the idea that (33) is an ordinary example of Modus Ponens, for example:

(33) If there is a loop, the roller coaster is fun.

There is a loop.

Therefore, the roller coaster is fun.

But it is quite hard to see how to maintain this idea if sentences like *The roller coaster is fun* do not have truth values.¹⁰

Moreover, if we claim that these sentences are neither true nor false, it becomes very unclear how to capture one of the original intuitions that opened the whole inquiry, namely, the intuition that if John says something is fun, and Mary says it's not fun, they're contradicting each

¹⁰See, e.g. Geach (1965) for additional discussion.

other — expressing direct and overt disagreement with one another. If the sentences don't even make assertions, it is hard to see in what sense they could contradict each other. So I think we can set Option 4.a. (and all other versions of Option 4) aside.

4.4. *Metalinguistic and Metacontextual Conflict.*

What options are left open to us? We rejected Options 1, 2 and 4 because they failed to capture the intuition that if one person says something is fun or tasty, and another says it is not, they are contradicting each other. But perhaps we abandoned these ideas too hastily. If we could account for the *intuition* of contradiction without claiming that the utterances involved actually do contradict each other, perhaps we could return to one of these options and make it more plausible. I will call this strategy Option 5:

(34) *Option 5:* Claim that sentences like *Roller coasters are fun* and *Roller coasters are not fun* do not actually contradict each other; account for the intuition of contradiction by claiming they conflict in some other way.

There are at least a couple of ways we might work out this idea in more detail, depending on what “other way” we claim the sentences conflict in. One possibility is to say that in addition to their ordinary semantic content, sentences carry metalinguistic information about the meanings of the words involved, and that the conflict is at this level:

(35) *Option 5.a.:* Treat utterances such as *Roller coasters are fun* and *Roller coasters are not fun* as conflicting at the level of metalinguistic implications about the meaning of *fun* (rather than expressing mutually contradictory semantic contents).

The analysis would go roughly like this: If John says “This is fun” while riding a roller coaster,

part of what he is saying is a comment on the roller coaster, but his utterance also clearly conveys some metalinguistic information too, namely that he interprets the word *fun* as having a meaning which applies to the roller coaster. If you already had a clear sense of what the roller coaster was like, but were unsure what *fun* meant — or in particular what John meant by *fun* — his utterance would inform you about the meaning of the word, at least to some extent.

Taking this a step further, if Mary then objects “This is not fun,” we could take her not to be arguing with John about the roller coaster at all, but instead about the interpretation of the word *fun*. We could then explain the intuition that John and Mary disagree as due to the fact that John and Mary take opposite sides in this conflict over the meaning of the word, rather than appealing to any sort of logical contradiction between the semantic contents of their utterances.

A related approach would exploit the fact that if the interpretation of a sentence varies from context to context, then using the sentence may be informative not just about the subject matter of the sentence, but also (or even exclusively) about the context itself. This point is made forcefully by Barker (2002), for example: If one of the functions of the pragmatic context is to specify boundaries for vague predicates like *tall*, then uttering a sentence like *Feynman is tall* in a situation where it is clear exactly how tall Feynman is will not tell us anything about Feynman’s height, but will tell us something about where the boundary between the tall and the non-tall is — in other words, it will give us information about what pragmatic context we are in. Particularly since some aspects of interpretation may depend on features of the context which are not obvious or publicly accessible to all the discourse participants, such as speaker intentions or background assumptions, it is not surprising that linguistic utterances may sometimes serve more to clarify the

context than to convey information about their subject matter.¹¹

Now suppose we return to Option 2, in which the content of *Roller coasters are fun* or *The chili is tasty* varies from context to context, depending on the value of the hidden indexical. This value is not fixed automatically to the speaker, but to potentially any pragmatically relevant group or individual. If the value is determined covertly, it might not be obvious what the pragmatic context is.

Now John might say *Roller coasters are fun*, intending an interpretation relative to some context c_1 which renders the sentence true; and Mary might say *Roller coasters are not fun*, intending an interpretation relative to some other context c_2 which renders John's sentence false. If we interpret both utterances relative to c_1 , they contradict each other; likewise if we interpret both relative to c_2 . If we interpret John's utterance relative to c_1 and Mary's relative to c_2 , their contents do not contradict each other, just as in the original version of Option 2. But now we can explain the intuition that John and Mary disagree with each other by pointing out that they are in conflict over what the pragmatic context is. Let us call this Option 5.b.:

(36) *Option 5.b.:* Treat utterances like *Roller coasters are fun* and *Roller coasters are not fun* as providing conflicting information about the pragmatic context (rather than expressing mutually contradictory semantic contents).

This is an attractive idea, and I certainly agree that some utterances serve to signal disagreement about context rather than subject matter.

¹¹See Stalnaker (1978) for a classic discussion of cases where discourse participants must entertain multiple candidate contexts in interpreting each other's utterances. Beaver (2001) Ch. 9 also provides some interesting relevant discussion.

However, if we assume a Kaplan-style distinction between character and content, then I don't think either Option 5.a. or Option 5.b. can be correct.

The reason is that we can report John and Mary's disagreement by embedding their sentences under verbs of propositional attitude. For example, if I hear John and Mary arguing, I can assert (37):

(37) John thinks that roller coasters are fun, but Mary thinks that roller coasters are not fun.

Moreover, it seems clear that if I say this, I am reporting a disagreement between John and Mary — claiming that they have contradictory beliefs.

But in Kaplan's system, verbs of propositional attitude relate individuals to the *contents* of their complement clauses.¹² So if (37) reports a disagreement between John and Mary, it would have to be a disagreement about content — that is, subject matter — not a disagreement about

¹²Schlenker (2003) argues in some detail that this is feature of Kaplan's system is a mistake, but this only reinforces my point that we cannot adequately treat examples like (37) in a Kaplan-style system under Option 2. Whether this means we should give up Option 2, or instead that we should give up Kaplan's claim that verbs of propositional attitude relate individuals to the contents of the their complement clauses, is an important issue which I cannot do justice to here. (But see the brief discussion in Section 7.1.) It is worth noting that if we retain Kaplan's claim, Barker's examples may become as problematic as (37), as an anonymous referee points out: If John and Mary both believe that Feynman is 5'9", but John intends a context in which 5'9" counts as tall, and Mary intends a context in which 5'9" does not count as tall, then in a Kaplan-style system, (i) would not report John's and Mary's beliefs as contradicting each other:

(i) John believes Feynman is tall, but Mary believes Feynman is not tall.

context or about the meanings of words. But Options 5.a. and 5.b. both attempt to account for the intuition of contradiction by appealing to conflict at some level other than ordinary semantic content.

Example (37) poses an additional problem for the idea of pursuing Option 5.b. (or Option 2) in a Kaplan-style system. Kaplan claims that English does not and could not contain any operators that “shift” the context; the context is fixed for the sentence as a whole. This means that in (37) we must interpret both subordinate clauses relative to the same context. And of course it is the context that determines the individual relative to which we interpret predicates like *fun*. So this individual must remain constant across both clauses, with the result that (37) ought to mean either that John thinks that roller coasters are fun for John and Mary thinks they are not fun for John, or that John thinks they are fun for Mary, and Mary does not think they are fun for Mary. But of course neither of these is the correct interpretation.

Of course there are non-Kaplanian semantic theories which allow operators to shift the context, most obviously including various systems of dynamic logic, but also even static systems like that of Montague (1970). But simply allowing the context to shift during the sentence will not solve this problem, as long as these context shifts alter the contents of the subordinate clauses. If we interpret the first subordinate clause relative to John, and the second one relative to Mary, then under Option 2, (37) will not report John and Mary’s thoughts as contradicting each other, contrary to intuition.

5. CONTEXT-DEPENDENCE AT THE LEVEL OF CONTENT

We have now explored a series of dead ends. Our basic problem is that if John says *This is*

fun and Mary says *This is not fun*, it seems possible for both sentences simultaneously to be true (relative to their respective speakers), but we also want to claim that John and Mary are overtly contradicting or disagreeing with each other; and none of the options we have considered give both these results at the same time.

What I would like to suggest is that we refine the notion of disagreement so that two people can overtly disagree — we might even go so far as to say they contradict each other — even if both their utterances are true.

Put this way, the idea sounds rather strange, but having eliminated these other possibilities, I think it is a reasonable alternative. If John says *This is fun* and Mary says *This is not fun*, they are clearly disagreeing with each other, but it is not the case that one of them is right and the other one is wrong. They are both in some sense right, even though Mary asserts the negation of the proposition expressed by John.

How can that be? All we have to do is assign words like *fun* and *tasty* the same content relative to different individuals, but contextually relativize the assignment of truth values to contents, so that the same content may be assigned different truth values relative to different individuals. This will allow for the possibility that two utterances express identical semantic content, but with one of them true and the other one false.

This is not at all hard to work out formally, and in fact can be implemented in Kaplan's system with a relatively small adjustment. And while it may seem out of the spirit of Kaplan's analysis to leave some sensitivity to context unresolved at the level of content, this was actually part of Kaplan's system all along, despite the discussion in Section 2 above.

Specifically, Kaplan treated the contents of sentences as (characteristic functions of) sets

of time-world pairs.¹³ Contexts were assumed to provide a time and world, and a sentence ϕ was defined as true in a context c iff the time and world of c were in the content of ϕ . In this way, the context plays a role not only in deriving the content from the character, but also in deriving the truth value from the content. This may not be the same *kind* of context-dependence as that involved in deriving contents from characters, but it is context-dependence nonetheless, and we can exploit it in analyzing predicates of personal taste.

What I would like to suggest is simply this: Instead of treating the content of a sentence as a set of time-world pairs, we should treat it as a set of time of time-world-individual triples. We assume that the context will provide an individual to be used in evaluating the sentences for truth and falsity, just as it provides a time and world; hence a sentence may be true relative to John but false relative to Mary.¹⁴ But this will be contextual variation in truth value only; the sentence will

¹³I am speaking here of the formal system at the end of Kaplan's paper. In informal discussion earlier in the paper, Kaplan suggests what is essentially a "structured meanings" approach to propositions, but this is not incorporated into his formalized theory.

¹⁴Alternatively, we might treat the third index not as an individual, but as a system of criteria for judging fun, tastiness, etc. There is, perhaps, some evidence in favor of this approach — an anonymous referee suggests that the following sentence, though false, is not *necessarily* false:

- (i) Wine is tasty, even though no one likes it.

The referee suggests the sentence would be true in a possible world where everyone has poor taste, and therefore fails to appreciate the good flavor of wine. In the system presented below, however, this sentence would be necessarily false, at least on the assumption that *Wine is tasty*

express the same *content* relative to both individuals. We may continue to define contradiction in the usual way: Two sentences ϕ and ψ contradict each other if their contents have an empty intersection.

If desired, we may retain the character-content distinction, and continue to resolve the values of indexicals like *I* in the mapping from character to content. That is the approach I will take here, in order to allow easy comparison to Kaplan's system.¹⁵

To make all this concrete, I now present a little "toy" language to illustrate the technique.

can be true relative to a world w , time t and individual x only if x likes wine in w at t . If, however, we treat the third index as a system of criteria instead of an individual, the sentence will not be necessarily false, because *Wine is tasty* may be true relative to a system s in a world w even if no individual employs system s in w . My own intuitions about this example are not very clear. It should be noted that using systems of criteria instead of individuals would complicate the analysis of belief sentences given in Section 6.2 below.

¹⁵I do not intend this as a defense of the character-content distinction or of the idea that the reference of ordinary indexicals is resolved only in the assignment of contents to characters — issues which I regard as more-or-less open. See King (2001), Schlenker (2002) for detailed critiques of different aspects of Kaplan's general approach. I adopt a Kaplan-style framework here primarily because it provides a popular, familiar, and explicit analysis of indexicality, in which the differences between ordinary indexicals and predicates of personal taste can be made easily apparent. It should be recognized that if we reject a Kaplan's distinction between character and content, then some of the options for analysis which I rejected above (such as Option 5.b.) could be reopened.

This language will be very simple, without quantification or even sentential connectives; but these seem largely incidental to our concerns here, and in any case it should be clear how they could be added. Our language will contain predicates of personal taste as well as other predicates, indexical pronouns as well as other noun phrases, negation, and a “now” operator. The formalism and presentation are modeled closely on the relevant parts of Kaplan’s system, with some obvious simplification, given the simpler language being presented.

Syntax

1. *Basic Expressions*

- (1) Constants: **I, John, Mary, the-chili, The-Giant-Dipper**¹⁶
- (2) Predicates: **fun, tasty, contain-pork, be-a-doctor**

Predicates which are basic expressions will be called *basic predicates*.

2. *Formation Rules*

- a. If α is a predicate and β is a constant, then $\alpha(\beta)$ is a sentence.
- b. If α is a predicate and β is a constant, then $[\alpha \text{ for } \beta]$ is a predicate.
- c. If ϕ is a sentence, then $\neg\phi$ is a sentence.
- d. If ϕ is a sentence, then $N\phi$ is a sentence.

Semantics

1. *Structures and Contexts*

A *structure* is a 5-tuple $\mathfrak{A} = \langle C, W, U, T, I \rangle$, where:

¹⁶The Giant Dipper is an old wooden roller coaster on the Santa Cruz Beach Boardwalk in Santa Cruz, California.

a. C is a non-empty set (of *contexts* of \mathfrak{A})

b. If $c \in C$ then:

$A(c) \in U$ (the *agent*, or speaker/author, of c)

$T(c) \in T$ (the *time* of c)

$w(c) \in W$ (the *world* of c)

$J(c) \in U$ (the *judge* of c)

Comment: The “judge” of a context will be the individual on which the truth value of sentences containing predicates of personal taste depends.

c. W is a non-empty set (the *worlds* of \mathfrak{A})

d. U is a non-empty set (the *individuals* of \mathfrak{A})

e. T is the set of integers (thought of as the *times* of \mathfrak{A})

f. I is a function (the *interpretation function* of \mathfrak{A}) assigning an intension I_α to each constant other than **I** and basic predicate α as follows:

(i) If α is a basic predicate, then I_α is a function such that for each $u \in U$, $w \in W$ and $t \in T$: $I_\alpha(u, w, t) \subseteq U$

(ii) If $\alpha \in \{\mathbf{contain-pork}, \mathbf{be-a-doctor}\}$, then for all $u, u' \in U$, and all $w \in W$ and $t \in T$: $I_\alpha(u, w, t) = I_\alpha(u', w, t)$

Comment: Since **contain-pork** and **be-a-doctor** are not predicates of personal taste, their extensions should not vary from individual to individual. Clause (ii) protects against such variation.

(iii) If β is a constant other than **I**, then I_β is a function such that for each $u, u' \in U$, $w \in W$ and $t \in T$: $I_\beta(u, w, t) \in U$ and $I_\beta(u, w, t) =$

$$I_{\beta}(u', w, t)$$

Comment: Constants should also not vary in extension from individual to individual. Proper names should denote rigidly across times and worlds as well as individuals, but I forego formulating that requirement here.

2. Truth and Denotation in Context

We write: $\models_{\mathfrak{A},c,u,t,w} \phi$ for ϕ , when taken in context c (and structure \mathfrak{A}) is true with respect to time t , world w , and individual u .

We write: $\llbracket \alpha \rrbracket_{\mathfrak{A},c,u,t,w}$ for the denotation of α , when taken in context c (and structure \mathfrak{A}) with respect to time t , world w , and individual u .

For all \mathfrak{A}, c, u, t, w as above:

- a. If α is a basic predicate or a constant other than \mathbf{I} , then $\llbracket \alpha \rrbracket_{\mathfrak{A},c,u,t,w} = I_{\alpha}(u, w, t)$
- b. $\llbracket \mathbf{I} \rrbracket_{\mathfrak{A},c,u,t,w} = A(c)$
- c. $\models_{\mathfrak{A},c,u,t,w} \alpha(\beta)$ iff $\llbracket \beta \rrbracket_{\mathfrak{A},c,u,t,w} \in \llbracket \alpha \rrbracket_{\mathfrak{A},c,u,t,w}$
- d. $\llbracket \alpha \text{ for } \beta \rrbracket_{\mathfrak{A},c,u,t,w} = \llbracket \alpha \rrbracket_{\mathfrak{A},c,b,t,w}$, where $b = \llbracket \beta \rrbracket_{\mathfrak{A},c,u,t,w}$
- e. $\models_{\mathfrak{A},c,u,t,w} \neg\phi$ iff $\not\models_{\mathfrak{A},c,u,t,w} \phi$
- f. $\models_{\mathfrak{A},c,u,t,w} \mathbf{N}\phi$ iff $\models_{\mathfrak{A},c,u,T(c),w} \phi$

Additional Definitions

We write: $\{\alpha\}_{\mathfrak{A},c}$ for the content of α , when taken in context c (and structure \mathfrak{A}).

Content:

- a. If ϕ is a sentence then $\{\phi\}_{\mathfrak{A},c} =$ that function which assigns to each $u \in U$, $t \in T$ and $w \in W$, Truth, if $\models_{\mathfrak{A},c,u,t,w} \phi$, and Falsehood otherwise.

Comment: As Kaplan (1989: 546) points out, the usual notion of the *proposition*

expressed by a sentence ϕ corresponds better to the content of $N\phi$ than to the content of ϕ as defined here. Free-standing English sentences should therefore be translated into formulas prefixed with N .¹⁷ However, in what follows, I usually drop the N for simplicity.

- b. If α is a predicate or constant, then $\{\alpha\}_{\mathfrak{A},c}$ is that function which assigns to each $u \in U$, $t \in T$ and $w \in W$, $[\alpha]_{\mathfrak{A},c,u,t,w}$.

Truth in Context: ϕ is true in the context c (in the structure \mathfrak{A}) iff $\{\phi\}_{\mathfrak{A},c}(J(c), T(c), w(c)) = \text{Truth}$.

Contradiction: Where p, q are sentence contents (i.e. functions from $U \times T \times W$ into $\{\text{Truth}, \text{Falsehood}\}$), p and q contradict each other iff there are no $u \in U$, $t \in T$, $w \in W$ such that $p(u, t, w) = \text{Truth}$ and $q(u, t, w) = \text{Truth}$.

Character: The character of α is that function which assigns to each structure \mathfrak{A} and context c of \mathfrak{A} , $\{\alpha\}_{\mathfrak{A},c}$.

Remarks

Remark 1: If α is a basic predicate, even **fun** or **tasty**, its denotation will not vary according to context. That is, $[\alpha]_{\mathfrak{A},c,u,t,w} = [\alpha]_{\mathfrak{A},c',u,t,w}$ for all contexts c, c' (where u, t and w are held constant). Therefore, it expresses the same content relative to all contexts. That is, $\{\alpha\}_{\mathfrak{A},c} = \{\alpha\}_{\mathfrak{A},c'}$ for all contexts c, c' .

¹⁷For the language considered here, this effectively renders the time parameter in sentence contents superfluous, since $\models_{\mathfrak{A},c,u,t,w} N\phi$ iff $\models_{\mathfrak{A},c,u,t',w} N\phi$ for all t, t' . It is useful in a language with tense operators, however, such as Kaplan's original language LD.

Remark 2: Constants other than **I** also do not vary in denotation according to context, and receive the same content relative to all contexts.

Remark 3: By the same token, sentences consisting of a basic predicate and a constant other than **I**, such as **fun(The-Giant-Dipper)**, will receive the same truth value relative to any two contexts c and c' , provided u , t and w are kept constant: $\models_{\mathfrak{A},c,u,t,w} \mathbf{fun}(\mathbf{The-Giant-Dipper})$ iff $\models_{\mathfrak{A},c',u,t,w} \mathbf{fun}(\mathbf{The-Giant-Dipper})$. Therefore, such sentences express the same content in all contexts: $\{\mathbf{fun}(\mathbf{The-Giant-Dipper})\}_{\mathfrak{A},c} = \{\mathbf{fun}(\mathbf{The-Giant-Dipper})\}_{\mathfrak{A},c'}$ for all c, c' .

Remark 4: Nonetheless, sentences like **fun(The-Giant-Dipper)** may vary in truth value from context to context. That is, there could be contexts c, c' such that **fun(The-Giant-Dipper)** is true in c and **fun(The-Giant-Dipper)** is not true in c' (in \mathfrak{A}). In particular, this will be the case if there are two individuals a and b such that $\models_{\mathfrak{A},c,a,t,w} \mathbf{fun}(\mathbf{The-Giant-Dipper})$ but $\not\models_{\mathfrak{A},c,b,t,w} \mathbf{fun}(\mathbf{The-Giant-Dipper})$, and $J(c) = a$ and $J(c') = b$.

Remark 5: The content of **fun(The-Giant-Dipper)** and the content of $\neg\mathbf{fun}(\mathbf{The-Giant-Dipper})$ contradict each other, even if these sentences are evaluated relative to different contexts with different judges or agents. That is, $\{\mathbf{fun}(\mathbf{The-Giant-Dipper})\}_{\mathfrak{A},c}$ and $\{\neg\mathbf{fun}(\mathbf{The-Giant-Dipper})\}_{\mathfrak{A},c'}$ contradict each other for all c, c' .

Remark 6: Nonetheless, there might be contexts c, c' such that **fun(The-Giant-Dipper)** is true in c and $\neg\mathbf{fun}(\mathbf{The-Giant-Dipper})$ is true in c' . Again, this will be the case if there are two individuals a and b such that $\models_{\mathfrak{A},c,a,t,w} \mathbf{fun}(\mathbf{The-Giant-Dipper})$ but $\not\models_{\mathfrak{A},c,b,t,w} \mathbf{fun}(\mathbf{The-Giant-Dipper})$, and $J(c) = a$ and $J(c') = b$.

Remark 7: Suppose $\llbracket \mathbf{Mary} \rrbracket_{\mathfrak{A},c,u,t,w} = \text{Mary}$. Then $[\mathbf{fun for Mary}](\mathbf{The-Giant-Dipper})$ is true in c iff there is some c' such that $J(c') = \text{Mary}$ and **fun(The-Giant-Dipper)** is true in c' .

Remark 8: Suppose $A(c) = J(c)$. Then $[\text{fun for I}](\text{The-Giant-Dipper})$ is true in c iff $\text{fun}(\text{The-Giant-Dipper})$ is true in c .

Remark 9: Nonetheless, $[\text{fun for I}](\text{The-Giant-Dipper})$ will normally express a different content from $\text{fun}(\text{The-Giant-Dipper})$ in c . For example, suppose $U = \{\text{John}, \text{Mary}\}$; $\models_{\mathfrak{A},c,\text{Mary},t,w}$ $\text{fun}(\text{The-Giant-Dipper})$ for all c, t, w ; and $\not\models_{\mathfrak{A},c,\text{John},t,w}$ $\text{fun}(\text{The-Giant-Dipper})$ for all c, t, w . Then where $A(c) = \text{Mary}$, $\{[\text{fun for I}](\text{The-Giant-Dipper})\}_{\mathfrak{A},c}$ is a constant function mapping every u, t, w onto Truth; but $\{\text{fun}(\text{The-Giant-Dipper})\}_{\mathfrak{A},c}$ is a function mapping Mary and every t, w onto truth, but John and every t, w onto Falsehood.

6. PERSPECTIVE, ASSESSMENT AND BELIEF

This section explores the implications of the system presented above for the pragmatics of truth-assessment, and for the semantics of belief-attribution sentences.

6.1. Who is to Judge?

One issue raised by the system presented here is how the “judge” of a context is determined. Our original hypothesis (Option 1) treated predicates of personal taste as having a hidden first-person element to their meaning; in effect this meant that the judge was the agent, or speaker/author. Options 2 and 5.b. assumed a hidden indexical element whose value could be fixed to any relevant individual or group, making the choice of judge analogous to the choice of referents for third person indexicals — presumably this depends on speaker intentions in some way. Our current theory no longer treats predicates of personal taste as having a hidden indexical element, but similar choices are available to us: we may claim that the judge of a context is

automatically fixed to the agent, or to some relevant group or individual intended by the agent, or perhaps something else.

In considering this issue, some caution is necessary. If we claim that it is always possible to determine on an objective basis who the judge is, we effectively introduce into our system a level at which truth values are always assigned objectively. For example, if we claim the judge is always the speaker, an utterance would presumably count as true *simpliciter* iff it expresses a content which is true relative to the speaker — at the level of utterances, the relativization would be removed and we would have to count speakers as objectively truthful or untruthful in saying things like “Roller coasters are fun” or “The chili is tasty.”

This problem is not solved by claiming that the judge is determined by speaker intentions, rather than being fixed automatically to the speaker himself or herself (at least if we assume that there is an objective fact of the matter as to which individual or group the speaker intends). In order to maintain an authentically subjective assignment of truth values to sentences containing predicates of personal taste, we must allow that the objective facts of the situation of utterance do not uniquely determine a judge.

The formalism developed above required that for any context c , there must be a unique individual $J(c)$, the judge of c . That is, it was stipulated that the context uniquely determine a judge. If we are to retain this feature of the formalism, therefore, we must conclude that the objective facts of the situation of utterance do not uniquely determine a context.

This need not bother us if we remember that “context” is a technical term in our theory, for objects which play a specific role in the formalism. That is, we may think of contexts simply as formal objects which fix values for parameters such as the agent, judge, etc., rather than

directly identifying them with concrete situations of utterance. As long as we have some explanation of how formal contexts relate to such situations, there is no reason for a direct identification, or even for assuming a 1-1 correspondence.

In fact I think we may claim that any concrete situation of utterance will determine as many different contexts in our technical sense as there are individuals¹⁸ — one for each potential judge. We should not limit our choice of judges to individuals who are present in the situation of utterance; John’s utterance of *Roller coasters are fun* might be true or false relative to Mary, even if she was not present when he spoke. Nor, I think, should we even limit our choice of judges to those individuals who eventually interpret the utterance or assess it for truth; we would not want to say that *The chili is tasty* is objectively true simply because so few people ever consider the issue that they happen all accidentally to agree.¹⁹

All this having been said, I think we must recognize that when we do assess an utterance for truth or falsity, we all normally tend to use ourselves as the judge; or, as I shall put it, we adopt an *autocentric* perspective. (That is, from among the formal contexts corresponding to the concrete situation of utterance, an individual x will normally assess relative to the one in which x is the judge.) This is true regardless of whether we are the speaker, addressee, or a third party: we typically evaluate our own assertions, and those of others, from our own perspective.

¹⁸We might restrict this to sentient individuals, depending on whether we regard sentences such as *Roller coasters are fun for this rock* as incoherent or merely false.

¹⁹For this reason I think we could not preserve the identification of contexts with concrete, real-world situations by relativizing truth both to a “context of utterance” and to a “context of assessment,” as MacFarlane (2003) suggests for future contingent sentences.

Likewise, we typically *assert* from an autocentric perspective. That is, in making an assertion, we regard it as in some sense *justified* iff it is true relative to that context corresponding to the concrete situation of utterance in which we ourselves serve as judge.

The tendency to adopt an autocentric perspective is only a tendency, of course. Realizing that in matters of taste, our own perspective is no more valid than that of others, we can also adopt a “bird’s eye view,” or *acentric* perspective, in which no particular individual serves as judge. In this case, an assessment for truth is precluded, since this requires a context, and each context specifies a particular individual as judge.²⁰ This accords well with our intuitions, I think; if we adopt an acentric perspective, we do not regard sentences like *Roller coasters are fun* or *The chili is tasty* as having definite truth values. Note that despite the fact that an acentric perspective precludes the truth-assessment of such sentences, it does not render them uninterpretable — which is as expected under our formalism, since the content of such sentences does not vary with the judge.

Under certain circumstances, we may also adopt an *exocentric* perspective, assessing sentences for truth relative to contexts in which someone other than ourselves is specified as the judge, or regarding our assertions as justified by virtue of their truth relative to such contexts. This is not typical, I think, but there are at least three special cases where it occurs.

The first case is that of *free indirect discourse*. In this construction, used mainly in literary style, narrative is presented not from the perspective of the author, but from the perspective of a character in the text — typically expressing his or her internal thoughts. An illustration appears in

²⁰Justified assertions from an acentric perspective would also therefore seem to be ruled out.

(38):

(38) John wondered what to do with his Saturday afternoon. Should he get out of the house, or just stay home and work? A movie might be nice, but he really wanted to be outdoors. Roller coasters were fun, but it cost a lot to get into the amusement park. It hardly seemed worth it if he were just going by himself..

The issue of how to assess sentences of free indirect discourse for truth or falsity is complicated somewhat by the fact that this style appears most often in works of fiction, and the general question of truth in fiction involves its own intricate set of problems. However, free indirect discourse is not limited *in principle* to fiction, and we may separate the issues by asking how we would assess sentences like those in (38) for truth or falsity if John were a real person and this discourse were presented as a factual narrative about him.

Intuitively, it seems that such sentences should be assessed in some way relative to the individual from whose perspective the narrative is presented. The author was certainly not asserting *Roller coasters were fun* because this sentence was true for himself or herself; nor, as readers, would we reflect on our own experience with roller coasters as a way of evaluating the accuracy of this narrative. Rather, it is John's perspective which is relevant.

A more detailed analysis of such examples would require a general theory of free indirect discourse — a large topic which we cannot do justice to here.²¹ I will note only that because free indirect discourse expresses someone's thoughts, it may not be right simply to assess such sentences for truth relative to the actual world, current time, and context in which that person is judge. Instead, perhaps, such sentences should be compared in some way to the set of time-world

²¹See Doron (1991) for an interesting analysis.

pairs compatible with his or her beliefs. I suggest below that whether an individual *a* believes a sentence content *p* normally depends only on the “*a*-oriented segment” of *p*; perhaps something similar is involved in free indirect discourse as well.

A second class of examples in which we naturally adopt an exocentric perspective, assuming a context in which the judge is someone other than ourselves, are sentences in which a predicate such as *fun* is ascribed to a *particular event*. Suppose Mary rides the roller coaster at 11:05 a.m. on July 23, 2005. This event might be fun for Mary (or it might not). Could it be fun for anyone else? Perhaps for someone watching, who experiences vicarious enjoyment from observing Mary’s ride. But for someone who has no experience of the event, directly or vicariously, it could not be fun.

Nonetheless, a person who has no experience of an event, or whose experience of an event is not under discussion, might assert or assess a sentence expressing the claim that the event is fun. In such cases, the intuitive interpretation is that the event is fun for some other salient person who does experience the event. This usage seems particularly common when the experiencer is a child who cannot speak for himself or herself. For example, suppose John is describing to Mary how their two-year-old son Bill enjoyed a recent trip to the amusement park. Something like the following dialog might occur:

(39) Mary: How did Bill like the rides?

John: Well, the merry-go-round was fun, but the water slide was a little too scary.

We intuitively regard John’s utterance as true if the merry-go-round was fun for Bill, not if it was fun for ourselves (or for John).

This usage is not limited to reporting the perspective of young children, however.

Another context in which it may be used very naturally is in attempts to convince someone to participate in some activity. For example, if John is trying to convince Mary to go bowling, he might very well utter (40):

(40) Come on! It'll be fun!

John's utterance is intuitively true if the game will be fun for Mary, or perhaps for both John and Mary; it does not suffice that it will be fun for John. John asserts from an exocentric perspective, assuming a context which specifies Mary as the relevant individual for determining truth or falsity.

Adopting an exocentric perspective does not seem as natural with generic statements about events, as opposed to sentences which involve reference to particular events. For example, suppose John says (41) instead of (40):

(41) Bowling is fun.

My intuition is that (41) merely expresses John's personal taste in recreation, while (40) predicts that bowling will appeal to Mary's taste as well. John might well use (41) to try to convince Mary that she will enjoy bowling, but it does not directly claim this. Rather, John expresses his own opinion of bowling as evidence that Mary may like it too, on the presumption that her taste may be similar to his.

As Carlson (1982) and others have pointed out, generic sentences may be true even if there are no verifying instances; for example *John handles the mail arriving from Antarctica* may be true even if no mail from Antarctica ever actually arrives. By the same token, it seems to me that a sentence like *Roller coasters are fun* could be true relative to Mary even if she never actually rides on one. Such sentences therefore do not provide the same pressure as sentences about particular events to adopt an exocentric perspective.

Similarly, sentences which predicate *fun* of individuals rather than events are most naturally assessed from an autocentric rather than exocentric perspective. *The Giant Dipper is fun* seems much more like (41) than (40) — perhaps because *fun* is interpreted as an individual-level predicate in the sense of Carlson (1977) and therefore is in some sense intrinsically generic.

A third class of sentences for which an exocentric perspective seems natural are *questions*. If John turns to Mary while they are riding the roller coaster and asks (42), for example, he is asking whether *she* finds the roller coaster fun, not whether he himself does:

(42) Is this fun?

This is despite the fact that if John uttered the corresponding declarative sentence, *This is fun*, he would presumably be asserting from his own autocentric perspective — regarding his assertion as justified by virtue of its truth relative to a context in which he himself is judge.

This effect is expected, if we assume the right kind of semantics for questions and make some natural assumptions about their pragmatics.

In particular, let us adopt the general semantic approach developed initially by Hamblin (1958), in which a question may be thought of as setting up a space of mutually exclusive, complete possible answers; and let us further assume that the pragmatic force of the question is to request or invite the addressee to assert one of these answers.

To illustrate, a yes-no question presents a choice between two propositions, one of which is the negation of the other, as in (43):

(43) $[[\textit{Is John happy?}]] = \{\text{Happy}(j), \sim\text{Happy}(j)\}$

Is John happy? denotes the set containing the proposition that John is happy and the proposition that he is not happy; in posing the question, the speaker requests the addressee to choose one of

these and assert it.

In adapting this idea to our present purposes, we may suppose that the denotation of a question will be a set of sentence contents (that is, a set of sets of individual-time-world triples). For example, (44) will denote the set containing the content of *The Giant Dipper is fun* and the content of *The Giant Dipper is not fun*:

(44) Is the Giant Dipper fun?

Now if, as we have been assuming, speakers normally assert from an autocentric perspective, it seems reasonable to suppose that an invitation to assert will normally be intended and understood as an invitation to assert from an autocentric perspective. So if John turns to Mary as they're riding the roller coaster and asks "Is this fun?", he is requesting her to answer based on *her* standard of fun, not his own.

Of course in a situation where assertion from an exocentric rather than autocentric perspective is independently expected, questions will also normally shift their orientation away from the addressee. Hence if Mary asks John *Was the merry-go-round fun?* on his return from the amusement park with two-year-old Bill, the question may naturally be understood as requesting an answer which would be true relative to a context with Bill as judge, not John.

6.2. Adding Propositional Attitude Verbs

A detailed analysis of propositional attitude verbs is beyond the scope of this paper, but in light of the role of belief in example (37) and some of our other discussion above, a few comments seem in order.

Kaplan argues for a role both for content and for character in the analysis of the attitudes:

the objects of the attitudes correspond to the contents of sentences, while the “cognitive significance” of these objects corresponds to characters. In an attitude report, the subordinate clause should express the *content* corresponding to the object of the attitude, not necessarily the character (except in cases of direct quotation).

To capture this idea directly, we might simply add to our system a basic expression **believe**, with the syntactic rule that if α is a constant and ϕ is a sentence, then **believe**(α , ϕ) is a sentence. We would then require that for all u , t , w , $I_{\text{believe}}(u, t, w)$ be a relation between individuals and sentence contents (that is, a subset of $U \times \{\text{Truth, Falsity}\}^{U, T, W}$). Because **believe** is not a predicate of personal taste, we require $I_{\text{believe}}(u, t, w) = I_{\text{believe}}(u', t, w)$ for all u, u' . As usual, $\llbracket \text{believe} \rrbracket_{\mathfrak{A}, c, u, t, w} = I_{\text{believe}}(u, w, t)$. Sentences containing **believe** would be interpreted by a rule that $\models_{\mathfrak{A}, c, u, t, w} \text{believe}(\alpha, \phi)$ iff $\langle \llbracket \alpha \rrbracket_{\mathfrak{A}, c, u, t, w}, \{\phi\}_{\mathfrak{A}, c} \rangle \in \llbracket \text{believe} \rrbracket_{\mathfrak{A}, c, u, t, w}$.

With these rules in place it should now be easy to see that the sentences **believe**(**John**, **fun**(**The-Giant-Dipper**)) and **believe**(**Mary**, \neg **fun**(**The-Giant-Dipper**)) describe John and Mary as having beliefs that contradict each other.

But I think a little more ought to be said.²² To believe something is to consider it true. That is, belief involves some kind of assessment for truth — and this requires a context specifying a judge. We have just seen that one may adopt an autocentric, exocentric, or acentric perspective toward a sentence content, depending on the kind of context one assumes, and that this choice affects how one assesses it for truth or falsity. It is natural to suspect, then, that the context

²²In addition to the problem discussed below, this approach obviously suffers from the usual problems attendant to possible-worlds analyses of belief, such as the failure to distinguish between logically equivalent propositions; but these problems fall beyond the scope of this paper.

assumed by an individual in assessing a sentence content will have some effect on whether he or she believes it.

Because in the typical case we adopt an autocentric perspective, to believe a sentence content should normally involve believing that it is true relative to ourselves. For example, if John believes that the Giant Dipper is fun, he judges the content of *The Giant Dipper is fun* to be true relative to himself. Therefore, he should also believe that the Giant Dipper is fun for himself.

This is *not* to say that *The Giant Dipper is fun* and *The Giant Dipper is fun for John* express the same content relative to John. It is merely to claim that if John, adopting an autocentric perspective, believes the content of one of these sentences, he should believe the content of the other one as well.

Of course if there are reasons to adopt an exocentric perspective, this pattern no longer holds. Suppose John is thinking back to two-year-old Bill's ride on the merry-go-round, assuming a context in which Bill is the judge. John believes the ride was fun (i.e. he stands in the belief relation to the content of *The ride was fun*), but this means he believes it was fun for Bill, not necessarily for himself.

Our system as it is currently formulated does not show any such sensitivity to the perspective adopted by the believer. Because **fun(The-Giant-Dipper)** and **[fun for John](The-Giant-Dipper)** normally express different contents, it is possible for **believe(John, fun(The-Giant-Dipper))** and **believe(John, [fun for John](The-Giant-Dipper))** to differ in truth value, and nothing in our rules makes this difference dependent on the perspective John adopts.

As a first step to adjusting our formalism to take the perspective of the believer into account, let us suppose that for each individual u , at any given time t and world w , certain worlds

and times are compatible with everything u believes at t , w , and others are not. Let us call the set of time-world pairs which are compatible with what u believes at t , w the *belief set* of u (at t , w), and notate it $\mathbf{B}_{u,t,w}$. As far as u is concerned, the time-world pairs in $\mathbf{B}_{u,t,w}$ are candidates for the current time and actual world; all other time-world pairs are not.

Now, given the belief set of an individual u , which sentence contents does u believe? To capture the idea that in believing a sentence content, one assumes a context c and judges the sentence content to be true relative to the judge of c , we must now treat *believe* as a 3-place relation between an individual, a context, and a sentence content. We now say that u believes p in assuming c iff p is true relative to $\langle J(c), t, w \rangle$ for all times t and worlds w which u regards as candidates for the current time and actual world. In other words:

$$(35) \quad \langle u, c, p \rangle \in I_{\text{believe}}(u, t, w) \text{ iff for all } \langle t', w' \rangle \in \mathbf{B}_{u,t,w}: p(J(c), t', w') = \text{Truth}$$

The import of this principle may perhaps best be understood by recognizing that in our system, a sentence content may be divided into “segments” oriented to different individuals.

Specifically:

$$(36) \quad \text{For any individual } a, \text{ and any sentence content } p, \text{ the } a\text{-oriented segment of } p \text{ is the set}$$

$$\{\langle a, t, w \rangle \mid p(a, t, w) = \text{Truth}\}$$

The a -oriented segment of p is just the set of triples in p that have a as their first element — in other words, the triples which encode in which times and worlds p is true relative to a . With this concept in place, it may be seen that according to (35), whether or not an individual a believes a sentence content p in assuming context c depends only on the $J(c)$ -oriented segment of p . Since we typically adopt an autocentric perspective, it will normally be the case that whether or not a believes that p depends only on the a -oriented segment of p .

Now, where $J(c) = \llbracket \mathbf{John} \rrbracket_{\mathfrak{A},c',u,t,w}$, it follows that $\langle \llbracket \mathbf{John} \rrbracket_{\mathfrak{A},c',u,t,w}, c, \{\mathbf{fun}(\mathbf{The-Giant-Dipper})\}_{\mathfrak{A},c'} \rangle \in \llbracket \mathbf{believe} \rrbracket_{\mathfrak{A},c',u,t,w}$ iff $\langle \llbracket \mathbf{John} \rrbracket_{\mathfrak{A},c',u,t,w}, c, \{[\mathbf{fun for John}](\mathbf{The-Giant-Dipper})\}_{\mathfrak{A},c'} \rangle \in \llbracket \mathbf{believe} \rrbracket_{\mathfrak{A},c',u,t,w}$. In other words, where John adopts an autocentric perspective, he believes the Giant Dipper is fun iff he believes the Giant Dipper is fun for himself. To see this, we need only observe that the contents of $\mathbf{fun}(\mathbf{The-Giant-Dipper})$ and $[\mathbf{fun for John}](\mathbf{The-Giant-Dipper})$ are identical in their John-oriented segments.

Of course none of this precludes the possibility that John might believe the Giant Dipper is fun for someone else but not for himself, even if he adopts an autocentric perspective. This is allowed because sentences like $[\mathbf{fun for Mary}](\mathbf{The-Giant-Dipper})$ can be true relative to John (and will be, as long as $\mathbf{fun}(\mathbf{The-Giant-Dipper})$ is true relative to Mary).

The analysis just sketched affords an interesting comparison to analyses like that of Kimball (1971), which accounts for some of the same facts using a syntactic Dative Deletion Rule. Kimball argues that sentences like (37)a. are derived from underlying structures like (37)b. by a rule which deletes the *for*-phrase under identity with the subject of the sentence.

- (37) a. John believes that riding roller coasters is fun.
 b. John believes that riding roller coasters is fun for John.

The apparent synonymy of (37)a. and (37)b. may be explained by their derivation from the same underlying structure.

In the analysis presented here, however, this apparent synonymy is explained without any syntactic mechanism analogous to Dative Deletion. Instead, the explanation is essentially pragmatic: we know that typically, people adopt an autocentric perspective. Assuming John adopts an autocentric perspective, he will stand in the belief relation to the content of *Riding*

roller coasters is fun iff he stands in the belief relation to the content of *Riding roller coasters is fun for John*, because these two sentences are identical in their John-oriented segments.

However, if there are reasons why the individual denoted by the subject might adopt an exocentric perspective, our analysis predicts a reading which could not be obtained by deletion of a dative under identity with the subject. Consider again the case of John's belief about 2-year-old Bill's ride on the merry-go-round:

- (38) a. John believes that riding the merry-go-round was fun.
b. John believes that riding the merry-go-round was fun for John.
c. John believes that riding the merry-go-round was fun for Bill.

In the context described, (38)a. is not understood as equivalent to (38)b. but to (38)c., contrary to what would be expected under a dative deletion analysis.

7. REMAINING ISSUES AND ALTERNATIVE APPROACHES

This section very briefly considers an alternative analysis in a non-Kaplanian framework and identifies some additional issues raised by the analysis presented above. No firm conclusions will be reached; the discussion in this section is tentative, and intended mainly to point out areas for further research.

7.1. *Diagonalization.*

Recall Options 5.a. and 5.b., in which the intuition of contradiction between *Roller coasters are fun* and *Roller coasters are not fun* (as uttered by different speakers) was explained as due to conflict at some metalinguistic or metacontextual level, rather than at the level of

ordinary semantic content. The argument given against this approach was simply that it was incompatible with a Kaplan-style distinction between character and content. It seems worth considering, therefore, whether a satisfactory metalinguistic or metacontextual analysis might be possible in a non-Kaplanian framework.

An interesting framework for exploring this issue is that of Stalnaker (1978), according to which sentences may sometimes shift their content so that they express a “diagonal proposition,” which may encode metalinguistic or metacontextual information.

Stalnaker asks us to consider sentence (39) as uttered by a speaker who hears a voice in the next room:

(39) That is either Zsa Zsa Gabor or Elizabeth Anscombe.

Assuming that both proper names and demonstrative pronouns are rigid designators, this sentence should express either a necessary truth or a necessary falsehood — yet it seems informative.

Stalnaker suggests that each possible world (or at least each world which could be regarded as a candidate for the actual world by someone who has just witnessed this utterance) determines facts about the context of utterance, including facts about who the referent of *that* is. Let i be a world in which the referent is Zsa Zsa Gabor, j be a world in which it is Elizabeth Anscombe, and k be a world in which it is some third person. Then in worlds i and j , (39) expresses a necessary truth — it is true in i , j , and k — while in k it expresses a necessary falsehood — it is false in i , j , and k . But it seems clear that the proposition conveyed in this situation is one which is true in i and j but false in k — in other words, the proposition which is true in a world w iff the proposition expressed by (39) in w is true, and false iff it is false. As Stalnaker points out, this proposition may be obtained by taking the diagonal of the following

matrix, where each row indicates the truth values of the proposition expressed by (39) in the worlds indicated at the tops of the columns:

(40)

	<i>i</i>	<i>j</i>	<i>k</i>
<i>i</i>	T	T	T
<i>j</i>	T	T	T
<i>k</i>	F	F	F

Stalnaker suggests that in order to maintain the idea that an informative assertion is being made, language users may reinterpret the sentence so that it expresses this diagonal proposition. In this way, the sentence acquires a content which is informative about its own context of use. From a Kaplanian perspective, diagonalization may thus be regarded as a kind of “contentization of character.”

Assuming that possible worlds also determine facts about the conventional meanings of words, it is easy to see that diagonalization may also lead sentences to acquire contents which are informative about these meanings — in other words, a metalinguistic interpretation.

Now, suppose we adopt some variant of Option 2, in which predicates like *fun* or *tasty* have a hidden argument which may be fixed indexically to any pragmatically relevant group or individual, which we may continue to call the “judge.” If we assume that the pragmatic context determines the judge, and that each possible world fixes a context, then taking the diagonal of the resulting matrix for a sentence like *The Giant Dipper is fun* will yield a proposition which is

similar in important respects to the content assigned to this sentence in the analysis presented in Section 5 above. In particular, this proposition will be true at an index iff the Giant Dipper is fun relative to the judge for that index. As in the Section 5 analysis, the choice of judge is crucial for assigning a truth value to the proposition, and not just for determining which proposition is expressed. (In the “horizontal” propositions, in contrast, the choice of judge is fixed for each proposition.)

It should be noted that by requiring each world to determine the context of the utterances which take place in it, this formulation of the analysis makes truth completely objective. Assuming there is exactly one actual world, it will determine a unique context for any actual utterance, with the context determining a unique judge; the result being that the utterance is objectively true or false according to whether it is true or false relative to that judge. As pointed out in Section 6.1 above, if we want to maintain that the truth values of sentences containing predicates of personal taste are assigned subjectively, and model that subjectivity as contextual variation in the assignment of truth values to sentence contents, then we cannot assume that the objective facts of the situation of utterance determine a unique context. If we are appealing to diagonalization to avoid a commitment to subjective truth, this is not a problem. But if we want to use diagonalization to derive propositions which are only subjectively true or false, the indices marking the rows and columns of tables like (40) should not be possible worlds, but world-context pairs, where each world may be paired with multiple contexts, as in the analysis presented in Section 5.

The diagonalization analysis differs from the analysis presented in Section 5 in several respects. In the diagonalization analysis, sentences like *The Giant Dipper is fun* are systematically

ambiguous between “horizontal” and “diagonal” readings; while Section 5 analysis does not require such an ambiguity. A related difference is that the diagonalization analysis requires a hidden argument corresponding to the judge and normally interpreted like an ordinary indexical, while the Section 5 analysis does not.

There is some evidence in favor of a hidden argument like that required by the diagonalization analysis, particularly if we assume it can sometimes be interpreted as a bound variable. As an anonymous referee points out, sentence (41) seems to allow a reading in which each person has a hobby which is fun for him or her, not just a reading in which each person has a hobby which the speaker regards as fun.

(41) Everybody has a hobby which is fun.

On the other hand, if we posit such an implicit argument, and analyze it as a phonologically empty pronoun, we should expect certain syntactic patterns which we do not in fact observe. For example, this supposed pronoun does not seem to give rise to crossover effects: Sentence (42)b. does not seem any more resistant than (42)a. to a reading equivalent to “For which x did the fact that the ride wasn’t fun for x upset x ?”; but (43)b. does seem to resist such a reading (in contrast to (43)a., which does not):

(42) a. Who was upset that the ride wasn’t fun?
b. Whom did the fact that the ride wasn’t fun upset?

(43) a. Who was upset that the ride wasn’t fun for him?
b. ?Whom did the fact that the ride wasn’t fun for him upset?

This is as expected under the Section 5 analysis, where no syntactic element corresponding to the judge is posited, hence no particular syntactic effects of the judge parameter are predicted.

Finally, it should be recognized that in Stalnaker's original analysis, diagonalization is triggered pragmatically, when the "horizontal" proposition conventionally expressed by a sentence is uninformative and therefore violates the Gricean maxim of quantity. In the diagonalization analysis considered here, however, we must allow sentences like *The roller coaster is fun* to be interpreted diagonally even when their horizontal interpretation is not uninformative. This is a significant departure from Stalnaker's analysis and leaves it a mystery why diagonalization should apply in these cases.

The evidence bearing on the choice between the analysis in Section 5 and the diagonalization analysis considered here thus appears to be mixed; additional research is needed.

7.2. To Which Predicates Should the Analysis Apply?

I have been deliberately non-committal in this paper about what the full range of predicates might be to which the analysis presented here applies. I have focused on predicates of personal taste, because these seem to me to be the clearest examples of predicates which hold true or false of their arguments only subjectively; and I have focused on the particular predicates *fun* and *tasty* because these seem to me to be clear examples of predicates of personal taste. But of course the analysis should apply to a broader range of predicates than just these two, and perhaps to a broader range than the class of predicates of personal taste as a whole.

In principle, the analysis should apply in any case where, if one speaker asserts a sentence ϕ and another speaker asserts $\neg\phi$, we have an intuition of contradiction or direct disagreement, but where no objective facts can decide the issue, even in principle. But of course this does little to clarify the status of unclear cases without some reasonably rigorous characterization of what

“objective facts” are. I have little to add to the philosophical discussion of this issue.²³

One might hope for a more “linguistic” characterization of the class of predicates to which the analysis applies. In the “diagonalization” analysis presented in Section 7.1, one should expect to be able to identify the relevant predicates by the syntactic effects of the hidden argument; but, as already pointed out, the evidence for such effects is not particularly clear. In the main analysis presented in Section 5, there is no such hidden argument, so this route is not open to us.

Even in the Section 5 analysis, however, there is one major syntactic effect of the relativization of truth to “judges”: the availability of a *for*-phrase as in *Roller coasters are fun for Mary*.²⁴ It is worth exploring the idea that the class of “subjective” predicates may be identified with the class of predicates which combine with this sort of *for*-phrase.

The problem then becomes one of distinguishing this particular use of *for* from others; presumably we would not count *bake* as a subjective predicate simply because one can say *John baked a cake for Mary*. Identifying the “judge” use of *for* based solely on its intuitive interpretation gets us no further than identifying subjective predicates based solely on their intuitive interpretation; what is needed is a syntactic pattern which this use of *for* participates in, but not others.

Unfortunately, I know of no such pattern. One might suggest characterizing the relevant use of *for* by its subjectibility to Kimball’s (1971) rule of Dative Deletion — which would classify

²³See Wright (1992), Kölbel (2002) for some relevant discussion. Kölbel suggests that his analysis might apply to aesthetic, moral, and probability statements generally.

²⁴Our rules allow such a *for*-phrase with all predicates, but it is semantically superfluous with objective predicates, therefore presumably pragmatically anomalous.

as subjective not only predicates of personal taste, but also such predicates as *good*, *interesting*, *necessary* and *easy* — but as argued in Section 6.2 above, a Dative Deletion rule faces empirical difficulties in accounting for examples attributing an exocentric perspective to the subject.²⁵

Further research is necessary, but at present I see little reason to expect that subjective predicates may be identified by any straightforward linguistic test; it may be that the status of predicates must be argued on more on philosophical than linguistic grounds, on a case-by-case basis.

7.3. *What is the Substance of the Disagreement?* I have proposed a semantic theory in which sentences like *The Giant Dipper is fun* and *The Giant Dipper is not fun* contradict each other, even if uttered by different speakers; and used this semantic theory to explain the intuition that if one speaker asserts the first sentence, and another speaker asserts the second, they are expressing disagreement with one another. But this analysis still, perhaps, leaves the nature of the disagreement somewhat mysterious. It is presumed that there is no fact of the matter whether the Giant Dipper is fun, so the disagreement cannot be about that. Nor is the disagreement about the context, or the interpretation of the words (at least in the main analysis presented in Section 5). What, then, are the speakers disagreeing about?

I think that the only answer one can give to this is that the two sentences cannot both be accommodated into a single coherent perspective. This is modeled in our system by the fact that both sentences cannot be true relative to the same index. Asserting a sentence containing a predicate of personal taste requires the speaker to adopt a perspective (with a particular choice of judge), so anyone asserting one of these two sentences must reject the other, or fall into

²⁵For additional problems with Kimball's analysis, see Grinder (1971).

inconsistency.

Of course a speaker may realize that in matters of taste, no one choice of judge is any more valid than another, and adopt an acentric perspective; but then no truth value at all can be assigned, and assertion cannot be regarded as justified. In this case, no disagreement can arise, since no sincere assertions can be made. The analysis does not claim that we are locked into a particular perspective, from which we can never escape; it does claim that adopting a perspective is a prerequisite to asserting a sentence containing a predicate of personal taste, and that asserting such a sentence requires one to reject its negation to maintain consistency.

The fact remains that in this analysis there is no matter of fact on which disagreements of taste turn. Such disagreements are in some sense “without substance.” More, no doubt, should be said to clarify and justify the notion of “substanceless” disagreement, but this too will be left to further investigation.

CONCLUSION

I have argued that sentences containing predicates of personal taste are not completely objective; their truth values vary from person to person. However, this variation in truth value does not involve a variation in semantic content: If you say roller coasters are fun, and I say they are not, I am negating the very same sentence content which you assert, and directly contradicting you. Nonetheless, both our utterances can be true (relative to their separate contexts). I presented a semantics which gives this result by introducing an individual index, analogous to the world and time indices commonly used, and by treating the pragmatic context as supplying a particular value for this index. However, the context supplies this value in the derivation of truth

values from content, not in the derivation of content from character. Predicates of personal taste therefore display a kind of contextual variation in interpretation which is unlike the familiar variation exhibited by pronouns and other indexicals.

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