A direction effect on taste predicates

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Abstract: The recent literature abounds with accounts of the semantics and pragmatics of so-called predicates of personal taste, i.e. predicates whose application is, in some sense or other, a subjective matter. Relativism and contextualism are the major types of theories. One crucial difference between these theories concerns how we should assess previous taste claims. Relativism predicts that we should assess them in the light of the taste standard governing the context of assessment. Contextualism predicts that we should assess them in the light of the taste standard governing the context of use. We show in a range of experiments that neither prediction is correct. Which taste standard people choose in evaluating a previous taste claim crucially depend on whether they start out liking the food in question and then come to dislike it or *vice versa*. We argue that no extant theory predicts this *direction effect* and go on to suggest what we call *hybrid relativism* as a possible solution. On this view, sentences of the form "F is/isn't tasty" have a relativist and a contextualist reading, where the relevant reading is selected by an independently motivated pragmatic principle to interpret speakers as negatively as possible.

1. Introduction

Consider an utterance of "Fish sticks are tasty" as made by a speaker who likes fish sticks. How should the speaker assess this claim when, at some later point in her life, she comes to dislike fish sticks? As true or as false? Should she retract her earlier statement or stand by it? More generally, should she use her present taste standard in assessing this claim or the standard she had at the time of the original utterance? The answer to this question is of vital importance for the recent discussion on the semantics and pragmatics of so-called predicates of personal taste (e.g. "is fun" and "is tasty").

One of the most central questions in this debate concerns whether we should adopt relativism or contextualism. Although these views make similar predictions in many cases, they crucially come apart when it comes to the indicated types of situations. Contextualism predicts that the speaker's assessment should depend on her original taste standard, that is, the taste standard governing the so-called "context of use" (e.g. Glanzberg, 2007; López de Sa, 2008; Moltmann, 2010; Schaffer, 2011; Huvenes, 2012; Plunkett and Sundell, 2013; Pearson, 2013; Zakkou, forthcoming). Relativism predicts that the speaker's assessment should depend on her later taste standard, that is, the taste standard governing the so-called "context of assessment" (e.g. Kölbel, 2003; Lasersohn, 2005; Stephenson, 2007; MacFarlane, 2014; Egan, 2014; Dinges, forthcoming).

Which prediction is borne out by the data? Relativists typically take the data to favour their position. MacFarlane (2014: 141), for instance, holds that "speakers will retract (rather than stand by) an earlier assertion that something was tasty, if the flavor the thing

had at the time of the assertion is not pleasing to their *present* tastes—even if it was pleasing to the tastes they had then." Raffman (2016), however, disagrees. She "would have no inclination to retract" and suggests that "our intuitions are sufficiently divergent, and/or simply anemic, that MacFarlane's constructed examples cannot always bear the weight he places on them" (Raffman, 2016: 172). Indeed, relativist claims about ordinary intuitions have been challenged with experimental data in discussions of epistemic modals (e.g. Knobe and Yalcin, 2014; Marques, 2015) and, more recently, predicates of personal taste (Kneer, ms).

One candidate way to make progress in the light of these divergent intuitions is to try to confirm contextualist or relativist predictions in further empirical studies. Depending on the outcome, we could then dismiss the competing intuitions as the result of some sort of theoretical bias on the part of those philosophers pushing them. This seems to be the standard approach in the contemporary debate. Another option though is to take seriously the intuitions on all sides and to try to accommodate them in a unified theoretical framework. The present paper advocates the latter, we think underappreciated, approach.

We begin by presenting experiments showing that the strength of ordinary intuitions about the indicated types of cases depends on a surprising factor that has gone unnoticed so far, namely, on whether one's initial assessment of the food in question was positive or negative. Claims to the effect that, say, fish sticks aren't tasty are assessed as false after a change in taste standard, in line with relativism; claims to the effect that, say, fish sticks are tasty continue to be assessed as true, in line with contextualism (§4). This *direction effect* underwrites the idea that, even among lay persons, intuitions do not univocally favour relativism or contextualism. We seem forced to live with this disarray. How can we explain it? We show that extant theories don't live up to the challenge. They fail to predict the direction effect (§6). We go on to offer what we call *hybrid relativism* as a promising alternative. According to hybrid relativism, "tasty" sentences have a contextualist and a relativist reading, where each reading generates one half of the data. We supplement this account with an independently motivated pragmatic story as to why different readings are selected in the different conditions (§7).

As it stands, hybrid relativism only explains the direction effect. It also provides a framework though that may ultimately help us understand why philosophers have divergent intuitions even about individual cases where the direction of change is fixed: The relevant expressions have a relativist and a contextualist reading. People may have idiosyncratic preferences for one reading or the other. A deeper understanding of the determinants of these preferences will eventually explain why people have the intuitions they have.

2. Simple contextualism and simple relativism

In this section, we'll briefly describe simple versions of contextualism and relativism before presenting some methodological considerations on how to test these views in experimental studies. The relevance of our experimental results will be easier to appreciate against this background. Simple contextualism and relativism will also figure as ingredients in the account of the data we will ultimately suggest.

We'll be using a Kaplanian two-stage semantic framework (Kaplan, 1989). We'll use $[\Phi]^c$ to refer to the proposition expressed by the sentence Φ in context c. Further, we will assume that we can define a notion of truth relative to a circumstance of evaluation that applies to propositions so expressed. A circumstance of evaluation will be understood as a tuple of parameters, which may include a possible world, a time, a location, a judge, a taste standard and more. For our purposes, it will be most convenient to take circumstances of evaluation to be triples, <w,j,t>, comprising a possible world, w, a judge, j, and a point in time, t.

With this framework at hand, we can look at the truth-conditions that contextualists and relativists assign to the propositions expressed by sentences of the form "F is/isn't tasty" as used in a given context.

Proponents of simple versions of contextualism will assume a principle along the following lines (for simplicity, we'll assume throughout that "F" isn't context-sensitive):

> Simple contextualism
>
> $[\text{F is/isn't tasty}]^c$ is true at <w,j,t> iff, at w, F is/isn't tasty by the lights of the taste standard that the speaker of c has at the time of c.

Assuming that not everybody has the same taste standard, this principle entails that e.g. "F is tasty" expresses different propositions in different contexts. For instance, let's say that, in w, F is tasty by the lights of the taste standard of the speaker in c1 but not by the lights of the speaker in c2. Given simple contextualism, $[\text{F is tasty}]^{c1}$ is true at <w,j,t>, while $[\text{F is tasty}]^{c2}$ isn't true at <w,j,t>. Thus, $[\text{F is tasty}]^{c1}$ cannot be the same as $[\text{F is tasty}]^{c2}$. Note that the judge parameter, j, and time parameter, t, play no role as far as contextualism is concerned. They play a role though in the definition of relativism below, so for the sake of unity, we left them in place.

As indicated, the suggested version of contextualism is simple. For one thing, one might want to allow for so-called "exocentric" contexts, where the truth of "F is/isn't tasty" doesn't depend on the taste of the speaker but some other salient subject. For another thing, one might prefer less individualistic views, where it is not the taste standard of an individual but of some salient group that calls the shots. Finally, one might want to add pragmatic considerations about the proper use of "tasty." We'll come back to such modifications below.

Simple versions of relativism will entail a principle along the following lines:

> Simple relativism
>
> $[\text{F is/isn't tasty}]^c$ is true at <w,j,t> iff, at w, F is/isn't tasty by the lights of the taste standard that j has at time t.

This principle no longer entails that e.g. "F is tasty" expresses different propositions in different contexts of use. To the contrary, the propositions expressed in different contexts will be equivalent at least as far as truth-conditions are concerned. After all, c doesn't figure in the right hand side of the biconditional. Unlike in the case of contextualism, though, the truth-value of such propositions is not just sensitive to the possible world parameter

in the circumstance of evaluation; it is sensitive to the judge and time parameters as well. For instance, $[\text{F is tasty}]^c$ will be true at <w,j,t> but not at <w,j,t'> if j has relevantly changed their taste standard between t and t'.

One might complain that relativism as defined here is not actually relativism but rather non-indexical contextualism. Note, however, that the difference between genuine (or assessment) relativism and non-indexical contextualism is standardly assumed to be purely technical as long as we consider only the speech act of assertion and leave retraction aside (see MacFarlane, 2014: Ch. 5). We will leave retraction aside (for the most part), so there is no need to use the technically more complex assessment-sensitive framework (but see below for some further pertinent discussion).

To fully spell out the suggested views, some metaphysical questions would need to be answered, e.g. what is a *standard of taste*, what does it mean to *have* a certain standard of taste and how do we analyse claims to the effect that something is tasty *by the lights of* a given taste standard? For our purposes, an intuitive understanding of all these notions will do. Roughly, one may think of a taste standard as assigning a degree of tastiness to each type of food, namely, the degree to which the relevant taster likes the food in question. A given type of food will be tasty by the lights of a given taste standard if the degree of tastiness assigned surpasses a given threshold.

Now, how do we decide whether relativism or contextualism is correct? What are the testable predictions? There are presumably various different ways to derive such predictions, but the most standard procedure is to hook up the views to principles for the correct use of language. The corresponding norms may take various forms. For concreteness, we'll assume a truth norm rather than, say, a knowledge norm. Nothing should depend on this. Let's define the *circumstance of evaluation of a context* as the world, judge and time of the context. This allows us to formulate the following norm (cp. MacFarlane, 2014: 103f):

> Assertion norm
>
> An assertion of a sentence Φ in a context, c, is correct iff $[\Phi]^c$ is true at the circumstance of evaluation of c.

We can now derive predictions about when it is correct to use a given sentence from the suggested definitions of contextualism and relativism. Both theories will entail, among other things, that one cannot correctly say "Fish sticks are tasty" when one doesn't like fish sticks. For the contextualist, this will be so because fish sticks are not tasty by the lights of the taste standard one has at the context of use. For the relativist, this will be so because fish sticks are not tasty by the lights of the taste standard of the judge of the circumstance of evaluation of the context of use, i.e. again the taste standard one has at the context of use.

At this point, it may be hard to see how relativism and contextualism could make different predictions. For instance, on both theories, it will be correct to say "F is tasty" only if F is tasty by one's own lights. Indeed, some further work needs to be done to tear the positions apart. One familiar way to go is to appeal to norms of retraction, but as indicated, retraction is not our present focus. We will consider cross-contextual truth-value assessments instead.

First, we assume that ordinary English contains the predicates "true" and "false" that, at least in general, behave disquotationally. Where "P" is a context-insensitive, proposition denoting expression, we get the following principles (cp. MacFarlane, 2014: 93):

> Disquotational truth and falsity
>
> [P is true]^c is true at <w,j,t> iff P is true at <w,j,t>.
>
> [P is false]^c is true at <w,j,t> iff P isn't true at <w,j,t>.

Second, we assume that ordinary English contains expressions that can be used to refer to the proposition expressed by the use of a given sentence in context. More specifically, we will assume that "what X said" as applied to a previous utterance by X has that function, at least in the absence of pragmatic interferences via conversational implicatures, presuppositions and the like (cp. Kölbel, 2015).[1]

A full defence of the previous two assumptions goes beyond the scope of this paper, but we hope they are plausible enough to be taken for granted for now. With the assumptions in place, we can derive competing predictions from our initial definitions of contextualism and relativism (cp. Kölbel, 2015).

Assume, for instance, that S, in context A, assesses her previous assertion in U of "F is tasty." An assertion of "What I said was true" will be correct according to the above assertion norm iff [What I said was true]^A is true at the circumstance of evaluation of A. By our previous assumption, we can take "What I said" to refer to [F is tasty]^U. The disquotational nature of truth will thus yield that the mentioned assessment is correct iff [F is tasty]^U is true at the circumstance of evaluation of A. Relativism and contextualism make competing predictions about when this condition holds. According to relativism, the condition will hold iff F is tasty by the lights of the taste standard S has at the time of A. According to contextualism, the condition will hold iff F is tasty by the lights of the taste standard S has at the time of U. For the contextualist, the original taste standard matters, for the relativist the current one does. Generalizing a bit, we can thus derive the following, competing predictions:

> Consider the following scenarios:
>
> *S1*. In U, F is tasty by the lights of S's taste standard. Correspondingly, S says "F is tasty." In A, S's taste standard has changed so that F is no longer tasty by the lights of S's taste standard.
>
> *S2*. In U, F isn't tasty by the lights of S's taste standard. Correspondingly, S says "F isn't tasty." In A, S's taste standard has changed so that F is now tasty by the lights of S's taste standard.

[1] See Larson et al., 2009 for interesting empirical results to the effect that "what X said" may have the suggested function even in the presence of implicatures.

Simple relativist predictions for S1 and S2

In A, it will be correct for S to assert "What I said was false" and incorrect to assert "What I said was true."

Simple contextualist predictions for S1 and S2

In A, it will be correct for S to assert "What I said was true" and incorrect to assert "What I said was false."

3. Methodological remarks

The just spelled out predictions can be tested empirically in many ways. We'd like to briefly explain how we chose to test them in the experiments to follow.

To begin with, note that the indicated predictions involve normative assessments, in particular, claims about which utterances are correct. To the extent that the use of "correct" in ordinary English (or some other expression such as "right" or "appropriate") tracks the notion of correctness in play here, we could directly test whether people's "correctness" judgments are in line with the indicated predictions. We aren't entirely opposed to this approach: Knobe and Yalcin (2014: Experiment 4), for instance, use this method when they ask people to make "appropriateness" judgments, Marques (2015: footnote 10) and Kneer (ms) ask about what is "required" of a given speaker, and Khoo and Knobe (2016) test "correctness" intuitions. But we don't think the method is without problems either. The notion of correctness, and similar normative notions philosopher use to formulate norms of speech, seem to be at least semi-technical. An assertion can be correct or incorrect in many different ways. Assertion norms are presumably intended to capture only one specific flavour of correctness, one that is dictated by linguistic rather than, say, epistemic, social or prudential norms. So one runs the risk that people's judgments latch on to the wrong flavour. To the extent that they do, results may be unreliable. We thus want to suggest a different strategy to test the indicated predictions, if only for the purposes of methodological diversity.

We begin by observing that the above assertion norm, and linguistic norms in general, are supposed to govern our linguistic behaviour. So assuming that the norm is correct, people should prefer to make an assertion that is correct by the lights of the norm over one that is incorrect by the lights of the norm (other things equal). After all, the incorrectness of an assertion should be at least one reason not to make it. Based on the previously described relativist and contextualist predictions, we can thus derive the following, further predictions:

Consider S1 and S2 from above.

Simple relativist prediction for S1 and S2

In A, S will prefer to assert "What I said was false" over "What I said was true."

Simple contextualist prediction for S1 and S2

In A, S will prefer to assert "What I said was true" over "What I said was false."

In order to directly test these predictions, we presumably would have to put people in the envisaged situations and see what they actually say. This was practically unfeasible for us. So we chose a more indirect method that essentially relied on the assumption that people are good counterfactual reasoners at least as far as their own speech behaviour is concerned. In particular, we asked subjects to picture themselves in a relevant scenario and to judge what they would likely say if they were in the envisaged scenarios. To the extent that people are good counterfactual reasoners, this should tell us what people would actually say in the scenarios in question. And this, in turn, may confirm or disconfirm the indicated predictions.

Note that the suggested methodology is much in line with how philosophers and linguists often present alleged data in support of their theories. In many cases, they don't start out with intuitive normative assessments, but rather offer intuitions about what people "would say" in a given case (e.g. MacFarlane, 2014: 13f).

With these preliminary considerations in mind, we can turn to our experiments. The first experiment was initially designed to test the indicated predictions of simple contextualism and relativism in order to help us decide between these theories. As we'll see, it wasn't particularly helpful in this regard, but it delivered another surprising result, which we'll explore in detail below.

4. A direction effect on taste predicates

4.1. Experiment 1

Participants were presented with one of two vignettes. In each vignette, they were asked to imagine themselves in a situation where they have changed their taste standard over time. They were then asked to assess how likely they would be to judge a previous taste claim as true or false. The two vignettes differed only in whether participants start out liking the food in question and then come to dislike it or *vice versa*.

4.1.1. Method

289 participants were recruited through Prolific Academic (24% female, mean age 38). Each participant was randomly assigned to either of two conditions. The first condition ("NLtoL" for not liking to liking) read as follows:

> **Picture yourself in the following scenario.**
>
> Yumble is a new brand of bubblegum. You have never had a Yumble. One day you decide to try one. You don't like the taste. You tell your friend Paul:
>
> "Yumble isn't tasty."
>
> A few weeks later, you and Paul meet at the check-out in the supermarket. Yumble hasn't changed its taste, but you have now come to like it. You take a pack from the shelf. Paul says:
>
> "That's funny, I have a clear recollection of you saying 'Yumble isn't tasty' last time we met!"

After reading this vignette, participants received instructions to rate how likely they would be to judge their utterance of "Yumble isn't tasty" as true, and how likely they

would be to judge it as false. Answers could be given by moving sliders (one for each response) on a scale from 0 to 100. The specific instruction read as follows:

> For each of the following responses, please tell us how likely you would be to give this response to Paul's remark in the given context.

The specific candidate responses were "What I said was false. Yumble is tasty" and "What I said was true. Still, Yumble is tasty."[2]

The second condition ("LtoNL" for liking to not liking) differed from the first in that participants started out liking rather than disliking Yumble and ended up disliking rather than liking it. Specifically, it read as follows:

> **Picture yourself in the following scenario.**
>
> Yumble is a new brand of bubblegum. You have never had a Yumble. One day you decide to try one. You like the taste. You tell your friend Paul:
>
> "Yumble is tasty."
>
> A few weeks later, you and Paul meet at the check-out in the supermarket. Yumble hasn't changed its taste, but you don't like it anymore. When you refuse to buy Yumble, Paul says:
>
> "That's funny, I have a clear recollection of you saying 'Yumble is tasty' last time we met!"

Again, participants were asked to judge how they would assess their original utterance by moving sliders on a scale between 0 and 100. The candidate assessments in this condition were "What I said was false. Yumble isn't tasty" and "What I said was true. Still, Yumble isn't tasty."

4.1.2. Results

Mean responses by condition are displayed in *Figure 1*.

[2] Contextualists might complain that we are artificially downgrading the "true" response. A more natural way of putting it, they might say, would be something like "What I said was true. Still, Yumble is tasty *to me now*." Contextualists would presumably explain the difference in naturalness between this response and the one we offer by assuming some kind of communicative ideal to make tacit arguments explicit whenever there is a threat of misunderstanding. Note, however, that our primary concern is whether people prefer the "true" to the "false" response or *vice versa*. Even if our "true" response fails to live up to the indicated ideal, it should still be preferable to the "false" response according to contextualism. After all, even as stated, the "false" response is false according to contextualism and the "true" response true. One would normally not prefer to say something outright false to saying something true just because the true claim is not ideal in terms of possible misunderstanding. This is not to say, of course, that it would be uninteresting to modify the "true" response in the suggested way and to see how this affects results. We'll leave this for another occasion. Similar considerations apply to the "true" response in the next condition.

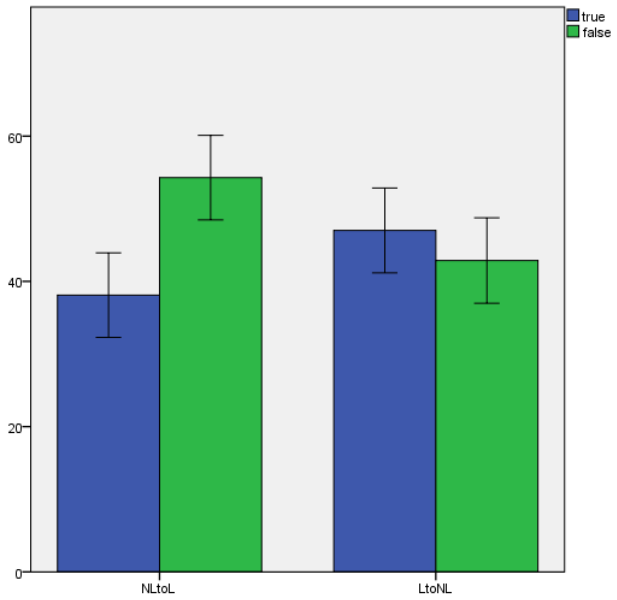

Figure 1. Mean responses by condition in Experiment 1. Error bars show 95% CI.

The data were analysed using a mixed-model repeated measures ANOVA, with condition (NLtoL vs. LtoNL) as a between-subject variable and statement ("true" vs. "false") as a within-subject variable. There was no significant main effect of statement, $F(1, 287) = 2.58$, $p = .11$, and no significant main effect of condition, $F(1, 287) = .45$, $p = .50$. But there was a significant interaction, $F(1, 287) = 7.36$, $p = .007$.

To further explore this interaction, we compared judgments for the two statements within each condition. In the NLtoL condition, participants gave higher ratings for the "false" statement ($M = 54.28$, SD = 35.46) than for the "true" statement ($M = 38.10$, SD = 35.45), $t(144) = 3.01$, $p = .003$. In the LtoNL condition, participants gave slightly higher ratings for the "true" statement ($M = 47.01$, SD = 35.41) than for the "false" statement ($M = 42.87$, SD = 35.76), but this difference wasn't statistically significant, $t(144) = .78$, $p = .435$.

Even though average responses across conditions all range somewhere around the middle of our scale, individual participants tended to have more categorical preferences in that they gave very different rating for the different statements. As a rough statistical measure for this, we found that the average absolute value of the difference between the response to the "true" and the "false" statement was pretty high in the LtoNL condition ($M = 54.67$, SD = 32.30) and the NLtoL condition ($M = 58.17$, SD = 30.28).

4.1.3. Discussion

Across conditions, participants were equally likely to judge their previous taste claim as "true" or "false" after a change in taste standard. Our experiment thus disconfirmed relativism as well as contextualism. This was surprising. Even more surprisingly, we found that preferences for the "true" and the "false" response differed significantly between the two conditions. In particular, people preferred the "false" response when they started out disliking Yumble, but this preference disappeared when they started out liking it. Again, neither relativism nor contextualism predicts this.

Average responses to all statements in all conditions are in a similar middling range. But we cannot conclude from this that people, for instance, didn't really understand our task

and hence tended to choose a default response in the middle. People generally had clear preferences for either "true" or "false," these preferences though were more or less equally likely to go one way rather than the other.

The observed *direction effect* is very surprising, we think. In fact, one might easily be inclined to classify it as some sort of noise resulting from our experimental setup. We chose to address such concerns in two further experiments before drawing substantive conclusions.

4.2. Experiment 2

One striking difference between the two conditions is that, in the NLtoL condition, the original utterance is a negated claim ("Yumble isn't tasty") while in the LtoNL condition, the original utterance is a simple affirmative claim ("Yumble is tasty"). Could this—the presence vs. absence of negation—be the source of the direction effect? We tested this hypothesis in the following experiment.

4.2.1. Method

251 participants were recruited through Amazon Mechanical Turk (49% female, mean age 36). As before, participants were randomly assigned to either of two conditions. The conditions were exact copies of the above NLtoL and LtoNL conditions except that we replaced "Yumble is tasty" by "Yumble tastes good" and "Yumble isn't tasty" by "Yumble tastes bad." All relevant negations were thus removed.

4.2.2. Results

Mean responses by condition are displayed in *Figure 2*.

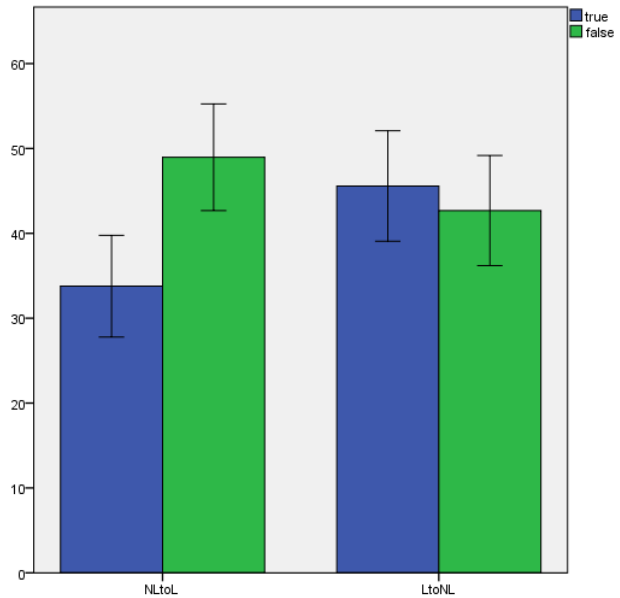

Figure 2. Mean responses by condition in Experiment 2. Error bars show 95% CI.

As before, the data were analysed using a mixed-model repeated measures ANOVA, with condition (NLtoL vs. LtoNL) as a between-subject variable and statement ("true" vs. "false") as a within-subject variable. There was no significant main effect of statement, $F(1, 249) = 2.32$, $p = .13$, and no significant main effect of condition, $F(1, 249) = 1.87$, $p = .17$. Again, though, there was a significant interaction, $F(1, 249) = 5.02$, $p = .026$.

To further explore the interaction, we again compared judgments for the two statements within each condition. In the NLtoL condition, participants gave higher ratings for the "false" statement (M = 48.96, SD = 36.19) than for the "true" statement (M = 33.78, SD = 34.51), $t(129) = 2.81$, $p = .006$. In the LtoNL condition, participants gave slightly higher ratings for the "true" statement (M = 45.58, SD = 36.12) than for the "false" statement (M = 42.69, SD = 36.07), but as before, this difference wasn't statistically significant, $t(129) = .48$, $p = .632$.

As before, the average absolute difference between responses to the "true" and the "false" statement was high in the LtoNL condition (M = 57.31, SD = 32.71) as well as the NLtoL condition (M = 54.17, SD = 32.72).

4.2.3. *Discussion*

The experiment replicated our results from Experiment 1. Across conditions, there was no preference for the "true" or the "false" response. The "false" response was preferred in cases where participants started out disliking Yumble, but there was no clear preference either way in the other condition. These results rule out the negation hypothesis: we find a direction effect even when no negations are involved.

4.3. Experiment 3

The next experiment was supposed to test whether the direction effect is constrained to truth-value assessments. In particular, we wanted to see whether our willingness to retract previous utterances also shows a direction effect.

4.3.1. Method

257 participants were recruited through Amazon Mechanical Turk (42% female, mean age 34). Again, participants were randomly assigned to either of two conditions. The conditions were exact copies of the original NLtoL and LtoNL conditions except that we replaced "What I said was true" by "I stand by that" and "What I said was false" by "I take that back."

4.3.2. Results

Mean responses by condition are displayed in *Figure 3*.

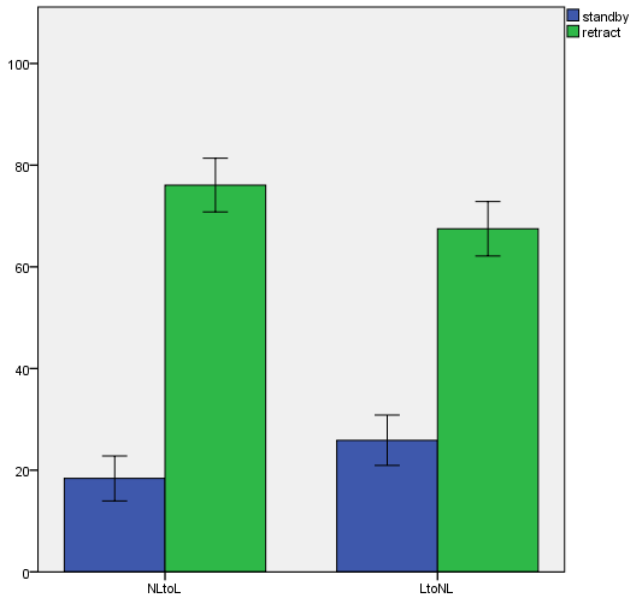

Figure 3. Mean responses by condition in Experiment 2. Error bars show 95% CI.

Again, the data were analysed using a mixed-model repeated measures ANOVA, with condition (NLtoL vs. LtoNL) as a between-subject variable and statement ("stand-by" vs. "retract") as a within-subject variable. There was a significant main effect of statement, $F(1, 254) = 223.40$, $p < .001$, but no significant main effect of condition, $F(1, 254) = .16$, $p = .69$. As before, there was a significant interaction, $F(1, 254) = 5.88$, $p = .016$.

To further explore the interaction, we compared judgments for each statement in the two conditions. For the "stand-by" statement, participants gave higher ratings in the LtoNL condition ($M = 25.89$, SD = 27.91) than in the NLtoL condition ($M = 18.38$, SD = 25.69), $t(254) = 2.24$, $p = .026$. For the "retract" statement, participants gave higher ratings in the NLtoL condition ($M = 76.08$, SD = 30.72) than in the LtoNL condition ($M = 67.48$, SD = 30.12), $t(254) = 2.26$, $p = .025$.

4.3.3. Discussion

Once again, our experiment confirmed the direction effect. Unlike in the previous experiments, though, there was also a very clear preference for the "retract" statement in both conditions. This replicates earlier results from the domain of epistemic modals. Knobe and Yalcin (2014: 17), for instance, similarly observe "that truth-value judgments and retraction judgments can come apart in the case of epistemic modal language." We'll consider a candidate explanation of this puzzling phenomenon below.

The results from the present experiment confirm the direction effect. They incidentally also put pressure on an otherwise promising deflationary account of the direction effect as measured in Experiment 1 and 2. A simple relativist might have argued as follows:

> Throughout their lives, many people come to like things they previously disliked (e.g. beer, spinach, Brussel sprouts, mustard, etc.). Things can go in the other direction too (consider MacFarlane's (2014: 13f) fish sticks case), but this seems less common. In many cases, at least, our dislike in the latter cases is temporary, and maybe the result of a recent overdose of the relevant type of food. As such, there is

presumably no real change in taste standards. The LtoNL condition is generally interpreted along these, more typical, lines. Thus, it is no wonder that people don't prefer the "false" response. Even given relativism, they should do so only if there genuinely was a change in taste standards.

This account seems implausible in light of the results from Experiment 3. People generally prefer to retract even in the LtoNL condition. It's very hard to make sense of this unless we assume that they generally interpreted the vignette as featuring a change in taste standards. This worry applies, of course, to any supposed account of our data that appeals to the idea that there was no real change in taste standards in one or the other condition.

5. The controversial status of relativist intuitions

We confirmed the direction effect across three different experiments, so it is safe to conclude that the effect is real.[3] This shows that not just philosophers have divergent intuitions about the relevant cases. Lay intuitions don't univocally favour contextualism or relativism either. Participants tended to respond differently depending on condition. And even within conditions, preferences were far from uniform at least in Experiment 1 and 2, with some people clearly favouring the "true" response and some people clearly favouring the "false" response. It seems plausible then that the divergent intuitions on the part of philosophers aren't just the result of a bias towards ones favoured theory. We should accommodate them at a deeper level. In the rest of the paper, we will develop a theoretical framework suited for this task. The immediate goal, though, will be to explain the direction effect.

6. Conservative accounts of the direction effect?

What explains the direction effect? So far, we've argued only that simple versions of contextualism and relativism fail to explain the effect. Before we turn to our own positive account, let us briefly show that more elaborate versions specifically of contextualism don't fare any better.

Suppose, for instance, that "tasty" triggers a "presupposition of commonality," i.e. a presupposition to the effect that a relevant group of people shares the speaker's taste preferences (López de Sa, 2008, 2015). Such a presupposition might have an effect on the relevant truth-value judgments e.g. by being incorporated into "what is said." But we wouldn't expect it to have an asymmetric effect along the lines of the direction effect. For instance, if the group of people includes one's future self, then the presupposition of commonality should equally push us towards the "false" response in both the LtoNL and the NLtoL condition. After all, the speaker and her future self share a taste standard in neither of these cases. Similarly, consider the "metalinguistic negotiation" account in (Plunkett and Sundell, 2013). It might be that "tasty" claims somehow convey that "tasty" ought to be used in a particular way. Again, this pragmatic message might affect truth-value intuitions. But it is unclear why it should affect intuitions asymmetrically: a change in taste standards

[3] We also found a direction effect in an experiment with a slightly different background story that featured cream cheese instead of bubblegum and where we replaced "tasty" by "delicious." This lends further support to the robustness of the effect. On the other hand, we were unable to confirm a direction effect for "disgusting" so far. We have no explanation for this at the moment. It would be worthwhile to further explore the direction effect for other predicates than "tasty," but we restrict ourselves to "tasty" in this paper.

should make us equally disapproving of our previous recommendations regarding the use of "tasty," whether we started out liking or disliking it. Or suppose that "tasty" claims of the envisaged kind are understood as generic statements (Moltmann, 2010; Pearson, 2013). Again, it is unclear why we should be more willing to reject the claim that people generally don't like Yumble when we have come to like it than we are to reject the claim that people generally do like Yumble when we have come to dislike it. ("Flexible contextualism" (Dowell, 2011) might offer a more promising account of the data once combined with certain pragmatic principles that we will introduce below. We'll come back to this.)

7. Accounting for the direction effect

Extant theories fail to predict the direction effect. This is unsurprising because the effect wasn't on anybody's agenda. In what follows, we'd like to outline a theory that does. We call it *hybrid relativism*. For concreteness, we'll focus on the direction effect as measured in Experiment 1.

7.1. Hybrid relativism

Hybrid relativism has it that "tasty" has a contextualist ("tasty$_C$") and a relativist ("tasty$_R$") reading, where each of these readings can be characterized in terms of the above simple versions of contextualism and relativism, at least as a first approximation:

> Hybrid relativism
>
> [F is/isn't tasty$_C$]^c is true at <w,j,t> iff, at w, F is/isn't tasty by the lights of the taste standard that the speaker in c has at the time of c.
>
> [F is/isn't tasty$_R$]^c is true at <w,j,t> iff, at w, F is/isn't tasty by the lights of the taste standard that j has at time t.

More precisely, we favour a semantics along the lines of Stephenson (2007). Thus, we assume that "tasty" is a two-place predicate with the following lexical entry:

> $[[\text{tasty}]]^{c,<w,j,t>} = [\lambda x.[\lambda y.y \text{ is tasty by the lights of } x]]$

The second parameter can be filled overtly, as in "This is tasty *to me.*" When it isn't filled overtly, it may be filled by either of the following silent pronouns:

> $[[\text{PRO}]]^{c,<w,j,t>}$ = the taste standard that j has at time t
>
> $[[\textit{pro}]]^{c,<w,j,t>}$ = the taste standard that the speaker of c has at the time of c

PRO yields the relativist reading, while *pro* yields the contextualist reading.[4]

One might worry about so-called "exocentric" contexts (Lasersohn, 2005), where a taste judgment is tied to some other subject than the speaker (e.g. when I say to my cat, "This cat food is delicious"). For Stephenson, the non-relativist *pro* is primarily responsible for the generation of these readings. In our framework, *pro* is tied to the speaker. It differs from PRO only in that it is tied to the speaker in a contextualist rather than a relativist

[4] We are following a suggestion by MacFarlane (2014: 154) in that, unlike Stephenson, we take the indicated pronouns to refer to taste standards rather than judges.

way. Those who want to account for exocentric contexts semantically might want to loosen our lexical entry for *pro* along the following lines:

> $[[pro]]^{c,<w,j,t>}$ = the taste standard that the subject salient in c has at the time salient in c

We'll leave it open for now which of the two suggested entries for *pro* to prefer (or whether an even more complicated entry is required). But we'll assume—unlike Stephenson—that the simple entry above characterizes at least the default interpretation of *pro*.

Is there independent reason to think that the suggested ambiguity exists? As indicated, Stephenson (2007) assumes for independent reasons that "tasty" has a contextualist reading in addition to a relativist one, namely, in order to accommodate exocentric contexts (see also MacFarlane, 2014: 155f). But are there also independent reasons to assume a contextualist reading in autocentric contexts? We think there are. Consider the following dialogues quoted from Schaffer (2011: 213–215) (see also Stojanovic, 2007: sec. 2):

> [D1]
> *Ben*: Hey Ann, I'd like to buy you a gift. What's your favorite treat?
> *Ann*: Licorice is tasty
> *Ben*: No, licorice is not tasty
> *Ann*: Listen, I was just saying that *I* like it
>
> [D2]
> *Ann*: Licorice is tasty
> *Ben*: No, licorice is not tasty
> *Ann*: Yes it is

Like Schaffer, we think that both of Ann's responses in the above dialogues are fine. The suggested ambiguity explains this (flexible contextualism offers a competing explanation (Stojanovic, 2007: sec. 2; Schaffer, 2011: sec. 4.2), but see below for potential worries): In D1, "tasty" is read as "tasty_C." Thus, Ann is (roughly) saying that liquorice is tasty to her in her first utterance. It makes perfect sense then for her to point this out later on. In D2, "tasty" is read as "tasty_R." Thus, Ann and Ben are expressing contradicting propositions, and it makes sense for Ann to insist on that (from a relativist perspective, p and q are contradictory iff there is no circumstance of evaluation relative to which p and q are both true (cp. Kölbel, 2014: 105)).

To be sure, when we say that "tasty" has two readings, we are not saying that it is on a par with standard examples of ambiguity such as "bank." The two readings we posit are very closely related. Cases of polysemy (as witnessed e.g. in "book," which can denote a specific copy or an abstract work) would thus be a much more natural comparison. We assume that standard tests for ambiguity fare badly when it comes to polysemy (see Viebahn, ms). Correspondingly, we are not too worried that they presumably fail when applied to "tasty."[5]

[5] See also Anthony, 2016 for an ambiguity thesis that is closely related to ours.

If we combine hybrid relativism so understood with the above assertion norm, the view will be at least compatible with the data obtained. The basic idea will be that, in the NLtoL condition, people tend to favour the relativist reading, while in the LtoNL condition, people tend to favour the contextualist reading. This yields the right results because, as we've seen, on a relativist reading, the "false" response should be preferred while on a contextualist reading, the "true" response should be preferred.

The suggested account is independently motivated and compatible with the data outlined. Up to this point, however, it remains far from predicting them. In particular, why do we choose different readings in the different conditions? We want to turn to this issue next.

7.2. When in doubt, assume the worst

Let's begin by considering a seemingly unrelated phenomenon.[6] Negating scalar adjectives leads in many cases to a certain form of "pragmatic strengthening." For instance, when I say, "Hannah isn't happy," I'm naturally understood as saying not just that Hannah isn't happy but that she is in fact unhappy, or sad. In this vein, Horn (1989: 331) observes a tendency to convert "a relatively uninformative sentence negation […] into an assertion of the contrary." Surprisingly enough, however, this phenomenon does not occur across the board. Suppose, for instance, that I say, "Hannah isn't sad." In this case, there seems to be much less of a tendency to infer that Hannah is actually happy. What I seem to be communicating is that Hannah isn't sad, leaving it open that Hannah may not be happy either. As Horn (1989: 334) makes clear, contexts featuring pragmatic strengthening of the indicated type "characteristically involve not only gradable predications […] but more specifically those gradable predications involving desirable properties, those whose denial would reflect undesirable on the subject, speaker and/or addressee." Numerous examples attest to this phenomenon. For each of the following pairs, the negation of the positive attribute is naturally understood as an attribution of the corresponding negative attribute, while the negation of the negative attribute is naturally interpreted as just what it is (cp. Horn, 1989: 334f for these examples).

> "It's not clean." vs. "It's not dirty."
>
> "That's not right." vs. "That's not wrong."
>
> "She's not rich." vs. "She's not poor."

For instance, "It's not clean" is naturally understood as saying that it's dirty, while "It's not dirty" naturally leaves open that it isn't clean either. What explains this asymmetry?

Following Horn (1989: 333), "the weaker-seeming contradictory negation over the stronger affirmation of the contrary is characteristically prompted by a desire to avoid direct expression, to present one's contribution in a manner often labeled […] 'polite' or 'guarded'." Suppose one makes a claim that can be interpreted in a negative and a more positive way. It seems plausible that, if the more positive thing was intended, the speaker wouldn't have chosen such an ambiguous way of getting that across: everybody likes to be evaluated positively, and people presumably like to appear likable. The speaker could have made sure that she appears likeable by using an unambiguously positive assessment.

[6] We are indebted to [redacted] for directing our attention towards this phenomenon.

Hence, she presumably would have done so. On the other hand, if the speaker intended the negative message, it makes perfect sense that she chose an ambiguous way of expressing it: no one likes to be criticized, so one would naturally want to create some room to backtrack e.g. in case the criticism is too badly received. Horn (1989: 334) suggests a similar kind of reasoning:

> If I tell you that I don't approve of your behavior, you may infer that (presumably to spare your feelings) I am concealing my active disapproval—although I could have added, with perfect consistency, that I don't disapprove of it either, in which case this pragmatic inference will be blocked. But if I acknowledge that I don't disapprove of your behavior, you are less likely to conclude (however strongly you may wish to) that I actively approve of it.

These considerations converge on the following, certainly highly defeasible principle:

> NEG If it's possible to interpret a speaker as making a more or a less positive assessment, the less positive one is what the speaker has in mind.

NEG explains the above asymmetry: "It's not clean" can be understood as just negating cleanliness or, more negatively, as actually stating dirtiness. By NEG, the latter interpretation is preferred. "It's not dirty" can be understood as just negating dirtiness or, more positively, as actually stating cleanliness. By NEG, the former interpretation is preferred. There is a question of how the two suggested interpretations come to be available in the first place. This is irrelevant for our purposes, so we'll leave that aside (see Horn, 1989: sec. 5.3.1).

7.3. Relativistic assertions

One more ingredient is missing before we can predict the direction effect. Following Stephenson (2007: sec. 5) once more (see also Egan, 2014; Dinges, forthcoming), we'd like to embed hybrid relativism into a Stalnakerian account of assertion, according which an assertion is basically a proposal to update the common ground (Stalnaker, 1978). The common ground is standardly represented in terms of sets of possible worlds. To accommodate relativistic assertions, we need to construe it in terms of sets of world, judge, time triples. A relativist assertion, once accepted, thus has the effect of eliminating all triples relative to which the asserted proposition is false. This means, importantly, that a relativistic assertion can properly enter the common ground only if the asserted proposition is true relative to the taste standard of all the participants in the conversation. Otherwise, people will end up believing things that aren't true from their perspective. As Stephenson (2007: 509) puts it, accepting an assertion of a relativist proposition S has essentially "the same effect as adding the proposition that S is true as judged by the group of conversational participants."

With this in mind, consider the NLtoL condition. On the suggested view, "tasty" can be read in a relativist and a contextualist way when our subjects first say "Yumble isn't tasty." On either interpretation, the resulting assertion reflects negatively on Yumble. But on the relativist reading, the assessment is more negative. On the contextualist reading, the speaker is merely reporting her own predilections. On the relativist reading, she proposes

to update the common ground in a way that is acceptable only if everybody in the conversation dislikes Yumble. Consequently, NEG leads us to choose the relativist reading. Thus, our view predicts that we should later assess the utterance in question as "false."

Consider now the LtoNL condition. Again, "tasty" can be read in a relativist or a contextualist way when the speaker first says "Yumble is tasty." On either interpretation, the assessment of Yumble is positive. However, the assessment of Yumble is less positive on the contextualist reading. Again, this is so because, on the contextualist reading, the speaker merely pronounces on her own taste standard; whereas on the relativist reading, she makes a proposal to update the common ground that can be accepted only if everybody likes Yumble. By NEG, we choose the contextualist reading. This explains why people are inclined to prefer the "true" assessment later when they have changed their taste standard.

To be sure, the account in the previous paragraphs is somewhat simplified. We don't think that NEG univocally forces a contextualist reading in LtoNL and a relativist reading in NLtoL. We would expect clearer preferences for the "true" or "false" responses (respectively) if this were so. NEG is supposed to create some pragmatic pressure one way or the other, but presumably there are idiosyncratic preferences for relativist or contextualist readings that may overrule this principle in individual cases.

In this way, our account at least accommodates the indicated result that individual participants, as well as philosophers, tend to have diverging categorical preferences for the "true" or the "false" statement even within conditions. Depending on their idiosyncratic preferences, some people choose the relativist reading, some the contextualist reading. Depending on this choice, they prefer one or the other statement. To fully spell out these last ideas, we would need a deeper understanding of how the relevant idiosyncratic preferences come about. At this point, though, we just want to put a potential research question on the table, leaving it open how it is to be resolved.

8. Flexible contextualism?

This is the account we have to offer. We don't want to say that there are no other possible accounts of the direction effect available once NEG is at hand. One candidate account would be based on "flexible contextualism" as proposed by Dowell (2011) for epistemic modals. Transferred to the domain of taste, the view would amount to something along the following lines:

> Flexible contextualism
>
> [F is/isn't tasty]^c is true at <w,j,t> iff, at w, F is/isn't tasty by the lights of the taste standards determined by c, where this determination is a broadly pragmatic matter.

Following Dowell (2011: 5), we could say, for instance, that the taste standards of a given context are determined by "the speaker's publicly manifestable intention for her addressee to recognize some feature of the context as helping to manifest what she takes" the taste standards in the context to be (see Stojanovic, 2007; Schaffer, 2011 for related views).

On the suggested view, principles like NEG will be playing a role in deciding which taste standard is relevant in a given context. The direction effect could thus be predicted as follows: In the NLtoL condition, the relevant standards include the taste standard of the speaker's future self because this yields a particularly negative interpretation. Consequently, what is said is false in this condition. In the LtoNL condition, the relevant taste standards include only the speaker's present taste standard because this yields the least positive interpretation. What is said will thus be true in this condition.[7]

We have no knock-down argument against flexible contextualism so understood, but we are not convinced by this proposal either. Here is why.

In our vignettes, the respective taste judgments are made with a temporal distance of two weeks. We haven't tested this, but we expect people's intuitions to stay unaltered in cases where the distance is much longer. Suppose that this is so. Our flexible contextualist will then have to say that, in the NLtoL condition, the speaker's original utterance is actually a prediction to the effect that the speaker's taste standard won't change for a very long time (many years maybe). We think that speakers aren't in a position to properly make such predictions. The predictions would not only be false, but epistemically unjustified too. This leads to two related problems.

First, there should be strong pragmatic pressure to choose the reading which incorporates only one's present taste standard after all. For cooperative conversation presumably involves that you "[d]o not say that for which you lack adequate evidence" (Grice, 1989: 27). It is hard to see how NEG could overrule this basic principle. (A similar problem doesn't arise for hybrid relativism if we assume that a relativistic assertion is adequately justified if the speaker e.g. knows that the asserted proposition is true *from her perspective* (cp. MacFarlane, 2014: 113 for a more precise description of such a norm).) Second, we will lose "faultlessness" (Kölbel, 2003). At least from a neutral, outside perspective, the initial utterance in NLtoL seems perfectly fine. On the present view, though, it is not. Again, further research is required, but faultlessness intuitions of the indicated kind have been robustly confirmed at least in intersubjective cases. Solt (forthcoming), for instance, observes that "for *beautiful*, *tasty*, and other adjectives that were classified as evaluative, disagreements about orderings are almost universally judged to be matters of opinion" (see Khoo and Knobe, 2016 for related outcomes in the moral domain). It seems reasonable to expect similar results in cross-temporal, intra-subjective cases of the kind envisaged in this paper.

9. Retraction data

One puzzle remains. There are familiar ways for hybrid relativists to explain why we retract our previous assertion in the NLtoL condition, where people judge their previous utterance to be false (at least as soon as we couch the suggested view in an assessment-sensitive framework (MacFarlane, 2014: ch. 5.4)). But in the LtoNL condition, people don't tend to judge their previous utterance as false. Why is it then that people still prefer the retraction over the standing by response in this case? As indicated, a similar puzzle arises

[7] A similar story might be told if we replace flexible contextualism with the recent contextualist ambiguity account of "tasty" in Anthony, 2016.

in the domain of epistemic modals. Knobe and Yalcin (2014: 17) also observe that "truth-value judgments and retraction judgments can come apart in the case of epistemic modal language."

We have no worked out theory at the moment of why this is so, but we can offer some preliminary thoughts. The first is that the account of the phenomenon offered by Knobe and Yalcin (2014: 17) is too narrow. They note that "a conversation which incorporates the update associated with an epistemic possibility sentence is (*inter alia*) a conversation that can be felicitously updated with its prejacent." They go on to suggest that "[p]erhaps retraction is a way of flagging that one no longer wishes to be in a conversational context having this property." Taste claims have no prejacent, so this story won't apply.

Second, we'd like to point to what we take to be underappreciated data. Consider the following case: I liked fish sticks. Correspondingly, I said "I like fish sticks." I come to dislike them. My parents call me and ask "You said 'I like fish sticks.' Do you stand by that?" Clearly, it would be highly misleading for me to respond with "I do." For this would very strongly suggest that I still like fish sticks. The phenomenon is not restricted to the domain of taste. Suppose I say "I don't know who did this." Later I find out who did the deed. Someone asks "Do you stand by your previous claim 'I don't know who did this?'" Again, it would be utterly misleading to respond with "I do."

These observations suggest that, at least in many cases, standing by one's previous assertion is not just a means to reassert the proposition one previously expressed. Rather, one is suggesting that things didn't change in the meantime. In the fish sticks case, standing-by would suggest, for instance, that I not only liked fish sticks but that I still do. This could explain our data: people retract even in LtoNL because things have changed in the meantime. (In the NLtoL condition, they retract because of that *and* because what they previously expressed (the relativist proposition) isn't true relative to their current perspective. This would explain why the retraction response in this case is preferred even more strongly than in the LtoNL condition.)

We are aware, of course, that this is far from a theory about what is going on. For instance, we'd like to know when standing-by has the no-change-in-the-meantime implication and when it doesn't. If it has this implication in some cases but not others, we'd like to know the mechanism behind this. For instance, is there some kind of ambiguity or are we dealing with Gricean implicatures? We have no complete answers to these questions yet. Even so, the previous considerations should suffice to show that the challenge from retraction data is far from clearly insurmountable. In any case, we think it isn't specific to the account outlined. The phenomenon that retraction and truth-value judgments come apart is puzzling in and of itself.

10. Conclusion

We have reported a hitherto unobserved direction effect on our assessments of previous taste claims. In particular, our experiments show that the question of whether we judge a previous taste claim as true or false, or whether we are willing to retract it, depends on whether we start out liking the food in question and end up disliking it or *vice versa*. We

have argued that the direction effect is best explained by what we have called hybrid relativism. According to hybrid relativism, "tasty" is ambiguous between a contextualist and a relativist reading. The direction effect occurs because we choose different readings in the different conditions due to an independent preference to interpret speakers as negatively as possible. Hybrid relativism also at least makes room for the seeming datum that philosophers have diverging intuitions even about cases where the direction in which taste standards change is held fixed: idiosyncratic preferences for contextualist or relativist reading may sometimes override the indicated interpretive principle.

There is, of course, much more to be said. In particular, even if hybrid relativism predicts the direction effect, the question remains whether it is an overall plausible account. We have tried to address some possible concerns, but others may remain. There is also the question of whether it is plausible to assume idiosyncratic preferences for different readings of an ambiguous expression and how these preferences come about. These questions will be the task for another occasion. We hope to have shown at least that the direction effect imposes an important constraint on theories about the semantics and pragmatics of taste claims and that taking the effect seriously may lead to substantial revisions of the theories one holds dear.

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