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Predicates of personal taste: empirical data

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Abstract
According to contextualism, the extension of claims of personal taste is dependent on the context of utterance. According to truth relativism, their extension depends on the context of assessment. On this view, when the taste preferences of a speaker change, so does the truth value of a previously uttered taste claim, and the speaker might be required to retract it. Both views make strong empirical assumptions, which are here put to the test in three experiments with over 740 participants. It turns out that the linguistic behaviour of ordinary English speakers is consistent with contextualist predictions and inconsistent with the predictions of the most widely discussed form of truth relativism advocated by John MacFarlane.

Keywords Contextualism · Relativism · Predicates of personal taste · Retraction

1 Introduction

1.1 Indexical contextualism

Indexical contextualism is a semantic theory according to which claims involving predicates of personal taste such as 'delicious', 'tasty' or 'fun' are context-dependent.[1] The relevant standard of taste of, say, 'Spinach is delicious' is determined by the context of utterance, and it manifests itself, albeit tacitly, at the level of the content expressed by the utterance. Claims of this sort are thus somewhat analogous

[1] The semantics of predicates of personal taste has received a lot of attention over the last two decades, see *inter alia* Kölbel (2002, 2004a, b, 2009), Lasersohn (2005, 2008, 2009, 2011, 2017), Stojanovic (2007, 2017), Stephenson (2007), Recanati (2007), Glanzberg (2007), MacFarlane (2007, 2014), Cappelen and Hawthorne (2009) as well as the Analysis book symposium (2011) about the latter, Sæbø (2009), Moltmann (2010), Egan (2010), Sundell (2011), Schaffer (2011), Huvenes (2012), Collins (2013), Marques (2014, 2018), Marques and García-Carpintero (2014), Zeman (2016), Zakkou (2019a, 2019b) and Kneer (2015, 2020).

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to utterances invoking strict indexicals such as 'I' or 'now'. What a sentence like 'I am hungry' expresses can vary across contexts, since different contexts of utterance may supply different values for the first-person pronoun, that is, different speakers. The default value of perspectival claims is also the perspective of the speaker, though sometimes it is the perspective of another individual, or some contextually salient group. Standardly, however, indexical contextualists take (1) to mean (2):

1. Spinach is tasty.
2. Spinach is tasty for me.

This intuitively plausible picture has recently come under attack, principally on the basis of two arguments: The argument from faultless disagreement, and the argument from required retraction. The former has been employed to motivate a position called nonindexical contextualism, the latter to motivate truth relativism. Here we focus on the latter.

1.2 Truth relativism

Truth relativism[2] differs from indexical contextualism in three regards: *Firstly,* perspectival elements, such as the relevant standard of taste, are not part of the Kaplanian *content* of the proposition expressed by an utterance, but a parameter in the circumstance of evaluation like worlds or times. The content itself is perspective-neutral, just as it is time-neutral on a temporalist view of propositions such as Kaplan's (1989) own. *Secondly,* which standard of taste is relevant does not depend on *the* context of *utterance*, but on *some* context of *assessment*. Since there are countless contexts of assessment—in contrast to a single context of utterance per utterance—the truth-value of the proposition expressed is non-constant: It can vary across contexts of assessment, depending on the assessor's standard of taste. *Thirdly,* if the taste of a speaker evolves, her previous claim might no longer be accurate or true with respect to her current context of assessment. In such a case, the speaker—if challenged by an interlocutor—is required to retract or take back her previous claim.[3] Here is an instructive passage by MacFarlane:

> When our own tastes change, so that a food we used to find pleasant to the taste now tastes bad, we may say that we were mistaken in saying that the food was "tasty." When I was a kid, I once told my mother, "Fish sticks are tasty." Now that I have exposed my palate to a broader range of tastes, I think I was wrong about that; I've changed my mind about the tastiness of fish sticks. So, if someone said, "But you said years ago that fish sticks were tasty," I would

[2] Defenders of the position, not necessarily limited to predicates of personal taste, are inter alia MacFarlane (2007, 2014), Egan (2007), Lasersohn (2005, 2016) and Beddor and Egan (2018). This paper predominantly focuses on MacFarlane's truth relativism.

[3] For detailed discussion of retractions, see for instance Ferrari (2016), Marques (2018), Zakkou (2019a) and Caponetto (2020).

> retract the earlier assertion. I wouldn't say, "They were tasty then, but they aren't tasty any more," since that would imply that their taste changed. Nor would I say, "When I said that, I only meant that they were tasty to me then." I *didn't* mean that. At the time I took myself to be disagreeing with adults who claimed that fish sticks weren't tasty. (2014, pp. 13, 14)

What the example brings out is that the *truth* of claims of personal taste is assessment-sensitive (i.e. it depends on features of the context of assessment), and that this is *demonstrated* by the retraction of such claims at contexts of assessment at which they are no longer true. This can be fleshed out a bit. MacFarlane proposes a norm-governed picture of assertion, that is, a view according to which the practice of assertion is characterized by certain constitutive rules. According to one such rule, a speaker should only assert what is true:

> **Reflexive Truth Rule**: An agent is permitted to assert that p at context c_1 only if p is true as used at c_1 and assessed from c_2. (2014, p. 103)

The reflexive truth rule might seem puzzling, in so far as the context of utterance (or use) and the context of assessment *coincide*. This means—as MacFarlane acknowledges—that it 'will not help us make sense of relative truth, for it leaves contexts of assessment without any *essential* role to play' (2014, p. 104). However, the truth rule does not exhaust the normative constraints that govern assertion. As illustrated by the fish sticks example, there seems to be another rule at play, a rule in which contexts of assessment take on a central role:

> **Retraction Rule:** An agent in context c_2 is required to retract an (unretracted) assertion of p made at c_1 if p is not true as used at c_1 and assessed from c_2. (2014: 108)

Hence, in his example, young MacFarlane was *permitted* to utter 'Fish sticks are tasty', since the claim was true as used and assessed from the context of utterance. Once his tastes have evolved, however, he has to admit (if challenged) that his claim *was false* since it is inaccurate as evaluated from his present context of assessment. But if the previously made claim is now considered as *having been false*, MacFarlane suggests, it needs to be retracted so as to 'undo the normative commitments' undertaken by the speaker when it was uttered. In sum, relativism proposes a view that defines truth-evaluation as dependent on contexts of assessment, and suggests that the retraction of taste claims arises *in virtue* of their assessment-sensitivity.

1.3 Two kinds of data

Truth Relativism about predicates of personal taste is a position that makes empirically testable claims about our practices of truth-ascription and the retraction of assertions. These claims are taken to ground certain norms of assertion—the truth rule and the rule of retraction. Note that the norms in question are *behaviour-dependent*: They rely on the empirical adequacy of the relevant descriptions of our practice of assertion. If the descriptive claims are false, the norms are fictitious, and the resulting account of assertion is distorted. Legal norms and moral norms (at

least on certain assumptions about moral values) differ from linguistic norms in this respect: If nobody acts in accordance with a particular law or moral norm, it does not follow that such legal or moral rules do not exist. Whereas rules of this sort are (at least to some extent) behaviour-independent, linguistic norms are not.[4] As such they are suited to empirical investigation.

Advocates of relativism allege they have provided 'data' regarding the assessment-sensitivity of predicates of personal taste. This is somewhat euphemistic. They have provided example cases coupled with conjectures according to which ordinary language speakers react in line with relativist predictions. Since these conjectures are rather contentious, however, it is perhaps time to turn from 'data' to data proper.[5]

2 Experiment 1: 'delicious' and 'fun'

2.1 Scenario for 'delicious'

The retraction of claims of personal taste, relativists content, is driven by the assessment-sensitivity of the truth-value of such claims. If a certain taste claim uttered at context c_1 and true as assessed from c_1 at some later context of assessment c_2 is false, the speaker is required to retract *because* it is false at c_2. We must thus address two core questions: (1) Whether the taste claim, true at a context c_1, is indeed assessed as *false* from c_2 if, at c_2 the speaker's tastes have changed, and (2) whether ordinary language speakers share the relativist's intuition that the speaker is required to take back their original utterance in such a situation.

MacFarlane's passage can be worked into the following scenario, which comes in two versions (A and B), so as to address the two questions regarding falsity and retraction separately:

FISH STICKS
John is five years old and loves fish sticks. One day he says to his sister Sally: 'Fish sticks are delicious.' Twenty years later his taste regarding fish sticks has changed. Sally asks him whether he still likes fish sticks and John says he doesn't anymore.
[A] Sally says: 'So what you said back when you were five was false.'
[B] Sally says: 'So you are required to take back what you said about fish sticks when you were five.'
Q. To what extent do you agree or disagree with Sally's claim?

[4] For a related point, cf. Horwich (2014).

[5] This is not intended to sound polemical. Example dialogues which test whether certain utterances sound felicitous make for a perfectly valid preliminary method of assessing their linguistic properties. However, given how contentious even these preliminary assessments are, and given that the debate has been going strong for over a decade, we might want to examine how ordinary language speakers actually use perspectival expressions.

Each participant saw either version [A] or version [B], and had to respond on a 7-point Likert scale ranging from 'completely disagree' (1) to 'completely agree' (7) to the question. Relativists would predict mean agreement with the proposed truth assessment and required retraction to be significantly above the midpoint of the scale. Contextualists, by contrast, would predict the means to lie significantly below the midpoint of the scale.[6]

2.2 Scenario for 'fun'

Another predicate of personal taste besides 'delicious' that serves as a relativist intuition-pump is 'fun' (Lasersohn, 2005, 2011; MacFarlane, 2014; Stephenson, 2007). Again, we need a scenario where the protagonist finds a particular activity—building sandcastles, say—fun at some point in their life, yet at some later context of assessment his preferences have changed. The two versions of the scenario, focusing on truth and retraction respectively, read:

> **SANDCASTLE**
> John is five years old and loves building sandcastles. One day he says to his sister Sally: 'Building sandcastles is great fun.' Twenty years later his opinion regarding sandcastles has changed. Sally asks him whether he still thinks building sandcastles is fun, and John says he doesn't.
> [A] Sally says: 'So what you said back when you were five was false.'
> [B] Sally says: 'So you are required to take back what you said about building sandcastles when you were five.'
> Q.: To what extent do you agree or disagree with Sally's claim? (1= completely disagree; 7= completely agree)

Participants were randomly assigned to one of the four conditions (two scenarios: Fish Sticks, Sandcastle × 2 conditions: truth evaluation, retraction).

2.3 Participants

I recruited 241 participants on Amazon Mechanical Turk. In line with the preregistration,[7] subjects failing an attention check, responding in less than 15 seconds to the main task, and those whose native tongue was not English were excluded. 164 participants remained (80 female, age M = 40 years, SD = 13 years).

[6] In focusing on assessment-sensitivity and retraction, but not disagreement, the experiments are unsuited to shed light on advantages and disadvantages of different *types* of contextualism.

[7] https://aspredicted.org/blind.php?x=p37yp6. To prevent people taking similar surveys multiple times, Experiments 1 and 2 were preregistered and run together (with prevention of ballot-box stuffing enabled in Qualtrics). Data and preregistration also available at https://osf.io/sxtrb/.

2.4 Results

The results are clear and decisive (Fig. 1): In the fish sticks scenario, people manifest strong disagreement with Sally's statements that John's taste claim was false (M = 2.24, SD = 2.02) and that it should be retracted (M = 2.77, SD = 2.10). In line with contextualist predictions, and in contrast to relativist predictions, mean agreement was significantly below the midpoint of the scale.[8] The same holds for the sandcastle scenario. Here, too, people disagree with the assessment that what John said at the context of utterance was false (M = 2.21, SD = 1.99), and they also disagree with the claim that it stands in need of retraction (M = 2.34, SD = 1.92). Both means were significantly below the midpoint, signalling pronounced disagreement with the predictions of truth relativism.[9]

2.5 Discussion

In brief, the findings suggest that—consistent with contextualism—truth evaluation is sensitive to the context of utterance even if tastes have changed at the context of assessment. Given that John's claims are not evaluated as false in retrospect, it comes as no surprise that people do not think they must be retracted.

Does the relativist stand refuted? Not quite yet. Though the vignettes employed have been modelled closely on relativists' favourite examples, one might worry about normative commitments undertaken long ago. More precisely, one might reasonably call into question whether a pragmatic commitment to retract a taste claim true at a context c_1 yet false at a context c_2 is still in effect if the contexts are separated by two decades. Perhaps the requirement to retract wears off over time.

Von Fintel and Gillies (2008, pp. 84–86) discuss time lag issues with respect to epistemic modal claims, which are also deemed assessment-sensitive by relativists and for which a retraction requirement allegedly arises, too. Since knowledge accumulates over time, the larger the time span that separates the context of utterance and the context of assessment, the higher the chances that the original claim stands in need of retraction. Or at least that's what advocates of relativism think. Von Fintel and Gillies, however, argue, that 'the facts go the other way, as t_a [the time of assessment] gets much later than t_c [the time of utterance], it becomes increasingly silly to go in for the sort of rejection that [relativism] predicts.' (2008, p. 86). For instance, if Mary is to guess a randomly chosen card put into an envelope by John, and if the question is only resolved ten years later, it seems odd for him to shout 'Wrong!/What you said is false!' (2008, p. 86), or to require her to take back her claim. For predicates of personal taste, too, one might think that the relativist predictions work better when the time span between the contexts of utterance and assessment is relatively

[8] Truth evaluation: $t(36) = -5.29$, $p < .001$, CI [−2.43; −1.08]. Retraction: $t(44) = -3.88$, $p < .001$, CI [−1.87; −.59].

[9] Truth evaluation: $t(38) = -5.64$, $p < .001$, CI [−2.44; −1.15]. Retraction: $t(43) = -5.74$, $p < .001$, CI [−2.24; −1.08].

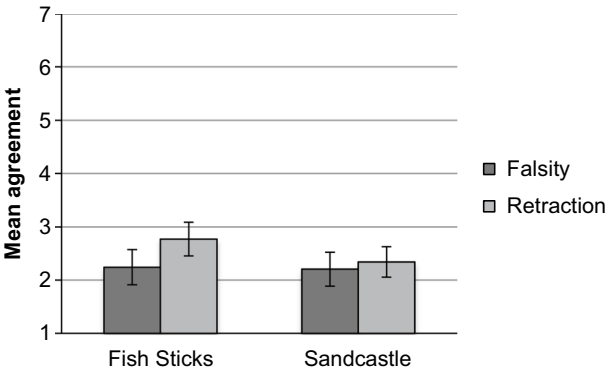

Fig. 1 Mean agreement with the statement that John's taste claim was false at the context of utterance and that it must be retracted for the *Fish Sticks* and the *Sandcastle* scenarios. Error bars denote standard error of the mean

short. So as to give relativism its best shot, this is what we'll explore in Experiment 2.

3 Experiment 2: time lag concerns

Experiment 2 addresses the potential concern regarding time lag. Naturally, tastes do not change from one moment to the next, so while the time lag should be reduced considerably, excess must be avoided. We'll explore what happens when we reduce it form twenty years to a few weeks.

3.1 Participants

120 participants were recruited on Amazon Mechanical Turk to complete a paid Qualtrics online survey. As preregistered (see Footnote 6), subjects failing an attention check, responding in less than 15 seconds to the main task, and those whose native tongue was not English were excluded. 87 participants remained (38 female, age M = 44 years, SD = 14 years).

3.2 Materials and procedure

The two versions (A v. B) of the target scenario read:

> **SALMON**
> It's Ben's birthday. To celebrate the occasion, Mary takes him out to her favourite restaurant. Ben loves salmon, and says to Mary: 'Salmon is delicious.' A few weeks later, Ben's tastes regarding salmon have changed.

Sally asks him whether he still likes salmon and Ben says he doesn't anymore.
[A] Mary says: 'So what you said in the restaurant a few weeks ago was false.'
[B] Mary says: 'So you are required to take back what you said about salmon a few weeks ago in the restaurant.'
Q.: To what extent do you agree or disagree with Mary's claim? (1= completely disagree; 7= completely agree)

As in the previous experiment, contextualists, according to whom what matters for truth evaluation is the context of utterance would predict mean agreement for both tasks to lie significantly below the midpoint of the scale, signifying disagreement with Mary's claims. Truth relativists, by contrast, would predict agreement to lie significantly above the midpoint of the scale.

3.3 Results

The results for the *Salmon* scenario are basically the same as the results for the previous two scenarios—mean agreement with *falsity* and *retraction* does not differ significantly across the three vignettes.[10] Again, people strongly disagreed with the claim that Ben's original utterance was false (M = 2.41, SD = 1.69) or that it must be retracted (M = 2.51, SD = 1.94), see Fig. 2. Both means were significantly below the midpoint of the scale.[11]

3.4 Discussion

Experiment 2 addressed a potential source of distortion of the first two experiments, namely the fact that the contexts of utterance and assessment were separated by a long time span. This, we said, might have lead to results inconsistent with relativism since one might think that the pragmatic commitment had worn off over time. As it turns out, the worry was unfounded: The results for the *Salmon* scenario are equivalent to those of the other two experiments in all respects (typeof scenario did not have a significant effect on truth assessment or retraction ratings, see ANOVA in footnote 10). The contextualist predictions proved again correct with regards to both dependent variables, and the relativist predictions were shown as empirically mistaken. The truth value of claims of personal taste is sensitive to the context of utterance only, and assertions are not subject to a rule of retraction.

[10] A 3 (scenario: Fish sticks, Sandcastle, Salmon) × 2 (dependent variable: falsity, retraction) ANOVA reveals no significant main effect of scenario ($F(2, 355) = .91$, $p = .405$) or variable ($F(1,355) = 1.22$, $p = .270$). The interaction is also nonsignificant ($F(2,355) = .62$, $p = .537$).

[11] Truth evaluation: $t(43) = -6.25$, $p < .001$, CI [−2.10; −1.08]. Retraction $t(42) = -5.02$, $p < .001$, CI [−2.09; −.89].

4 Experiment 3: benchmark comparisons

In the previous experiments, we used the *absolute* means as an indicator of agreement and disagreement. In a final experiment, we will complicate things somewhat by collecting data for cases where the protagonist's taste does *not* change, and use them as benchmark for the target tasks tested so far. This will provide us with a second, *comparative* way to assess the predictions of contextualism and relativism. Let me explain the proposal in detail.

4.1 Benchmarks

According to the relativist picture, a change in tastes gives rise to a change in truth-assessment, since taste claims are evaluated at the context of assessment. The results for the *target scenario*, in which John used to like fish sticks yet no longer does (call this condition 'Yes/No'), should pattern with those from a scenario in which John didn't like fish sticks as a child and still doesn't ('No/No'). In either case the claim 'Fish sticks are tasty', uttered 20 years earlier, is false as assessed form the present context of assessment and thus requires retraction. The only difference is that in the relativist benchmark case it was, in fact, *never* true. Hence, relativists and contextualists alike would agree that the (never true) claim must be evaluated as having been false. What is more, in such a case it is *prima facie* not implausible to hold that the claim stands in need of retraction on grounds neutral with regards to the debate between contextualists and relativists.

According to contextualism, by contrast, the perspectival feature of taste claims is provided by the context of utterance. Hence, the truth-value of John's claim must be evaluated relative to the context of utterance, and it remains the same across different contexts of assessment. A theory-neutral benchmark case for the contextualist's predictions is thus one in which John used to like fish sticks, and *still* does ('Yes/Yes'): Both relativists and contextualists agree that in such a case John's claim should *not* be assessed as false and that he is *not* required to retract it. Hence, with the two control cases in place we can also assess the *relative* fit of the target scenario results with the particular levels of mean agreement gathered in the benchmark experiments.

In short, then, we will compare the results for the target scenarios not only with the midpoint of the scale, but also with data from the benchmark scenarios that broadly reflect the rates of agreement predicted by relativists and contextualists. This procedure allows us to gain some insight as to whether the experiment design is successful on the basis of cases where contextualists and relativists agree.[12]

[12] Note that the target results might differ significantly from both benchmarks. Given the fact that simple changes in framing can suffice to produce considerable differences in response to an otherwise identical scenario (Tversky and Kahnemann, 1981; Malenka et al., 1993), and that the differences in target and benchmark cases go beyond framing only, this is in fact quite likely. As always with empirical data, we should be careful in interpreting our findings and look to the effect sizes, not just to p-values, if necessary.

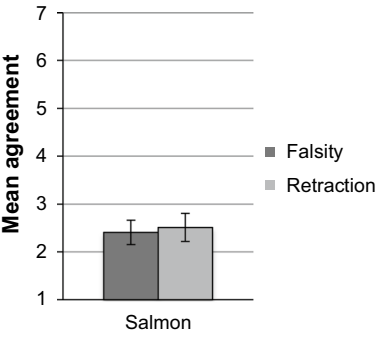

Fig. 2 Mean agreement with the statement that Ben's taste claim was false at the context of utterance and that it must be retracted. Error bars denote standard error of the mean

4.2 Materials

The original *Fish Sticks* scenario (henceforth called the "target scenario") from Experiment 1 came in three variations: The above-described Yes/Yes version, which constitutes the benchmark for the contextualist predictions, the No/No version, which constitutes the benchmark for relativist predictions, and the unaltered Yes/No target scenario itself. As in Experiments 1 and 2, each scenario was followed by a remark of Sally's concerning either the *truth value* [A] or the need for *retracting* the claim [B]. There were thus six conditions (3 case types: Yes/Yes, No/No, Yes/No $\times 2$ dependent variables: truth assessment, retraction). Participants were randomly assigned to one condition. For the Fish Sticks vignette, the different variations read (labels in bold and explanations in square brackets omitted):

Fish Sticks Yes/Yes [benchmark for contextualist predictions].
John is five years old and loves fish sticks. One day he says to his sister Sally: 'Fish sticks are delicious.' Twenty years later his taste regarding fish sticks has not changed. Sally asks him whether he still likes fish sticks and John says he still does.
Fish Sticks No/No [benchmark for relativist predictions]
John is five years old and hates fish sticks. One day he says to his sister Sally: 'Fish sticks are delicious.' Twenty years later his taste regarding fish sticks has not changed. Sally asks him whether he still likes fish sticks and John says that he in fact never did and still doesn't.
Fish Sticks Yes/No [target scenario]
John is five years old and loves fish sticks. One day he says to his sister Sally: 'Fish sticks are delicious.' Twenty years later his taste regarding fish sticks has changed. Sally asks him whether he still likes fish sticks and John says he doesn't anymore.

[A] Sally says: 'So what you said back when you were five was false.'
[B] Sally says: 'So you are required to take back what you said about fish sticks when you were five.'
Q. To what extent do you agree or disagree with Sally's claim? (Likert scale 1: 'completely disagree' to 7: 'completely agree')

I also wrote benchmark vignettes for the *Sandcastle* and *Salmon* vignettes (stated in full in the appendix), and ran an experiment with all three scenarios in all variations.

4.3 Participants

A total of 386 participants were recruited on Amazon Mechanical Turk. After excluding inattentive participants, non-native English speakers and those responding in under 15 seconds to the main task, 297 participants (126 female) remained. 53% of the participants were in the age group 22–34 years, 20% in the age group 35–44, 11% in the age group 45–54, 10% over 55, and 6% in the group 18–21.

4.4 Results

For *truth assessment*, a 3 (*case type*: Yes/No v. Yes/Yes v. No/No) × 3 (*scenario*: Fish sticks v. Sandcastle v. Salmon) ANOVA revealed a significant main effect for case type, a nonsignificant effect for scenario and a nonsignificant interaction.[13] Given the absence of any effects for scenario, the results were aggregated across scenarios; they are graphically represented in Fig. 3. Consistent with the results from Experiments 1 and 2, agreement for the target scenario (M = 1.72, SD = 1.08) was significantly below the midpoint.[14] Bonferroni-corrected post-hoc comparisons also showed it to be considerably below the relativist benchmark case No/No (M = 5.96, SD = 1.83)[15]—which itself was significantly above the midpoint.[16] Importantly, however, there was *no* significant difference in truth assessment across the Yes/No case and the contextualist benchmark Yes/Yes (M = 1.38, SD = 1.23).[17] Expectedly, mean agreement for the Yes/Yes case was significantly below the midpoint.[18]

For *retraction*, a 3 (*case type*: Yes/No v. Yes/Yes v. No/No) × 3 (*scenario*: Fish sticks v. Sandcastle v. Salmon) ANOVA revealed a significant main effect for case type, a nonsignificant main effect for scenario and a nonsignificant interaction.[19]

[13] Case type: $F(2,132) = 162.02$, $p < .001$; scenario: $F(2,132) = 1.74$, $p = .180$; interaction: $F(4,132) = 1.11$, $p = .353$.
[14] $t(38) = -13.26$, $p < .001$, CI [−2.63; −1.93].
[15] $p < .001$, Cohen's $d = 3.03$.
[16] $t(49) = 7.58$, $p < .001$, CI [1.44; 2.48].
[17] $p = .911$, Cohen's $d = .31$.
[18] $t(51) = -16.80$, $p < .001$, CI [−2.93; −2.30].
[19] Case type: $F(2,147) = 57.51$, $p < .001$; scenario: $F(2,147) = 1.06$, $p = .349$; interaction: $F(4,147) = .14$, $p = .966$.

Given the absence of any effects for scenario, the results were aggregated across scenarios (Fig. 3). Consistent with the findings from our previous experiments, mean retraction for the target scenario (M = 2.05, SD = 1.60) was significantly below the midpoint.[20] Bonferroni-corrected post-hoc comparisons also showed it to be considerably below the relativist benchmark case No/No (M = 4.25, SD = 1.97)[21] which, interestingly, did *not* differ significantly from the midpoint.[22] Again, the means for the target scenario differed but little from the contextualist benchmark case Yes/Yes (M = 1.30, SD = 0.78), just about making the significance threshold.[23]

4.5 Discussion

The benchmark scenarios suggest that the experimental design works well. In clear-cut cases where the protagonist's claim was true at the context of utterance, and remains true at the context of assessment (Yes/Yes), agreement with its assessment as false and required retraction are low. In the relativist benchmark case (No/No), by contrast, where the protagonist's claim was false at the context of utterance and remains false at the context of assessment, agreement with its assessment as false is very pronounced. Agreement with the claim that it must be retracted is also quite high—or at least much higher than in the other two cases (more on retraction below). With the possible exception of the retraction finding in the No/No scenario, the results for the benchmark cases thus came out exactly as predicted by both contextualists and relativists.

Replicating the findings from Experiments 1 and 2, the absolute results for truth assessment and retraction in the target case are consistent with contextualism and inconsistent with truth relativism. The *comparative* results confirm this pattern: Truth assessment in the target case (Yes/No) does *not* differ significantly from the results of the contextualist benchmark case (Yes/Yes). It does, however, differ significantly from the results of the relativist benchmark (No/No), and the effect size (Cohen's $d = 3.03$) is huge. For retraction, the target results differ significantly from the relativist benchmark, and here, too, the effect size (Cohen's $d = 2.04$) is very pronounced. The target results differ significantly from the contextualist benchmark, too—which is curious, given the results for truth assessment. However, the effect size is much smaller (Cohen's $d = 0.62$, see also note 12) and, as will be argued in the next section, the overall findings cast serious doubt on the hypothesis that assertion is governed by a linguistic norm of retraction.

[20] $t(43) = -7.99$, $p < .001$, CI [−2.45; −1.46].

[21] $p < .001$, Cohen's $d = 2.04$.

[22] $t(55) = .99$, $p = .329$, CI [−.26; .76].

[23] $p = .043$, Cohen's $d = .62$. The contextualist benchmark—like the target scenario—was significantly below the midpoint: $t(56) = -26.21$, $p < .001$, CI [−2.91; −2.50].

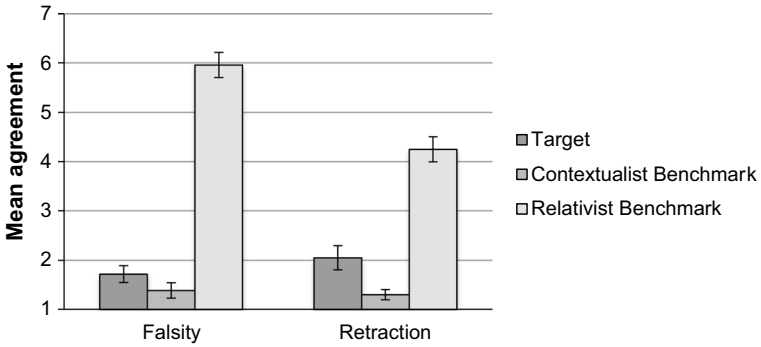

Fig. 3 Mean agreement with falsity and retraction for the target scenario (Yes/No), the contextualist benchmark (Yes/Yes) and the relativist benchmark (No/No). Error bars represent standard error of the mean

4.6 The fictitious norm of retraction

We made an interesting, somewhat unexpected, discovery: Even for taste claims which *are* false at the context of assessment, which *have been* false at the context of *utterance* (the No/No cases), and which are clearly assessed as such, there is no decisive support for a retraction requirement. This is illustrated by Fig. 4, where the No/No cases for all three scenarios are plotted in a single graph:

Participants tend to neither agree nor disagree with the statement that the false taste claim must be retracted (no significant difference from midpoint, see note 22). This suggests that assertion simply is not governed by a norm of this sort, even in cases most favourable to its potential application.

Those familiar with Knobe & Yalcin's (2014) results might be astonished by these findings concerning retraction. In their Experiment 4, Knobe & Yalcin explore how people assess epistemic modal claims from a context of assessment at which the prejacent is known to be false. In line with the data for predicates of personal taste presented here, the truth of such claims seems to depend on the context of utterance, not the context of assessment. Surprisingly, however, Knobe & Yalcin find some support for the retraction norm. Despite deeming the modal claim at stake true at the specified context of assessment, participants still agree with proposed retraction. How can this be? And how come the retraction results are so different from the ones reported above?

The very fact that people apparently agree with the suggestion of retracting a claim deemed *true* recommends a closer look at the way the retraction question was formulated. Knobe & Yalcin ask their participants whether it is "*appropriate* for [the speaker] to take back what she said" (2014: 15, italics added). Importantly, however, what is appropriate is quite different from what is *required* (the latter entails the former, but not vice-versa). MacFarlane, defines the norm of rertraction in terms of a requirement:

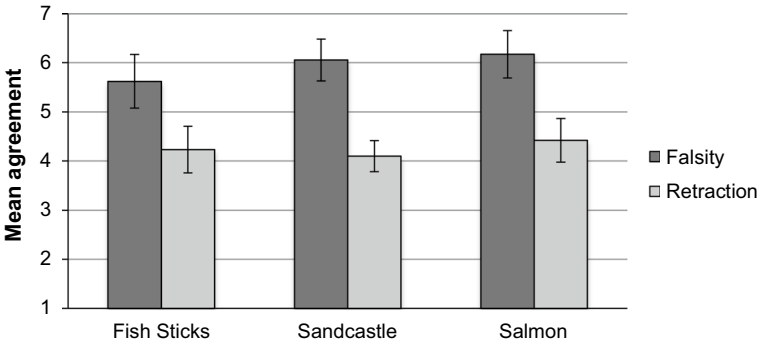

Fig. 4 Mean agreement with the statement that the target claim was false or stands in need of retraction for the No/No conditions of the *Fish Sticks*, *Sandcastle* and *Salmon* scenarios. Error bars designate standard error of the mean

> Retraction Rule: An agent in context c_2 is *required* to retract an (unretracted) assertion of p made at c_1 if p is not true as used at c_1 and assessed from c_2. (2014: 108, italics added)

If one runs Knobe and Yalcin's vignette with a formulation of the retraction question in the way relativists define the rule (i.e. stating that the speaker "is required to take back what they said" rather than it being "appropriate" for them to do so), the oddity disappears. As reported in Kneer (2015, Ch. 6), participants strongly disagree with the suggestion that a speaker is required to retract an epistemic modal claim whose prejacent is known to be false at the context of assessment when she had good reason to make such a claim at the context of utterance. What all this suggests is that participants might understand Knobe & Yalcin's question as whether it is acceptable or permissible[24] to retract the claim at stake, and not in the way relativists define the norm, i.e. in terms of what one should or must do. The latter entails the former, but not vice-versa. From the fact that people consider it broadly acceptable for speakers to take back certain claims, it does not follow that assertion is governed by a linguistic norm according to which there are requirements of retraction of any sort.

[24] Naturally, there is also a difference between what is *permissible* and what is *appropriate* (the latter at least implying the former, but not vice-versa). The suggestion in the main text, however, is merely that participants *interpret* Knobe & Yalcin's question concerning the appropriateness of retraction broadly as one of permissibility, rather than in terms of a normative requirement. Recent experiments focusing on the epistemic norm of assertion, in which the assertability question was formulated with varying strength ("should say that p", "appropriate to say that p", "permissible to say that p") support this hypothesis (Kneer, 2018). Unsurprisingly, people are more cautious about judging that a speaker *should* make a certain utterrance, than that it was appropriate or permissible for her to do so. At least in the experiments that exist to date, no significant difference could be found for ratings of appropriateness and permissibility.

Taking stock: The data reported above is inconsistent with relativist predictions concerning retraction in the target scenarios (the Yes/No cases). What is more, even in cases where a claim is, and was, uncontroversially false (the No/No cases), people do *not* think that speakers are required to take back their claims when prompted to do so. Assertion is not subject to a retraction norm and the extensive machinery the relativist builds atop the alleged norm is devoid of any empirical foundation.[25]

5 Conclusion

The findings presented in this paper are quite clear: In three experiments modelled on a scenario which truth relativists present as data in favour of their semantics, empirical data proper suggests otherwise. The predictions of MacFarlane-style relativism regarding truth-assessment and retraction stand refuted both in terms of absolute results, as well as vis-à-vis the relativist benchmark levels. The predictions of contextualism, on the other hand, are confirmed in both respects. What is more, it is doubtful whether assertions are ever subject to a norm of retraction. Even when a certain claim was false with respect to the context of utterance, ordinary language speakers see no evident need for the speaker to retract her assertion.

There is by now a small empirical literature concerning the contextualism/relativism debate. Like Knobe & Yalcin (2014), Kneer (2015) reports data at odds with relativism and broadly in support of contextualism, both as regards epistemic modals and predicates of personal taste. Khoo (2015), however, finds that disagreement with epistemic modals doesn't quite square with any of the major theories, though all can be adapted to accommodate his results. Beddor and Egan's (2018) findings concerning epistemic modals are inconsistent with standard truth relativism, too. They thus propose a "flexible" version thereof, where the relevant context of assessment is constrained by the Question under Discussion (see e.g. Roberts, 1996/2012, 2015). Finally, Dinges and Zakkou (2020) also advocate a flexible, or as they call it

[25] One reviewer made the following interesting point: In the No/No vignettes of Fish sticks and Salmon, the agent is specified not to like a certain food at time t_1 and still doesn't at t_2, yet at t_1 says it is delicious. The low retraction rates, the reviewer suggests, could be due to the fact that participants assume that, at t_2, the agent does not like the particular food, yet *says* it is delicious because he considers it *objectively* delicious (though not to his liking). I agree that in certain domains, such as aesthetics, what one likes and what one deems or claims beautiful can come apart on an objectivist conception of value. In the debate at hand, however, one is hard-pressed to find a defender of objective values concerning what is fun or tasty. This is why the claim "The salad is delicious but I don't like it" sounds infelicitous.

Naturally, it is possible to construct a clever case in which claims of this sort do not sound quite so bad. I doubt, however, that participants—in the clear and simple cases at hand—seriously entertain the thought that the agent holds the food in high regards despite not liking it, and that *this* explains the low retraction rates even in No/No cases.

Furthermore, in experiments regarding epistemic modals (Kneer, 2015), I also found people unwilling to require retraction in cases where the modal claim was clearly false at the context of utterance—and here a gap between objective and subjective values simply cannot arise. Taken together, the evidence points towards the conclusion that there is no norm of retraction of the sort envisioned by truth relativists.

"hybrid", form of relativism, according to which claims of personal taste can take either a relativist or a contextualist reading. Personally, I think that the more tailor-made ammendments relativism requires, the less it is suited as a unified semantics of perspectival expressions (Kneer, forthcoming). At some stage, all the extra flexibility invoked to save relativism might turn it into a somewhat unpalatable anything-goes picture. That said, some of the interesting results just cited also put pressure on contextualism. What is clear is that to find out whether contextualism, relativism, or yet another theory carries the day, we need more research that explores how ordinary English speakers actually understand and use perspectival expressions.[26]

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