1 Introduction

Since Lasersohn’s (2005) and Kölbl’s (2004) seminal papers, there has been much interest, both in philosophy of language and natural language semantics, in linguistic phenomena related to subjectivity, in particular with regards to faultless disagreement and predicates of personal taste (PPT; Stephenson 2007a, Stojanovic 2007, Moltmann 2010, Umbach 2016, Bylinina 2016, Vardomaskaya 2018, Muñoz 2019). Crucial, in this debate, is the peculiar behaviour displayed by subjective attitude verbs (SAVs), such as find and consider, which are known to embed only subjective clauses, e.g., clauses containing a PPT or, more generally, a gradable predicate that allows for a subjective interpretation (Sæbø 2009; Bouchard 2012; Kennedy 2013; Fleisher 2013; Kennedy & Willer 2016; Coppock 2018). Consider the contrast between (1) and (2)/(3):

(1) # I find/consider dinosaurs extinct.
(2) I find/consider this chili tasty.
(3) I find/consider this luggage heavy.

However, SAVs do not form a single uniform class: further asymmetries have been observed between find and consider. A crucial asymmetry, the one that is particularly relevant for the present study, is that find seems to require some relevant first-person experience of the complement clause, while consider may elude such requirement.

(4) Although I haven’t tried it, I consider/# find this chili tasty (because everyone seems to enjoy it).

The relationship between direct experience and belief in SAV-reports is still a controversial issue, and various analyses have been proposed to account for the observed empirical phenomena. However, no consensus has been reached on the matter. In the attempt to disentangle the doxastic and perceptual flavours of SAVs, and thus to assess the empirical adequacy of the main theories on the market, the current study investigates how speakers evaluate 3rd-person SAV ascriptions in contexts licensing potential doxastic conflict (PDC), i.e., in situations where a mismatch between belief and perception arises. By comparing the acceptability of find- and consider-reports in such contexts, we shed light on the kind of attitude they express. We discuss the implications of the findings for the theories presented and future directions of investigation.

2 Accounts of subjective attitude verbs

Since Stephenson (2007b), it was recognized that find implies a knowledge of a particular kind with respect to the content of the complement clause. This intuition was originally implemented as a requirement of direct experience built right into the denotation of find. Sæbø (2009) criticized this analysis and proposed a radical reductionist approach whereby the only requirement for the embedded clause is to be subjective, i.e., dependent on a ‘judge’
ideal: in this case, the entailment of belief would be blocked.

However, in the second case, it is not resolved even when such decisions are fixed (see Coppock 2018 for a similar strategy reframed in an outlook-based semantics). Muñoz (2019) assumes that find and consider differ with respect to both presupposed and asserted content. Casting his analysis in terms of hyperintensions sensitive to patterns of relevant linguistic behaviour (formally captured by a parameter M), Muñoz’s definition of consider-reports is close in spirit to counterstance theory: they presuppose that the agent’s beliefs about the world falsify the hyperintension of the complement at some model, meaning that a different linguistic behavior may determine a content which is false at all the doxastic alternatives. Find, on the other hand, presupposes that there is no other agent and world pair (different from the ones to which the report is anchored) at which there is direct evidence verifying the hyperintension as it is anchored to the agent. The asserted content, in turn, involves quantification over perceptual alternatives, defined as the set of worlds compatible with the agent’s direct perceptions. Formally (and simplifying for the current purposes):

(7) a. \([\alpha \text{ considers } \varphi]^M_w\) is defined only if \(\exists M’ \forall w' \in \text{Dox}_{\alpha,w} [\neg \varphi(M'(w'))]\)
   b. If defined, \([\alpha \text{ considers } \varphi]^M_w = 1 \iff \forall w' \in \text{Dox}_{\alpha,w} [\varphi(M'(w'))]\)

By default, doxastic alternatives are a subset of perceptual ones: in other words, speakers generally believe what they perceive. However, Muñoz admits situations in which they could not take themselves as accurate perceivers, perhaps because perception conditions are not ideal: in this case, the entailment of belief would be blocked.
2.1 Potential doxastic conflict

Given the theoretical landscape, a critical empirical test for assessing the various theories on the market would be to check whether judgements embedded in SAV reports can express content which is not a belief of the matrix subject.

To this end, Fusco (2022) framed subjective judgements in contexts of potential doxastic conflict (PDC), i.e., situations where a subject holds a belief that $p$ but, for some reason, her perceptual experience (temporarily) suggests that $not-p$. In such contexts, the subject must entertain a non-doxastic attitude towards $not-p$, in order to avoid holding a contradictory belief. Assuming that assertion expresses a belief of the speaker, PDC explains the following contrast:

(9) # Your apple pie is tasty, but I have just taken my medicines so I don’t believe it’s tasty.
(10) Your apple pie is tasty, but I have just taken my medicines so I don’t feel/perceive it (as) tasty.

With regards to SAVs, consider gives rise to the same contradiction as (10), suggesting that it does have a doxastic component:

(11) Your apple pie is tasty, but I have just taken my medicines so I don’t # consider/? find it tasty.

The hypothesis, then, was that in condition of PDC, a find-judgement would be more acceptable than a consider-judgement.

2.2 Previous experimental findings

To test this, Fusco (2022) set up a forced-choice task in Italian, assessing speakers' preferences between trovo ('find') and considero ('consider') in sentences like (6). The results gave partial support to the hypothesis that trovo lacks a doxastic component, however no significant effect of the PDC factor was found with PPTs, since trovo was the preferred option across both conditions. This was possibly due to the limitations of the forced-choice design, which doesn’t allow to measure fine-grained variations in acceptability among conditions. Moreover, one potential confound is that in sentences like (12), the referential noun phrase in the introductory clause refers to a kind (“the kind of pie that you usually make”), but in the second clause, the anaphoric pronoun it refers to a specific instance of that kind in the relevant situation.

3 Present study

This study investigates the effect of PDC contexts on the perceived acceptability of SAV reports in English, to assess the empirical adequacy of various theoretical proposals about the precise characterization of SAVs. More specifically, building on the experimental setup adopted by Fusco (2022), we ask whether the presence of a PDC affects the perceived acceptability of sentences where find or consider embed a small clause complement. The present study, then, had a 2x2, within-subjects design, with “Context” (PDC vs no-PDC) and “SAV” (find vs. consider) as main factors. To overcome the limitations of the previous study, we devised a 7-point acceptability task, in which participants were presented with contexts followed by a monoclausal target sentence. Also, by separating the context and the target sentence, the potentially problematic anaphoric relation (discussed above) was avoided. Subjects were then asked to rate the target sentence as a possible description of the preceding context.
3.1 Materials and procedure

Each experimental item contained a context and a target sentence. In every context a subject has a general evaluation about an object (or a type of object), but, while in situations with no PDC her perception gives rise to an evaluation that is consistent with the general one, contexts with PDC give rise to a contrasting evaluation. Therefore, all the contexts, presented in short narrative texts, described a situation in which a subject $S$ has a certain belief $p$ about some object, with which she is already acquainted. However, contexts varied in whether a PDC, due to a belief-perception mismatch, arises. Target sentences consisted of present tense 3rd-person attitude attributions, having $S$ as matrix subject and $p$ as (reduced) complement clause, and were manipulated as to have *find* or *consider* as their matrix verb\(^1\). Figure 1 illustrates an experimental item in the PDC – *find* condition, as shown on the online platform used for the test.

![Figure 1](image.png)

**Figure 1.** Sample item as viewed from the experimental platform.

In this design, target sentences are in the affirmative form, in order to avoid potential scope ambiguity of negation. Thus, assuming that *find* lacks a doxastic component and tracks direct experience instead, reports with *find* in PDC scenarios are expected to be less acceptable. Participants were asked to rate, on a 7-point Likert scale, how much they agreed with the target sentences as possible descriptions of the preceding context. 16 scenarios were created, involving the same number of vague adjectives/PPTs. Every scenario was developed in the 4 factor combinations described above, yielding a total of 64 context-target pairs. The total number of pairs was split into 4 lists, so that each list contained 4 items for each factor combination. 16 filler items were also added to all lists, resulting in a total of 32 items per list. The test was administered online to a total of 51 self-reported native speakers of English (21 American, 3 Australian, 27 British; Age range = 24-74, $M = 38.16$, $SD = 13.71$). Subjects were automatically assigned to one of the four lists as to ensure equal distribution among lists.

\(^1\) An anonymous reviewer pointed out that the present tense form of both *find* and *consider* may be associated with both generic and episodic readings. We acknowledge this potential ambiguity, but we assume that it would not play any relevant role for the acceptability of the target sentences. In fact, under a doxastic analysis of find, both generic and episodic readings would still make the attributions true, since the protagonist already has a belief based on multiple experiences with the object and the present situation does not prompt her to revise her previous belief.
3.2 Results

The results obtained are plotted in Fig. 2. The data were fitted using a range of linear mixed-effect models, including one or both factors (“Context” and “SAV”) as fixed effects; the random structure for all the models included random by-subject and by-item intercepts. The analysis revealed a significant main effect both of “Context” ($\chi^2 = 183.07$, $df = 1$, $p < 0.0001$) and “SAV” ($\chi^2 = 11.96$, $df = 1$, $p < 0.001$). Crucially, the analysis also highlighted a significant interaction between the two factors ($\chi^2 = 43.97$, $df = 2$, $p < 0.0001$). To further understand such interaction, a pairwise comparison of the estimated marginal means of each condition was performed. The comparison revealed that the PDC condition triggered significantly lower acceptability rates both with consider (no-PDC consider – PDC consider: estimate = 0.911, $SE = 0.137$, $t = 6.655$, $p < 0.0001$) and with find (no-PDC find – PDC find: estimate = 1.955, $SE = 0.137$, $t = 14.277$, $p < 0.0001$), thus confirming the main effect of the “Context” factor. However, in the no-PDC condition, acceptability is not significantly affected by the kind of SAV present, while in the PDC condition, acceptability with consider is significantly higher that with find (PDC consider - PDC find: estimate = 0.910, $SE = 0.137$, $t = 6.645$, $p < 0.0001$).

Figure 2. Mean acceptability rates across experimental conditions. Error bars indicate SEs.

4 Discussion

In this study, the doxastic status of SAVs was assessed by eliciting acceptability judgements of 3rd-person attributions preceded by relevant contexts, which were manipulated in order to license or not license a PDC. Results showed that attributions with find after PDC contexts produced significantly lower acceptability rates than their counterparts with consider. This outcome clearly favours some accounts of SAVs over others. A doxastic theory, such as Kennedy & Willer’s (2016), fails to account for the contrast observed, since in both cases the corresponding belief ascription is true and, additionally, being felicitously embedded under find in the no-PDC condition, the content of the ascription qualifies as counterstance contingent: therefore, the lower acceptability of find ascriptions could not be attributed to presupposition failure. On the other hand, an evidential analysis, such as the one proposed by Muñoz (2019), is better suited to explain the results: the absence of a doxastic component in the denotation of find allows the system the necessary flexibility to represent experiential content independently enough from belief.

More generally, we take the results to support the idea that direct experience is indeed essential for the kind of subjectivity that licenses find-reports, as in the original proposal by Stephenson (2007b). However, it is not clear how a presuppositional implementation of such requirement (see e.g., Korotkova & Anand 2021) could be able to account for the contrast observed here, if the asserted content remained doxastic.

Our results also seem to point towards a more substantial difference between the two attitude verbs, such that one is not just more restrictive than the other in terms of embedding behaviour. Rather, the two verbs would represent different kinds of propositional attitude. In this perspective, we think that a promising direction for future work would be to place the discussion about SAVs in the broader context of attitude predicates, and thus to assess
similarities and differences with a wider range of verb classes (see e.g., Anand & Hacquard 2013).

References


