

## Perspective-shifting and free indirect discourse: Experimental investigations<sup>\*</sup>

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**Abstract.** The psycholinguistic experiments reported in this paper explore the question of who gets to be the ‘judge’ according to whom we interpret linguistic expressions that seem to require some kind of epistemic anchor, such as epithets (e.g., *that jerk*). Experiments 1a and 1b corroborate Harris and Potts’ (2009) findings that epithets and appositives can receive non-speaker-oriented readings. Experiments 2 and 3 compare sentences with and without epithets and epistemic adverbs, and show that the presence of these elements can in fact *boost* the rate of non-speaker-oriented interpretations, at least in contexts that allow the text to be interpreted as fiction/narrative. We suggest this is because, in such contexts, expressions like epithets and epistemic adverbs can signal free indirect discourse.

**Keywords:** free indirect discourse, perspective-taking, epithets, pronouns

### 1 Introduction

There exists a range of linguistic expressions whose full interpretation depends on knowing whose judgment, opinion, or knowledge state is being referred to. They include epithets (e.g., *the idiot* in (1a)), predicates of personal taste (*fun* in (1b)), epistemic modals (*might* in (1c)), and appositives (the relative clause in (1d)).

- (1) a. Kim said she would take us surfing, but the idiot forgot at all about it!
- b. Surfing is fun.
- c. The pier at Malibu might be under repair.
- d. The pier at Malibu, which is historically significant, is under repair.

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To fully understand the meaning of the sentences in (1), we need to know who thinks Kim is an idiot, who regards surfing as fun, and so on – in other words, whose opinion or viewpoint is being referred to? Very broadly speaking, these kinds of expressions have been analyzed as making reference to some kind of a judge/evaluator, an ‘epistemic anchor’ of some kind. Prior work implemented this idea in different ways, e.g., Lasersohn’s (2005) judge parameter, Potts’ (2007) and Stephenson’s (2007) extensions, Patel-Grosz’s (2012) notion of the evaluator, Harris’s (2012) semantic underdetermination and pragmatic defaults (see also Giannakidou 1999 on the notion of anchor).

Lasersohn’s (2005) influential analysis of predicates of personal taste such as *fun* or *tasty* proposes the addition of a judge parameter *j* such that the truth of sentences containing predicates of personal taste is interpreted relative to the particular individual who is the judge. This is shown in (2), in simplified form. (See Pearson (2012) for a judge-free semantics of predicates of personal taste, based on genericity). Lasersohn (2005) states that “The ‘judge’ of a context will be the individual on which the truth value of sentences containing predicates of personal taste depends” (Lasersohn 2005:665). The judge-based approach is extended (with some changes) to expressives by Potts (2007) and epistemic modals by Stephenson (2008). Patel-Grosz (2012) proposes an evaluator parameter for epithets.

- (2) a.  $[[\text{fun}]]^{c; w, t, j} = [\lambda x_e . x \text{ is fun for } j \text{ in } w \text{ at } t]$   
 b.  $[[\text{tasty}]]^{c; w, t, j} = [\lambda x_e . x \text{ tastes good to } j \text{ in } w \text{ at } t]$

The experiments in this paper explore the question of who gets to be the ‘judge’ according to whom we interpret linguistic expressions that require some kind of epistemic anchor, with a focus on epithets, appositives, and epistemic adverbials. We investigated how readers interpret judge-dependent expressions and how willing they are to consider ‘non-default’ judges. I leave open the questions of (a) whether the judge-dependent nature of expressions such as those in (1) should be analyzed by means of a judge/evaluator variable or another approach, and (b) whether the expressions in (1) can be captured under a unified theoretical account or not, as these questions are not central to the aims of this paper.

### 1.1 Who gets to be the judge?

A key question that comes up with respect to epithets and related expression is, who is the judge? Consider the sentences in (3):

- (3) a. Jon said he would come but the idiot missed the train. (Corazza 2005)  
 b. Right after Chuck agreed to help out, the jerk boarded a plane for Tahiti. (Potts 2003)  
 c. Ed refuses to look after Sheila’s damn dog. (Potts 2003)

Who thinks Jon is an idiot, who thinks that Chuck is a jerk, and who dislikes Sheila's dog? The first intuition is to interpret the epithets in (3) as speaker-oriented expressions (e.g., Corazza 2005; Potts 2003, 2005; see also predicates of personal taste), such that the speaker of each sentence is the judge. However, does the judge of epithets have to be the speaker? A number of researchers have argued that this is indeed the case (e.g., Corazza 2005; Potts 2005 and earlier work) and others have made the same claim (or assumed it to be so) for appositive relative clauses (see discussion and references in Harris & Potts 2009). However, Karttunen & Zaenen (2005), Wang, Reese & McCready (2005) and Amaral et al. (2007) have argued that epithets and appositives can also receive non-speaker-oriented interpretations.

## 1.2 Existing experimental work on non-speaker-oriented readings

Recent experimental evidence regarding the availability of non-speaker-oriented readings of epithets and appositives comes from Harris & Potts (2009). For epithets (e.g., *the jerk*, *the idiot*, *the creep*), Harris and Potts used examples like (4), where participants were asked to indicate whose view is it that the professor is a jerk – i.e., is it the opinion of the speaker/the person who says the sentence, the subject of the sentence, or both people's opinion? All critical items in this condition contained epithets, and the polarity of the context (negative/positive) was manipulated. The reasoning is that if the context creates an expectation that the subject of the sentence (e.g., Sheila in (4)) has a negative stance towards the referent of the epithet (as in (4a), due to a low grade), then participants should be more likely to interpret the epithet as reflecting the view of the subject of the sentence (rather than the speaker) – compared to when the subject of the sentence has a positive stance towards the referent of the epithet (as in (4b), due to a high grade). In the absence of any evidence for a negative stance on the part of the sentence subject, participants were predicted to exhibit a default speaker-orientation bias in interpreting the epithets. (Harris and Potts also manipulated the presence of intensifiers, e.g., *a low grade/a really low grade*, but this had no significant effect so we will not discuss it further.)

- (4) a. My classmate Sheila said that her history professor gave her a really low grade. The jerk always favors long papers. [negative context]  
 b. My classmate Sheila said that her history professor gave her a really high grade. The jerk always favors long papers. [positive context]  
 c. Whose view is it that the professor is a jerk?

Response:

- |                      |           |
|----------------------|-----------|
| a. Mine              | (Speaker) |
| b. Sheila's          | (Subject) |
| c. Mine and Sheila's | (Both)    |

The results of the epithet experiment show an overarching bias in favor of speaker-oriented interpretations (71% speaker-oriented vs. 11% subject-oriented). However, there are significantly more subject-oriented interpretations in the negative contexts than in the positive contexts (17% vs. 7%). This indicates that, given an appropriate context, people are indeed willing to consider non-speaker-oriented interpretations of epithets.

Harris & Potts (2009) also tested appositives (both nominals and relatives), as in (5), and manipulated whether they were embedded under verbs of saying (5a) or unembedded (5b). (Thus, parallel to the epithet experiment, all critical items contained appositives; the presence/absence of appositive was not manipulated.) The key question is whether appositives can receive non-speaker-oriented interpretations, especially in non-embedded contexts that have no attitude predicates. In (5), will readers attribute the opinion that homework is a waste of time to the speaker of the sentence or to the subject, Sid? Harris and Potts find an overall preference for subject-oriented interpretations (77% subject-oriented interpretations overall), but this preference is significantly stronger in the embedded condition (86%) than in the unembedded condition (68%).

- (5) a. My brother Sid hates school. He says that he puts off his homework, a complete waste of time, to the last minute. [embedded]  
b. My brother Sid hates school. He puts off his homework, a complete waste of time, to the last minute. [unembedded]  
c. Whose view is it that homework is a complete waste of time?  
Response:  
a. Mine  
b. Sid's  
c. Mine and Sid's

In light of their results for epithets and appositives, Harris & Potts (2009) conclude that non-speaker oriented readings are available even in the absence of syntactic embedding. This fits with the contextual approach advocated by Potts (2007) according to which non-speaker-oriented readings have a pragmatic source. The finding that non-speaker-oriented readings are available in non-embedded contexts poses challenges for a configurational approach which claims that non-speaker-oriented readings stem from semantic binding by higher operators such as attitude predicates (e.g., Schlenker 2003, 2007; Sauerland 2007).

## 2 Can we boost the availability of non-speaker-oriented readings?

So far we have seen that both epithets and appositives *can* receive non-speaker-oriented interpretations. However, with epithets, even in the negative-context

condition which should make subject-orientation more likely, Harris & Potts' (2009) participants gave only 17% subject answers. With appositives, the experimental results suggest a much higher rate of subject answers (68-86% depending on the presence or absence of embedding), but a corpus study conducted by Harris and Potts on appositives echoes the speaker-orientation bias found for epithets: In the corpus, *speaker-oriented* uses of appositives vastly outnumber non-speaker-oriented uses. As a whole, Harris and Potts conclude that both epithets and appositives have a *default speaker-oriented interpretation*.

However, when looking at the structure of their experimental stimuli, it is worth noting that all of the 16 epithet items and seven out of the eight appositive items included an explicit linguistic realization/mention of the speaker, most often in the form of a possessive pronoun on the subject, e.g., *my sister Trudy*, *my friend Mike*, *my aunt* and sometimes also as an explicitly-mentioned subject, e.g., *I am increasingly worried about my roommate* (see Harris and Potts 2009 for discussion of why this was done, and for a full list of experimental items). The one item in the appositive study that does not explicitly mention the speaker has *poor Joan* as the subject, where *poor* presumably evokes a judge/evaluator. In other words, the speaker of the sentence is arguably quite salient/prominent in Harris and Potts' test items. What would happen if the speaker were not explicitly introduced into the discourse? Would this result in a higher rate of subject-oriented interpretations, especially for epithets? To test this, we conducted two follow-up experiments.

## 2.1 Design, materials, method, participants

We wanted to test if we can make non-speaker-oriented readings more available – even with epithets – by decreasing the prominence/salience of the speaker. To do this, we minimally adjusted Harris & Potts' (2009) materials (which consisted of 8 appositive items and 16 epithet items, for a total of 24 critical items) by changing expressions such as *my sister Trudy*, *my friend Mike* and *my aunt* to *Trudy*, *Mike* and *Rose* respectively. Examples are shown in (6-7). In other words, we deleted the possessed relational noun and added a name if one was not already included. We also reworded two sentences that used the first-person pronoun *I* in subject position so that the first-person pronoun was no longer mentioned. We used the same conditions, same critical items and same task that Harris and Potts had. Participants answered a three-way multiple-choice question about each item, asking about whose view the epithet or appositive represents (Speaker, Subject, or Both).

- (6) a. Sheila said that her history professor gave her a really low grade. The jerk always favors long papers. [negative context]  
 b. Sheila said that her history professor gave her a really high grade. The jerk always favors long papers. [positive context]

c. Whose view is it that the professor is a jerk?

Response:

- a. Mine (Speaker)
- b. Sheila's (Subject)
- c. Mine and Sheila's (Both)

- (7) a. Sid hates school. He says that he puts off his homework, a complete waste of time, to the last minute. [embedded]
- b. Sid hates school. He puts off his homework, a complete waste of time, to the last minute. [unembedded]
- c. Whose view is it that homework is a complete waste of time?
- Response:
- a. Mine
  - b. Sid's
  - c. Mine and Sid's

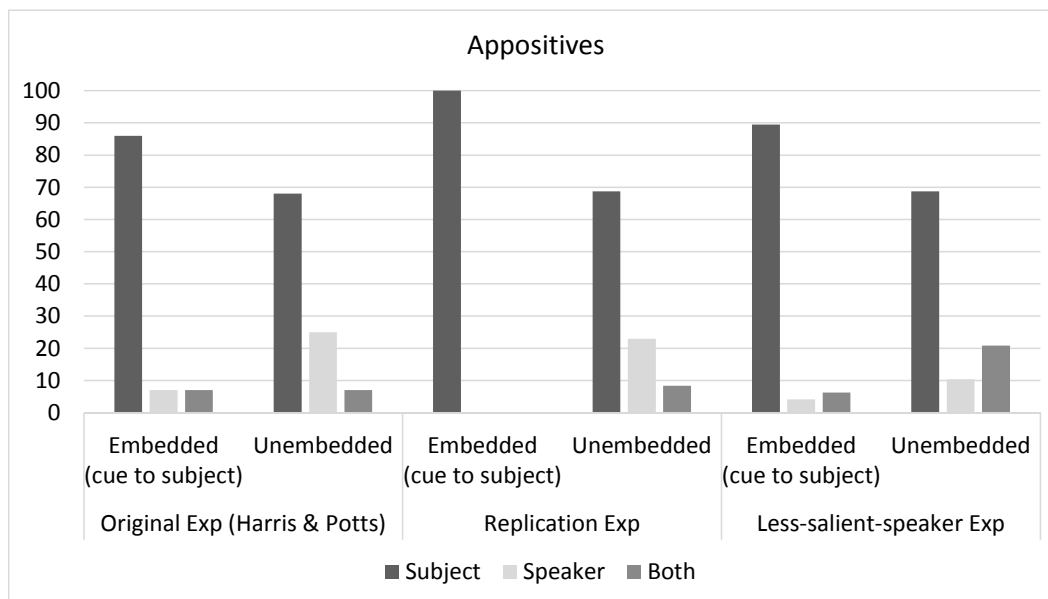
We conducted two experiments: (i) Experiment 1a, a (near-)replication of Harris & Potts (2009), using their critical items but with some differences in method (discussed below), and (ii) Experiment 1b, a follow-up study where we adjusted the wording of the items so that the speaker was less linguistically salient. We refer to this as the less-salient-speaker experiment. As in the original study, participants completed both the epithet items and the appositive items in the same session. The order of the items was randomized, and participants were naïve to the purpose of the experiment and to the existence of two different 'sub-experiments'.

Twelve native English speakers participated in Experiment 1a, and twelve in Experiment 1b, for a total of 24. Participants completed the study using a pen-and-paper questionnaire in the lab, in contrast to Harris & Potts (2009) whose study was done over the internet. We also did not include any filler items in our study, unlike Harris and Potts. (We discuss the implications of these differences in Section 2.4.)

As in Harris & Potts (2009), appositive items were in two conditions, embedded and unembedded; participants saw four items per condition. Epithet items had four conditions, as in Harris and Potts (negative vs. positive context; presence vs. absence of intensifier); participants saw four items per condition. We do not discuss the intensifier manipulation further, because – as Harris and Potts also found – it does not seem to influence participants' responses.

## 2.2 Results

Figures 1 and 2 show the percentage of *Subject*, *Speaker*, and *Both* responses for appositives (Figure 1) and epithets (Figure 2), as a function of embedding vs. no embedding (7) and the negative vs. positive contexts (6) respectively.



**Figure 1** Experiments 1A and B: Whose view does the appositive reflect? (% of subject, speaker and both responses)

We analyzed these patterns statistically, to see if they are reliable. In these statistical analyses, we follow Harris & Potts (2009) by focusing on the rate of subject responses and by using mixed effects logistic regression (using R, <http://www.R-project.org/>) because of the categorical nature of the data.<sup>1</sup> (For some analyses, a lack of variance precluded certain analyses, as explained below.)

### 2.2.1 Appositives

For appositives, the results of our replication experiment (Experiment 1a) as well as the less-salient-speaker experiment with modified stimuli (Experiment 1b) are very similar to Harris & Potts' (2009) findings. The data for all three studies is shown in Figure 1. Both of our experiments – the replication and the less-salient-speaker study – show an overall preference for subject-oriented interpretations of

<sup>1</sup> We started with fully crossed and fully specified random effects, tested whether the model converged, and when necessary, reduced random effects (starting with item effects) until the model converged (see Jaeger at <http://hlplab.wordpress.com>, May 14, 2009). Then, we used model comparison to test each random effect; only those that were found to contribute significantly were included. However, random intercepts for subjects and items were retained in all models.

appositives which is weaker in the unembedded than the embedded conditions. In fact, in the embedded condition in Experiment 1a, *all* participants consistently opted for the subject-oriented interpretation. This lack of variance complicates statistical analyses involving this condition, so we looked at Experiments 1a and 1b separately. For the replication experiment (Exp 1a), we used a one-sample, two-tailed t-test to test whether the rate of subject choices in the unembedded condition differs from 1 (since the proportion of subject choices in the embedded condition is 1). The results confirm that the rate of subject choices in that condition is significantly lower than 1 ( $t(11)=-4.103$ ,  $p=0.002$ ,  $t(7)=-3.071$ ,  $p<0.02$ ) – i.e., differs significantly from the high rate of subject responses in the embedded condition. For the less-salient-speaker experiment (Exp 1b), we used mixed-effects regression, which revealed significantly more subject responses in embedded contexts than unembedded contexts ( $\beta=-1.363$ ,  $SE=0.566$ ,  $Wald\ z=-2.41$ ,  $p<0.02$ ). Thus, although a direct comparison of the two experiments is complicated by the lack of variance in Experiment 1a, we find significant effects of embedding in both.

### 2.2.2 Epithets

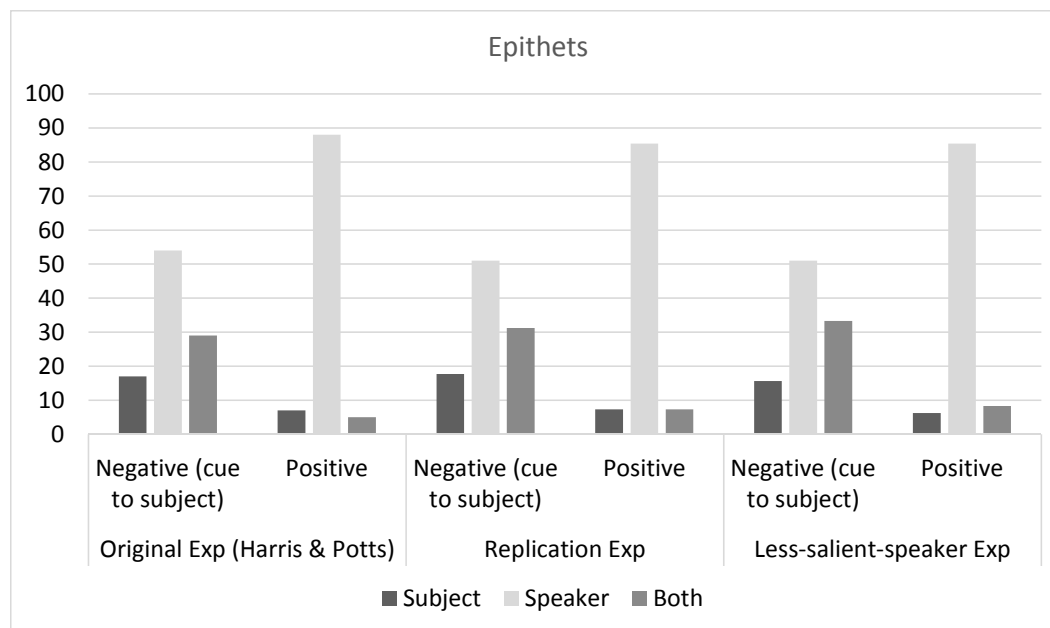
As for epithets, Figure 2 shows that our replication yielded results that are very similar to Harris and Potts's results (2009). Furthermore, even when the stimuli were modified to make the speaker linguistically less salient, the rate of subject-oriented interpretations of epithets stays low. We tested these results statistically to see if they are reliable. When we look at the rate of subject responses in the replication experiment and the less-salient-speaker experiment in the negative vs. positive contexts, we find significantly more subject responses in the negative than the positive context ( $\beta=0.757$ ,  $SE=0.214$ ,  $Wald\ z=3.54$ ,  $p<0.001$ ), no effect of experiment ( $p>0.9$ ), and no interaction ( $p>0.69$ ). If we analyze the rate of subject responses in each experiment separately, we also obtain significant effects of the negative vs. positive context manipulation (Exp 1a/replication:  $\beta=-2.192$ ,  $SE=0.724$ ,  $Wald\ z=-3.03$ ,  $p<0.003$ ; Exp 1b/less-salient-speaker:  $\beta=-1.35$ ,  $SE=0.59$ ,  $Wald\ z=-2.27$ ,  $p<0.03$ ). (This is expected, given the lack of an interaction and the lack of a main effect of experiment.)

In sum, we find an increase in the rate of subject responses when the context makes it likely that the subject would hold a negative opinion of the referent of the epithet. This effect is equally strong in the original and the reworded stimuli where the speaker is linguistically less salient.

### 2.3 Discussion

As a whole, our results are very much in line with Harris and Potts' (2009) results: (i) appositives receive mostly subject-oriented interpretations, more so in





**Figure 2** Experiments 1A and B: Whose view does the epithet reflect? (% of subject, speaker and both responses)

embedded contexts, and (ii) epithets receive mostly speaker-oriented interpretations, but can also receive subject-oriented interpretations when the pragmatic context makes such interpretations plausible. Thus, expressives and appositives do not have to receive speaker-oriented interpretations. Furthermore, we also found that the relatively low rate of subject-oriented interpretations observed with epithets cannot be attributed to explicit mention/salience of the speaker in the original Harris and Potts stimuli, since we obtain very similar numbers with stimuli that had been reworded precisely to minimize/remove explicit mention of the speaker.

When we combine our results with Harris and Potts' (2009) experiment results, as well as their corpus study which found a speaker-orientation bias for appositives, it seems reasonable to conclude that speaker-orientation is the default way of interpreting epithets and appositives.<sup>2</sup> In other words, the speaker of the utterance is normally the judge, but does not have to be. This is in line with claims by Harris (2012) and Patel-Grosz (2012) regarding epithets, as well as Lasersohn (2005), and Stephenson (2008) on predicates of personal taste. For example, building on Harris

<sup>2</sup> The reasons for why appositives received high rates of subject-oriented interpretations in the experiments but not in the corpus data are unclear. We leave this question open for future work.

and Potts, Patel-Grosz (2012) notes that with epithets, the evaluator is normally “the speaker of the utterance, but does not have to be” (Patel-Grosz 2012:86).

## 2.4 Methodological observations

Before turning to Experiments 2 and 3, it is worthwhile to consider some methodological differences between Harris & Potts (2009) studies and Experiments 1a and 1b. Recently, the importance of replicating experimental results has received increasing attention (e.g., Open Science Collaboration (2015), *The Reproducibility Project: Psychology*, <https://osf.io/ezcuj/wiki/home/>). Thus, one contribution of our studies is that they tested directly whether Harris and Potts’ results – the first published experimental/psycholinguistic work on the availability of non-speaker-oriented readings with epithets and appositives – can be replicated with a new group of participants, as well as a slightly different set-up.<sup>3</sup> As we saw in Figures 1 and 2, the results of our replication study (or ‘near-replication’) are very similar to the results obtained by Harris and Potts. This shows that their findings are replicable, an outcome which is especially interesting given that there are three main differences in our implementation of their experiment, as outlined below.

Although we used the same critical items as Harris & Potts (2009), we did not include any fillers. Thus, in our study each participant saw a total of 24 critical items (16 epithet items and 8 appositive items, in pseudo-random order). In Harris and Potts’ experiment, participants saw the 24 critical items but they also saw 16 other items that functioned as fillers/distractor items, for a total of 40 items. Even though our experiment had no fillers, the results are extremely similar to Harris and Potts. Usually, it is standard to use filler items in psycholinguistic studies (see Schütze & Sprouse 2014). Here, we found the same results both with and without fillers, which suggests that at least for some research questions, they may not be necessary.<sup>4</sup>

Another difference is the order in which the answer choices were presented. In Harris & Potts (2009), the three possible answers (i.e., does the epithet/appositive reflect the view of the speaker, the subject or both) were presented in randomly-generated order. This is a well-advised strategy, because one might be concerned that participants could exhibit a primacy bias (i.e., tend to choose the first answer

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<sup>3</sup> Depending on how one defines the term ‘replication’ (see e.g., Lykken 1968), our study could be argued not to be a ‘literal replication’ (to use Lykken’s term) because, although we used the same critical items and experimental manipulations as Harris and Potts, the implementation of the study was somewhat different from the original (as discussed in the remainder of this section). As we will see, the fact that the outcomes are still extremely similar despite some differences in the implementation and environment of the two studies is in fact very informative.

<sup>4</sup> This does *not* mean that fillers are not needed for other research questions or with other methods; fillers can help minimize response strategies that may result in non-representative data.

more often). However, in Experiments 1a and 1b, the answer choices were always presented in the order illustrated in the examples above (i.e., speaker, subject, both). As the similarity of the results shows, this did not affect the results. There is no evidence for a primacy bias, for example.

Finally, our data comes from a total of 24 participants (12 in Experiment 1a and 12 in Experiment 1b) who completed the study in the lab, by filling out a pen-and-paper questionnaire. In contrast, Harris & Potts (2009) had 32 participants who completed the study over the internet. The fact that our results clearly replicate their findings provides evidence that lab-based studies and internet-based studies can yield the same results. In this particular case, the number of participants in the internet-based study is almost three times bigger than in the lab-based replication. Thus, a more measured conclusion might be that internet-based studies, when conducted with sufficiently large numbers of participants, can yield the same results as lab studies conducted with a smaller number of participants.

In sum, the fact that we replicated Harris & Potts' (2009) results despite the above-mentioned differences in implementation/set-up of the experiments (i) confirms the robustness of their results and (ii) suggests that at least for this particular type of research question/experiment, the results are robust enough to not be affected by an absence of filler items, the order of the answer choices, the number of participants, or the setting of the experiment itself.

### **3 Shifting to non-speaker-oriented interpretations: Free indirect discourse**

So far, we focused on the question of whether non-speaker-oriented readings of epithets and appositives are available, and we replicated Harris & Potts' (2009) results showing that such readings are indeed available. The remaining two experiments focus on epithets and another type of expression that arguably requires an epistemic anchor, namely epistemic adverbials, and explore whether they can act as *cues to shift to a non-speaker-oriented perspective*. We tested how people interpret sentences with and without epithets and epistemic adverbials, in contrast to Experiments 1a and 1b which did not compare the presence/absence of these expressions. (All critical items in those studies contained epithets or appositives.)

Thus, rather than starting with the traditional linguistic/semantic view that epithets are interpreted by default from a speaker-oriented perspective, Experiments 3 and 4 take as their starting point a view – based on observations from narratology and literary theory – that epithets and epistemic adverbs can act as signals to adopt a non-speaker-oriented perspective. Based on what we have seen so far, this may seem paradoxical. How can epithets and epistemic adverbials act as cues for non-speaker orientation, especially in light of the experimental findings showing that epithets have a strong speaker-oriented bias? As we will see, this idea is not as odd as it may seem at first, and is based on research in literary narratology.

### 3.1 Introduction to free indirect discourse

To better understand why one might regard epithets as cues to a non-speaker-oriented perspective, consider examples (8a) and (8b). Both involve the same epithet-containing clause (*the idiot has missed the train*) but in different contexts:

- (8) a. Jon said he would come but the idiot had missed the train. (adapted from Corazza 2005)  
b. Lisa glared at Jon angrily. He was finally home, three hours late. Yet again, the idiot had missed the train. How on earth could someone be so disorganized? Did he not realize that other people were depending on him?

In (8a), the most natural interpretation is a speaker-oriented reading of the epithet *the idiot*. In contrast, in (8b), a likely intuition is that Lisa is the judge/evaluator for the expression *the idiot*. What causes this shift in our interpretation of who the judge/evaluator of the epithet is? In this section, I will suggest that our choice of judge depends crucially on the context – in particular, whether we treat a particular stretch of text as part of a literary narrative or as part of direct interpersonal communication, as I will explain below (see also Potts 2007 on context).

To start to appreciate the importance of context, we need to introduce the notion of free indirect discourse (FID), a narrative/literary style exemplified in (9c). In contrast to direct speech, which uses explicit quotation to directly represent the words (or thoughts) of a character (9a), and reported speech, which uses clauses embedded under verbs of saying (9b), free indirect discourse (9c) presents a character's speech or thoughts without embedding or explicit quotation marks.

- (9) a. *Direct speech*: Peter said, "I will go home tomorrow."  
b. *Reported speech*: Peter said that he would go home the next day.  
c. *Free indirect discourse*: Peter was getting really tired of sleeping on Tom's couch. How could anyone sleep on that old thing? He would go home tomorrow. Nothing would change his mind about that.

In direct speech, pronouns and tense are anchored to the speaker of the quoted speech (e.g., *I* in 9a). In reported speech, pronouns and tense are from the narrator's perspective (e.g., *he* in 9b). It has often been noted that FID resembles direct speech in the sense that it conveys the speech/thoughts of the character, but also resembles reported speech in that the pronouns and tense are from the narrator's perspective – for example, (9c) uses third-person *he* and not first person *I* to refer to the character whose speech is being conveyed. Various aspects of FID have been investigated by philosophers, linguists, literary narratologists and psychologists (e.g., Banfield 1973; Clark & Gerrig 1990; Eckardt 2015; Fludernik 1993; Harris

2012; Maier 2015; Sharvit 2008; Schlenker 2004; Redeker 1996; Salem, Weskott & Holler 2015; and many others; see also Bortolussi & Dixon 2003).

Existing work on FID from the literary tradition has investigated, among other things, the question of how readers recognize a stretch of text as FID, i.e., as reflecting character's thoughts/words, rather than those of the narrator. Prior work has identified various triggers for FID (e.g., Banfield 1973; McHale 1978; Fludernik 1993), including epithets (e.g., *that jerk*), modals (e.g., *he would go home*), dialectal expressions, and adverbs of possibility/certainly (e.g., *possibly, maybe*), which we will also refer to as epistemic adverbials.

### 3.2 The role of context in interpreting judge-dependent terms

In the literary tradition of work on FID, expressions such as epithets and epistemic cues such as adverbs of possibility are, in many contexts, regarded as cues to assume perspective of a character and abandon the perspective of the author/writer/speaker. In other words, these expressions are regarded as shifting the perspective away from the narrator to a character – i.e., signaling non-speaker-oriented content. At first glance, this seems to clash with findings from the theoretical linguistics tradition, discussed in Sections 1.2 and 2, where expressives (especially epithets) have been found to strongly prefer a speaker-oriented interpretation. Within one tradition of research, such expressions are regarded as signaling *non-speaker-oriented* content, but in another tradition, they are regarded as speaker-oriented by default. How can we resolve this apparent contradiction?

I suggest that a key factor is the nature of the context. Let us go back to (8), about the idiot missing the train, and consider it in two different contexts. If the sentence *the idiot had missed the train* is in an email from a friend, as (8a) might be, it seems natural to give the epithet a speaker-oriented interpretation. Your friend, the speaker, is expected to have and express opinions and thus can function as the judge. As a consequence, we end up with a speaker-oriented interpretation.

Now, let us consider the same clause embedded within a narrative context/a work of fiction (similar to example (8b), in fact). In such a context, we have an additional 'layer' present in the discourse: In addition to the viewpoint of the speaker/narrator, we also have the potential viewpoint of the characters in the novel. Depending on narratorial style (e.g., Le Guin 2015; Rasley 2008), the narrator may or may not express her opinions directly, i.e., may or may not be available to act as the judge for the epithet. However, characters in novels can express their opinions and can function as judges, which means that we can get a non-speaker-oriented, character-oriented interpretation of the epithet in fictional narrative contexts (e.g., (8b), where Lisa can be interpreted as the judge for the epithet).

In sum, whether the default judge is the speaker or not depends on the context. In 'regular' non-fiction communication, we expect the default judge to be the

speaker (as in the email context). In a fictional narrative context, the characters are available to act as judges, and the narrator may not be very available to act as the judge. Thus, I suggest there is no contradiction in the observation that epithets tend to be speaker-oriented in some contexts while signaling non-speaker-orientation in others. We return to this in the general discussion.

### **3.3 Aims of Experiments 2 and 3**

Experiments 2 and 3 aim to shed light on how people detect FID, and how sensitive they are to different kinds of cues. In other words, what allows us to recognize a shift in perspective away from the speaker and to treat a non-speaker as the judge?

Experiments 1a and 1b confirmed that the judge does not need to be the speaker. In Experiments 2 and 3, we explore what modulates how readers identify who the judge is. This has not been a central focus of most semantic analyses of FID, which have largely focused on the question of how to capture the observation that in FID, pronouns and tense are from the narrator's point of view, unlike other indexicals. Broadly speaking, one line of research has appealed to some kind of context-shifting mechanisms (e.g., Banfield 1973; Schlenker 2004; see also Sharvit 2008). An alternative approach to the context-shifting theories is Maier's (2015) mixed quotation approach: He analyzes FID as quotation but with pronouns and tenses unquoted. However, because our aims are more modest – we aim to test empirically whether naïve readers can recognize cues to FID and shift their assumptions about perspective accordingly – our experiments will not argue for or against context-shifting approaches or mixed-quotation approaches.

In Experiments 2 and 3, we tested the presence/absence of two kinds of cues: (i) epithets/evaluative expressions (e.g., *poor girl, that idiot*) and (ii) epistemic adverbials of possibility and certainty (e.g., *probably, definitely*). We did not test appositives in Experiments 2 and 3, and leave them as an avenue for future experimental work, especially given the divergent corpus and experimental results that Harris and Potts obtained for appositives. Experiments 2 and 3 also have implications for theories of pronoun interpretation, as will be discussed below.

## **4 Experiments 2 and 3**

### **4.1 Method**

#### **4.1.1 Participants**

Thirty-six native English speakers participated in Experiment 2, and 24 native English speakers participated in Experiment 3. None of these people participated in Experiments 1a or 1b, and no one participated in both Experiments 2 and 3. (Here

and in Experiments 1a and 1b, our participants were members of the University of Southern California community, mostly undergraduate students. We did not limit our participants to any one specific major/field of study.)

#### 4.1.2 Design and materials

Experiments 2 and 3 both had the same kind of design. We used sentences with and without epithet-type evaluative expressions (10) and with and without epistemic adverbial cues (11). Thus, the critical items were minimal pairs which differed only on the presence/absence of the FID cue (e.g., *poor girl* in (10), and *probably* in (11)).<sup>5</sup> Based on narratological work, the prediction is that presence of epithets and epistemic adverbials should make participants more likely to interpret the second sentence as being from the perspective/point-of-view of one of the characters – in this case, the subject of the first sentence. In other words, in (10b), if participants are sensitive to the FID cue, they should interpret the second sentence (*Poor girl; she was sick*) as being Mary’s thoughts about Elizabeth. Similarly, if the presence of the epistemic adverbial acts as a cue for FID in (11b), participants should interpret the second clause as being Luke’s thoughts about Andrew.

- (10) a. Mary looked woefully at Elizabeth. She was sick. [regular sentence]  
 b. Mary looked woefully at Elizabeth. Poor girl; she was sick. [FID cue]
- (11) a. Luke glanced at Andrew warily. He’d put toothpaste in the shampoo bottle again. [regular sentence]  
 b. Luke glanced at Andrew warily. He’d probably put toothpaste in the shampoo bottle again. [FID cue]

In the epithet/evaluative items, we used adjective-noun sequences with and without demonstratives (e.g., *poor girl*, *damn fool*, *that selfish idiot*, *that careless moron*). In Experiment 3, in addition to these two types, we also included two demonstrative+epithet items (e.g., *that jerk*). In the epistemic adverbial items, we used expressions like *probably*, *perhaps*, *most likely*, *certainly*, and *maybe*. Some express uncertainty and others express certainty. As can be seen in (11) and (13), both types can trigger an FID reading.

We chose to test epithets/evaluative expressions and epistemic adverbials

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<sup>5</sup> One might wonder about the presence of adverbs like *woefully* and *warily* in first sentence of (10-11). They were included in some items to make the sentences as natural as possible. They are not problematic for us, because they are present in *both* versions of an item (the FID cued version and the plain/uncued version). Thus, any differences between the cued and plain versions cannot be attributed to the adverb because it is present in both versions. Furthermore, not all targets contain such adverbs. Eight out of 16 targets had such adverbs in Experiment 2, and in Experiment 3, only 8 out of 41 targets contained such adverbs. Nevertheless, both experiments yielded the same results. In sum, the occasional adverbs in the first sentence are not problematic for our claims.

because both have been identified in prior work as being indicators for FID (e.g., Banfield 1973, McHale 1978) and because the way in which they signal a shift in point-of-view is, we hypothesize, quite different: Epithets, on the one hand, involve evaluative, emotional judgments or opinions about the intended referent. Psychological work has shown that we often mirror or simulate other people's emotions quite automatically (e.g., Shamay-Tsoory 2011). Thus, with epithets, it might be that comprehension is automatic and not reliant on reasoning/inference.

On the other hand, epistemic adverbials (e.g., *probably*, *perhaps*, *certainly*) signal that someone is expressing a judgment about the likelihood of an event/situation. It seems reasonable to posit that encountering such an adverb triggers an inference process in the reader: In narratives with omniscient narrators, a sentence with an epistemic adverbial signals that the person whose POV that sentence is from does *not* have certain knowledge about a particular event/situation taking place – because if they did, they would not include an epistemic adverbial in the utterance. An indication that the 'speaker' of the sentence does not have certain knowledge about an event or situation would then result in the reader inferring that the sentence is not coming from an omniscient narrator (see e.g., Le Guin 2015, Rasley 2008 on narrative voice types) but from someone else (cf. reasoning about others' knowledge, Theory of Mind).<sup>6</sup> Thus, I suggest that the presence of an epistemic adverbial can trigger the inference that the sentence is from the POV of one of the characters, rather than the narrator. (The situation would of course be different in narratives with non-omniscient narrators, suggesting that the potentially perspective-shifting effect of epistemic adverbials is probably context-dependent.)

Experiment 2 had 16 target items. The target items were evenly split between the evaluative/epithet condition and the adverbs-of-possibility condition. Each participant also saw 30 filler items, which resembled the targets in sentence length and syntactic complexity, but did not contain epithets or adverbs of possibility. (Unlike Experiments 1a and 1b, both Experiments 2 and 3 contained fillers.) We used a Latin-Square design so that each participant saw equal numbers of plain and cued conditions for both the epithet items and the adverbs-of-possibility items, and did not see any individual item more than once.

Experiment 3 had 41 target items (20 in the evaluative/epithet condition and 21 in the adverb condition). We created a large number of target items because we wanted to further assess the robustness of the effects observed in Experiment 2. Fourteen of the target items in Experiment 3 were based on the targets used in Experiment 2, and then we also created 27 additional new target items for

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<sup>6</sup> This effect also obtains with adverbs of certainty (13b). From a Gricean perspective, this is to be expected: Including an epistemic adverbial is a more marked choice than not including one, and signals that the speaker/writer intends to convey something about his/her epistemic state (e.g., emphasize (lack of) certainty). This can trigger the inference that the speaker is not the (omniscient) narrator, who would presumably not provide explicit signals about his/her knowledge state.



Experiment 3. Furthermore, the target items in Experiment 3 included a locative expression at the end of the first sentence, as illustrated in (12) and (13). This was done because we wanted to use some of the stimuli in a subsequent visual-world eye-tracking study (not described here) where a location needed to be mentioned. In Experiment 3, to keep the experiment length manageable, we split the targets into groups so that each participant saw 10 items in the evaluative/epithet condition and 10 or 11 items in the adverb-of-possibility condition. Each participant also saw 30 filler items. As in Experiment 2, we used a Latin-Square design.

- (12) a. Arthur hollered at Eric at the restaurant. He didn't care about using foul language in a room full of people.  
 b. Arthur hollered at Eric at the restaurant. That ignorant jerk; he didn't care about using foul language in a room full of people.
- (13) a. Hannah glanced at Ruth across the lecture hall. She wasn't paying attention to the monotone professor's lecture about chlorophyll.  
 b. Hannah glanced at Ruth across the lecture hall. She definitely wasn't paying attention to the monotone professor's lecture about chlorophyll.

#### 4.1.3 Role of pronouns

A key property of our stimuli is that the first sentence contains two third-person referents with the same gender (e.g., Mary and Elizabeth, Luke and Andrew), and the second sentence contains a potentially ambiguous third person pronoun (*he/she*). The stimuli were designed so that in the plain/non-cued version (10a-13a), the pronoun is fairly ambiguous: It could refer to the preceding subject or object/oblique argument, perhaps with a slight bias for the subject. However, in the cued versions ((10b-13b), (10-11) repeated as (14)), if readers recognize a perspective shift to FID and the POV of the subject character, this should lead them to interpret the pronoun as referring to the preceding *object* (e.g., Elizabeth or Andrew). In other words, if readers interpret the epithet "poor girl" as a signal to interpret the second sentence (*Poor girl, she was sick*) as Mary's thoughts about Elizabeth, then they should interpret the pronoun 'she' as referring to Elizabeth, the object of the preceding sentence.<sup>7</sup> Similarly, if the presence of the epistemic

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<sup>7</sup> The epithet/evaluative conditions involved a left-dislocation structure (Ross, 1967) when the epithet was present (e.g., *Poor girl, she...*, *That ignorant jerk, he...*). This allowed us to keep the syntactic structure of the critical sentence comparable across items. As a consequence, the subject of the second clause is mentioned twice in the cued condition (once with an epithet, once with a pronoun) and once in the uncued condition (with a pronoun). Being mentioned twice may render an entity more prominent. However, recall that that if readers are sensitive to the FID cue, they should be more likely to interpret the pronoun as referring to the preceding object (traditionally viewed as

adverbial ‘probably’ is a signal to interpret the second sentence as being from Luke’s perspective – conveying Luke’s thoughts about Andrew – then readers should interpret the pronoun ‘he’ as referring to Luke, the preceding object.<sup>8</sup>

- (14) a. Mary looked woefully at Elizabeth. *Poor girl; she was sick.* [FID cue]  
b. Luke glanced at Andrew warily. *He had probably put toothpaste in the shampoo bottle again.* [FID cue]

Thus, we designed the stimuli so that pronoun interpretation provides a tool for measuring readers’ recognition of shifts in perspective. We could have designed the stimuli so that detection of a perspective shift would push people to interpret a pronoun as referring to the preceding subject (rather than the object). Given that existing research indicates that pronouns have an overall subject bias, we thought it would be easier to detect potential perspective shifts by setting things up so that people would be pushed away from the default subject interpretation.

It is worth noting that existing theories of pronoun resolution are unable to account for the effect of the FID cue/perspective shift on the interpretation of the pronoun. One common view is that pronouns, especially in subject position, prefer salient antecedents, and subjects are salient, so pronouns tend to be interpreted as referring to subjects (e.g., Brennan, Friedman, & Pollard 1987; Chafe 1976; Crawley & Stevenson 1990). According to this view, we would predict a subject preference in all conditions in Experiments 2 and 3. Thus, this approach does not predict the presence/absence of epithets or epistemic adverbials to have any effect. Recent work on coherence relations between clauses (e.g., Kehler & Rohde 2013) goes beyond an overarching subject bias but still does not straightforwardly predict differences between sentences with and without FID cues.

#### 4.1.4 Procedure

In both Experiments 2 and 3, participants saw sentences with and without FID cues (evaluatives/epithets or epistemic adverbs) and after each sentence, participants were instructed to answer a question using a six-point scale. The study was administered as a paper-and-pencil questionnaire in both Experiments 2 and 3, with sentences and questions presented next to each other. This was to minimize any potential processing effects due to memory load/retrieval effects. The questions

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less prominent than the subject). There is no reason to expect repeated mention to increase the rate of object interpretations, and so the left-dislocation in the epithet stimuli is not problematic for us.

<sup>8</sup> Under the FID interpretation, *he/she* in the second sentence does not refer to the judge/epistemic anchor, i.e., under the FID interpretation, the pronoun does not refer to speaker of the Context of Utterance ( $\gamma$ , Schlenker 2004). Thus, the pronoun effects we investigate are distinct from the indexical shifts that have received considerable attention in theoretical work.

after target items tested the interpretation of the pronoun in the second sentence, as in (15). Participants could use the six-point scale to indicate how strongly they preferred the possible answer choices (e.g., if they felt that Mary was definitely the one who was sick, they could chose ‘1’, and if they were pretty sure that Mary was the one who was sick, they could chose ‘2’ or ‘3’, and so on).

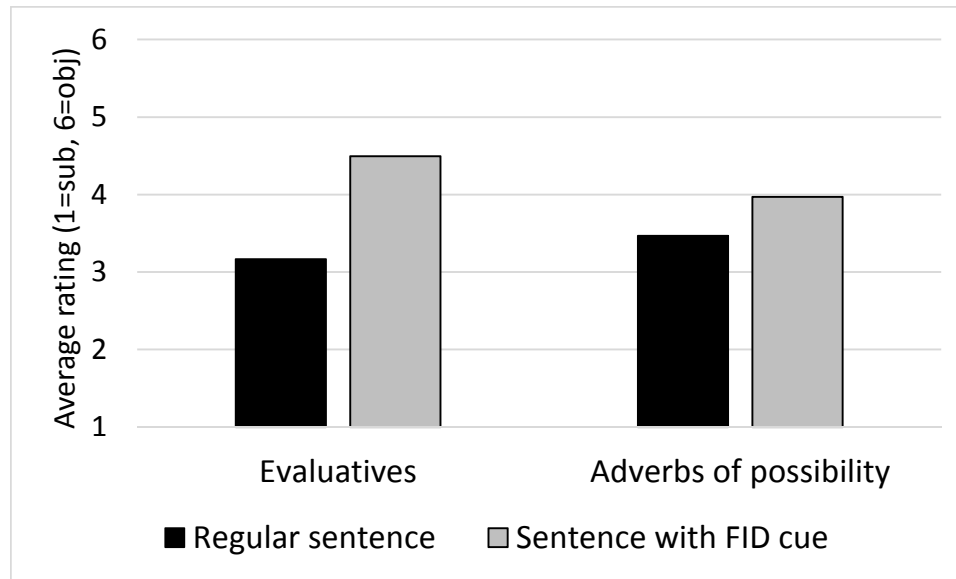
- (15) a. Who was sick?  
 Mary 1 2 3 4 5 6 Elizabeth
- b. Who put the toothpaste in the shampoo bottle?  
 Luke 1 2 3 4 5 6 Andrew
- c. Who didn’t care about using foul language?  
 Arthur 1 2 3 4 5 6 Eric
- d. Who wasn’t paying attention?  
 Hannah 1 2 3 4 5 6 Ruth

This task allows us to probe for shifts in perspective without having to explicitly ask participants about whose perspective a particular sentence or expression is from. Explicitly asking people about perspective shifts could tip them off and make them extra sensitive to perspectival cues. We wanted to see if participants would show sensitivity to perspective shift in a ‘neutral’ context, where they have no special reason to be focusing on changes in perspective/judge.

As a ‘sanity check’, Experiment 3 also contained an explicit point-of-view task that participants completed at the very end, after they had answered the questions about all targets and all fillers. In this second task, participants saw only the target items, with the second sentence now underlined, and were asked to indicate whose voice or point-of-view/opinion is being expressed in the underlined sentence. The choices were the subject of the sentence, the object of the sentence or the narrator. This task provides a direct measure of participants’ interpretations of whose perspective is being assumed.

## 4.2 Results and discussion of Experiment 2

Let us first consider how participants answered the questions probing the referent of the pronoun on a six-point scale (1=preceding subject, 6=preceding object). As can be seen in Figure 3, the presence of an epistemic adverb or an evaluative/epithet results in a significantly higher rating score – i.e., a stronger object preference – than the regular ‘uncued’ versions of the sentences (paired t-tests: Evaluatives cued vs. plain:  $t(35)=6.736$ ,  $p<0.0001$ ,  $t(7)=6.529$ ,  $p<0.0003$ ; Adverbs cued vs. plain:  $t(35)=2.181$ ,  $p<0.04$ ;  $t(7)=3.045$ ,  $p<0.02$ .)



**Figure 3** Experiment 2: Who does the pronoun refer to, in sentences with and without evaluatives/epithets and adverbs of possibility? (The higher the rating, the stronger the preference for an object interpretation)

Thus, the presence of an epithet or an epistemic/possibility adverb has an effect on how participants interpret the pronoun: Participants are more likely to interpret the pronoun as referring to the preceding *object* (a sign of them having shifted to the perspective of the preceding subject) in the presence of epithet/evaluative expressions or adverbs of possibility. This suggests that participants are indeed sensitive to the perspective shift triggered by FID cues. Interestingly, this increase in the rate of object interpretations is not predicted by current theories of pronoun resolution, an issue that we return to in the general discussion.

Based on the patterns in Figure 3, one might also wonder if evaluatives/epithets are a stronger cue to shift perspective than adverbs of possibility. However, because the items that we used in the two conditions were different, they cannot be directly compared to each other: Any differences that we observe in the strength of the cueing could, at least in theory, be due to another property of the sentences. Thus, at this point, we are reluctant to speculate on a potential difference in cue strength between evaluatives and adverbs of possibility (but see Kaiser & Fedele 2013 for evidence that evaluatives/epithets are indeed stronger cues than adverbs of possibility – a finding which poses interesting questions for future work.)

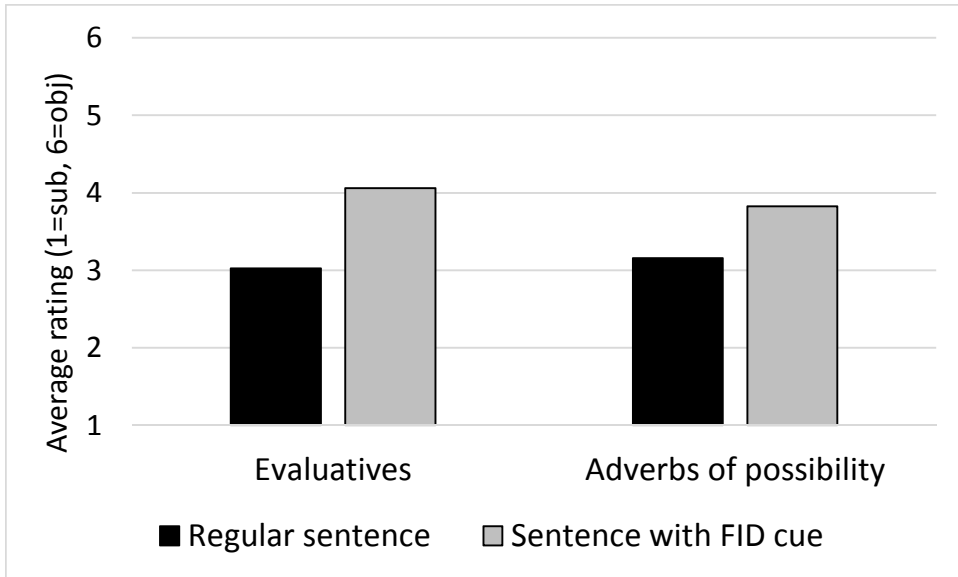
### 4.3 Results and discussion of Experiment 3

The question responses from Experiment 3 (Figure 4) replicate Experiment 2: The presence of an evaluative/epithet or an adverb of possibility makes people more likely to interpret the pronoun as referring to the preceding object (Adverb cued vs plain:  $t(23)=3.068$ ,  $p<0.006$ ,  $t(21)=2.591$ ,  $p<0.02$ ; Evaluative cued vs plain:  $t(23)=4.954$ ,  $p<0.0001$ ,  $t(19)=4.864$ ,  $p<0.001$ ).

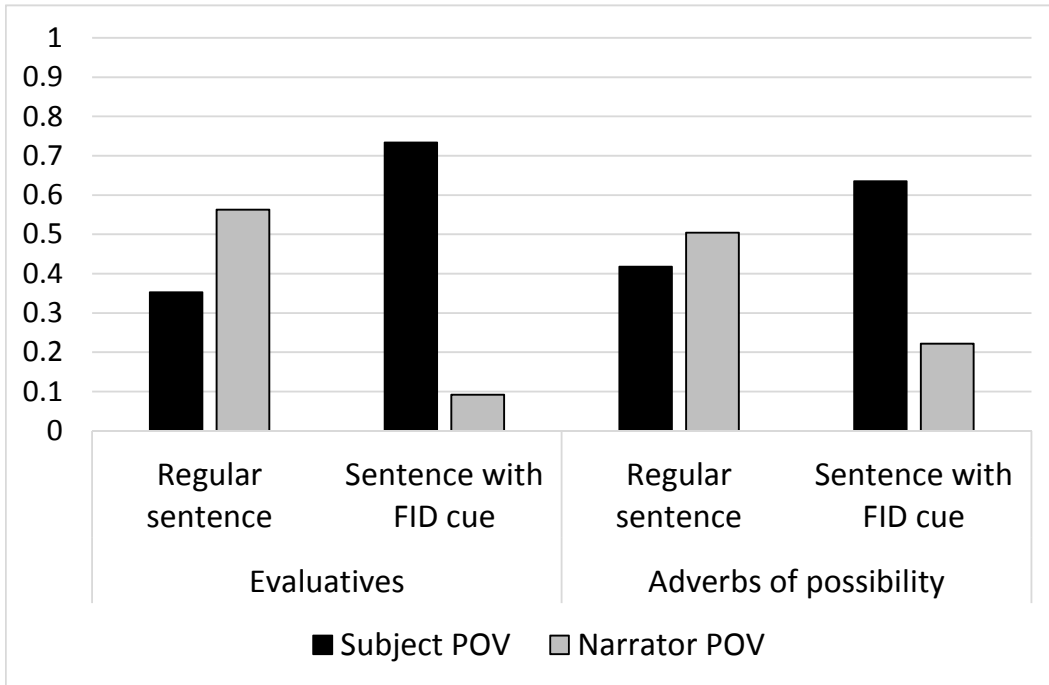
Figure 5 shows the results for the explicit point-of-view task (done at the end of the experiment), where participants were asked to indicate whose point-of-view was expressed by the second (critical) sentence (Object POV responses were rare and are not shown in Figure 5). We find significantly more subject POV responses in the cued than the plain conditions, for both the evaluative/epithet conditions and adverb conditions (Evaluative cued vs plain:  $t(23)=5.846$ ,  $p<0.0001$ ,  $t(19)=5.685$ ,  $p<0.0001$ ; Adverb cued vs plain:  $t(23)=3.443$ ,  $p<0.005$ ,  $t(20)=5.582$ ,  $p<0.0001$ ). Conversely, we find significantly more narrator responses in the plain than the cued conditions, with both evaluative/epithet cues and adverb cues (Evaluative cued vs plain:  $t(23)=-7.24$ ,  $p<0.0001$ ;  $t(19)=-7.522$ ,  $p<0.0001$ ; Adverb cued vs plain:  $t(23)=-5.29$ ,  $p<0.0001$ ;  $t(20)=-6.379$ ,  $p<0.0001$ ). When participants are asked explicitly about whose point-of-view a sentence is from, they are significantly more likely to interpret the sentence as being from the perspective of the subject when an FID cue is present, and significantly more likely to interpret the sentence as being from the narrator's POV when no FID cue is present. The explicit POV task data corroborate the pronoun/question data.

## 5 General discussion and conclusions

The experiments reported here explore the question of who gets to be the 'judge' according to whom we interpret linguistic expressions that require some kind of epistemic anchor, such as epithets, appositives and epistemic adverbials. We investigate how readers interpret judge-dependent expressions and how willing they are to consider 'non-default' judges. Experiments 1a and 1b build on Harris and Potts (2009). Our results are in line with theirs in showing that epithets and appositives do not have to receive speaker-orientated interpretations, i.e., the judge can be someone other than the speaker, although there seems to be a default preference for the speaker. Furthermore, we found that the relatively low rate of subject-oriented interpretations observed with epithets cannot be attributed to explicit mention of the speaker in the original stimuli, since we obtain the same results with stimuli reworded to remove explicit mention of the speaker. We agree with Harris and Potts that, at least in the kinds of contexts tested in Experiments 1a and 1b, the speaker of the utterance is the default judge, but does not have to be (see also Harris 2012, Patel-Grosz 2012, Lasersohn 2005, Stephenson 2008, i.a.).



**Figure 4** Experiment 3: Who does the pronoun refer to, in sentences with and without evaluatives/epithets and adverbs of possibility?



**Figure 5** Experiment 3: Whose point of view does the critical sentence convey?

In Experiments 2 and 3, we further investigated how epithets and another type of judge-dependent expression, epistemic adverbs, influence perspectival processing. Using insights from work on free indirect discourse (FID), we created minimal pairs of sentences with and without epithets and epistemic adverbials. We found that sentences *with* epithets/evaluatives and epistemic adverbials are more likely to be interpreted as being from a non-speaker/non-narrator perspective (i.e., to receive a subject-oriented interpretation, to be an occurrence of FID) than sentences *without* these cues. This was found with a task that explicitly asked about point-of-view and a more indirect task that used pronoun resolution in comprehension questions to probe for perspective shift. Thus, the perspective-shifting, FID-creating effect of epithets and epistemic adverbs occurs even when participants are not explicitly asked about point-of-view. Our findings suggest that readers spontaneously recognize shifts in perspective from narrator to character.

Let us now consider the combined implications of these results. Experiments 1a and 1b confirm that epithets (and appositives) *can* have non-speaker judges and can receive subject-oriented interpretations. Experiments 2 and 3 show that the presence (vs. absence) of epithets and epistemic adverbials is already enough to trigger subject-oriented interpretations (FID interpretations). Thus, Experiments 2 and 3 suggest that not only do these expressions allow subject-oriented interpretations; their presence in fact *boosts* the likelihood of such interpretations, compared to sentences where these expressions are not present.

This brings up the question of why the rate of subject-oriented/non-speaker-oriented interpretations of epithets in Experiments 1a and 1b (as well as Harris and Potts 2009) is relatively low, when Experiments 2 and 3 show epithets (and epistemic adverbials) acting as cues to shift to a subject-oriented interpretation. While this may at first seem paradoxical, I propose that the answer lies in the context/register in which the sentences occur or are assumed to occur, which is also related to FID. As discussed in Section 3.2, in ‘regular’ non-fiction communication (e.g., emails, conversation, etc), we expect the default judge to be the speaker. However, in a fictional/narrative context, there is an additional layer, because the characters in the narrative can be judges, and (depending on narratorial voice) the narrator may not be likely to be the judge. When we have a situation in fiction where one of the characters (rather than the narrator/speaker) is the judge, without the involvement of direct or reported speech, we are dealing with FID.

According to this line of reasoning, our results suggest that the stimuli in Experiments 2 and 3 were more likely to be interpreted as part of a fiction/narrative-oriented context (and to involve FID), whereas the stimuli in Experiments 1a and 1b were more likely to be interpreted as non-literary/direct interpersonal communication. Although none of the instructions of these experiments specified what kind of text/context the sentences were from (but see Kaiser 2014 for evidence showing that participants’ expectations about context do indeed play a

key role), there are stylistic differences between them that could push readers towards divergent assumptions about the type of text: The critical items in Experiments 1a and 1b described regular, everyday events that a speaker may want to communicate to a friend, and many of the original items started with an expression such as ‘my friend X’, ‘my sister X’, or ‘my colleague X.’ Thus, these could easily be interpreted as direct, person-to-person communication (which is presumably what Harris and Potts 2009 intended) – there is no reason to assume them to be literary/fiction. In contrast, the critical items in Experiments 2 and 3 are less clear in this regard. For example, the left-dislocation structure used in the epithet items is quite rare in written present-day English (e.g., Pérez-Guerra & Tizón-Couto 2004) and could be interpreted as a marker of fiction, especially when used with an epithet as the left-peripheral element. (Recall that our stimuli were written; the situation could be different in spoken language.) Thus, it seems plausible that participants in the first two vs. the last two studies may have made different assumptions about the text type of the stimuli, such that participants in Experiments 2 and 3 would be relatively more willing to consider the stimuli as part of fictional text. Treating the stimuli as part of fictional text/narrative, rather than straightforward ‘regular’ person-to-person communication means that characters are more available to act as judges and the phenomenon of FID is more available.<sup>9</sup> This distinction, I propose, is what accounts for the seemingly divergent results of Experiments 1a and 1b when compared to Experiments 2 and 3.

Another aspect of our findings that is worth mentioning is that the results of Experiments 2 and 3 pose challenges for theories of pronoun resolution, because current theories offer no straightforward way of capturing the different rates of subject vs. object interpretation in the presence/absence of evaluatives/epithets and adverbs of possibility. Our finding that subtle cues to perspective-shifting have significant effects on pronoun interpretation highlight the importance of going beyond ‘surface heuristics’ and acknowledging the role of meaning-based factors.

Put together, our experiments (i) support Harris and Potts’ (2009) claim that epithets and appositives can receive non-speaker-oriented interpretations, contrary to some prior claims, and (ii) show that the presence of evaluatives/epithets and epistemic adverbials can in fact *boost* the rate of non-speaker-oriented interpretations, at least in contexts that allow the text to be interpreted as fiction/narrative. We suggest this is because, in such contexts, the presence of these elements can be taken to signal FID. These findings highlight the importance of (comprehenders’ assumptions about) the context in which language occurs.

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<sup>9</sup> In Experiments 2 and 3, subject-oriented interpretations of epithets and epistemic adverbials could be naturally construed as FID. In Experiments 1a and 1b, we did not consider the availability of FID, as that was not part of the motivation for Harris & Potts (2009). It might be that non-speaker-oriented interpretations of appositives are easier to construe as FID than non-speaker-oriented interpretations of epithets in Experiments 1a and 1b; this is a question for future work.



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