Proceedings of SALT 33: 1–12, 2023

Commitments de lingua & assertoric commitments: the case of expressives

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Abstract This paper presents the results of two series of experimental studies concerning the interpretation of expressives (e.g., 'the jerk') and the sentences they occur in. While expressives are known for their strong speaker-orientation, Harris & Potts (2009) found that in the right context, i.e. when a different subject is introduced into the discourse as a reported speaker, it is possible to interpret the expressive from this subject's perspective. In our first series of experiments we corroborated the systematic availability of non-speaker oriented readings of expressives, but we also found a strong correlation between the attribution of the expressive and that of the sentence content: participants who attribute the expressive to the subject rather than the speaker, also tend to attribute the sentence as a whole to the subject. In other words, shifted interpretations of expressives do occur, but tend to go hand-in-hand with a reportative reading of the sentence in which the expressive occurs. In our second series of experiments, we identified factors that influence such a reportative reading. Following Kaiser (2015), we found that when we made the subject more prominent as an anchor—by removing the reference to the actual speaker and by adjusting the tense to facilitate a free indirect discourse reading—the number of subject-oriented readings grew significantly. On the basis of these findings we argue for a pragmatic account in terms of commitment attribution with three constraints at work: (i) commitments *de lingua* for expressives need a salient anchor, (ii) commitments *de lingua* tend to be attributed in concert with assertoric commitments, and (iii) the main speaker is the most salient anchor by default. These three constraints jointly explain the observations in the experiments.

Keywords: expressives, commitment, perspective, experimental pragmatics

Contents

1 Introduction

Expressives, i.e., emotionally loaded epithets such as 'the bastard' or 'the jerk', are perspective-sensitive words that exhibit interesting properties with regard to how their content is attributed to the actual speaker or someone else in complex linguistic constructions. Traditionally, they are known in the literature for their strong speaker-orientation (Potts 2005). In this paper we present experimental studies concerning the interpretation of discourses like this one (from Harris & Potts 2009):

(1) My classmate Sheila said that her history professor gave her a really low grade. The jerk always favors long papers.

The first sentence of this text introduces an agent, Sheila, to whom the content of 'her professor gave her a really low grade' is explicitly attributed. The second sentence lacks explicit anchoring, and therefore poses the following issues. First, to whom is the content of 'the jerk' attributed: is it the actual speaker, or Sheila who is calling the professor a 'jerk'? Second, to whom is the sentential content attributed: is it the speaker or Sheila who is claiming that the professor always favors long papers? And third, how are these two attributions connected?

We conducted two series of experiments investigating these questions and the factors that impact the attribution of expressive and sentential content—or, in the terminology we will introduce here (in section 2), of *de lingua* and assertoric commitments. In the first series we tested the hypothesis that, contrary to the assumption of some authors, *de lingua* and assertoric commitments tend to be attributed together and are not independent. Our results confirm this hypothesis. In the second series we manipulated linguistic features of vignettes like (1) to increase the salience of a second agent (subject) relative to the speaker. We found that certain manipulations make it more likely that assertoric commitments will be attributed to the subject, suggesting an interpretation of the text closer to free indirect discourse than a direct message.

The paper is structured as follows. In section 2, we present the theoretical background for the first series of experiments, which are closely modeled on the seminal work of Harris & Potts (2009). The experiments and results are presented

in section 3. Section 4 presents the background, and section 5 the experiments and results of the second series, in which we refer to the work by Kaiser (2015) who obtained strikingly different results in a similar study. Section 6 presents a general discussion of the results and our theoretical conclusions.

A note on the terminology: we use 'speaker' in phrases like 'speaker-oriented interpretation' to refer to the *actual* speaker. Of course, Sheila is also presented as a speaker in (1) but we will refer to her as the 'subject' and to interpretations anchored to her as 'non-speaker-oriented' or as 'subject-oriented'. The latter two terms are used more or less interchangeably (the first more often when we want to signal the contrast with the speaker-orientated interpretation, the second when we want to mention the concrete anchoring point). The few occasions where we want to refer to Sheila as a speaker we will talk about the 'reported speaker'.

2 Theoretical background: Expressive and sentence attribution

Potts (2005) claimed on conceptual grounds that the content of expressives always projects from all embeddings, i.e. it is always speaker-oriented, unless the expressive is part of overt quotation. This claim was soon falsified by examples like (2) (from Amaral, Roberts & Smith 2007):

(2) [Monty's father:] Well, in fact Monty said to me this very morning that he hates to mow the friggin' lawn.

A non-speaker-oriented reading of 'friggin" in (2) is at least possible, if not preferred. To see if such readings are restricted to speech and attitude reports, Harris & Potts (2009) conducted an experiment with vignettes like (3):

(3) My friend Mike said that his housemate threw a horrible party last weekend. The cretin always invites a lot of people.

Participants were asked to indicate if they attributed the content of the expressive to the speaker or to the subject of the first sentence (i.e., Mike in the example). Harris and Potts' results showed that non-speaker-oriented readings were systematically available: as for (3), almost 30% selected Mike as the one who thought that the housemate is a cretin (see also Kaiser 2015). This led Harris and Potts to propose a pragmatic mechanism to account for the apparent possibility of "shifted" expressives outside of direct or indirect reports.

Harris and Potts' pragmatic account relies on the assumption that in examples like (3) the expressive is not construed as covertly embedded in a report, even when its content is attributed to the subject, and not the speaker; i.e., it assumes that the attribution of the content of the expressive is independent from the attribution of the content of the clause in which it occurs. This assumption goes against configurational

approaches which assume semantic binding by attitude predicates (Schlenker 2007; Sauerland 2007). On such an approach, the second sentence would be construed as including a covert reportative operator, and the expressive would be treated as an indexical whose interpretation is relative to a parameter that can be bound by this operator.

Hess (2018) develops Harris and Potts' pragmatic account further, and embeds it in a scorekeeping-style conversation model. Specifically, Hess argues that the content of an expressive is attributed as commitment *de lingua* (cf. Harris 2016: a commitment to the appropriateness of a certain expression in a given context), which is independent from assertoric commitments (i.e., ones concerning the main propositional content of a clause).

An alternative account implicitly shares the same assumption of independence: Anand (2007) proposes that "shifted" expressives are covertly quoted. While this is not a fully developed account, quotation is typically entirely flexible in scope, so, according to Anand's account, it should be possible to interpret the expressive as non-speaker-oriented without attributing the rest of the clause to the subject. As Hess (2018) is the only one to make this assumption explicit, in what follows we refer only to his version of the pragmatic account, which is also the most developed.

Furthermore, following Hess (2018) we employ the terminology of commitment attributions, which are to be distinguished from attributions of literal utterances. Thus, (4), with a direct quotation, attributes the exact words to John, while (5) only attributes the commitment to the proposition that Tories will lose.

(4) John said 'Those bloody Tories will lose the next election'.

(5) John said that the Tories will lose the next election.

(6) A CPJ report on Venezuela tells us how problems have 'escalated' in Venezuela under Chavez, i.e. the physical attacks against journalists under previous presidents have 'escalated' to Chavez calling the opposition, which includes the media, names. This is very, very serious, but I don't think another coup attempt is called for until Chavez resorts to dramatic irony or sarcasm. But if **that vicious bastard** uses litotes, then there's no other rational choice than an immediate invasion.

Similarly, (6) (from a blog post cited in Potts 2007) attributes a commitment *de lingua* to the authors of the CPJ report without suggesting that they actually used these specific words. These examples jointly illustrate that neither *de lingua* or assertoric commitment attribution should be construed as reducible to attribution of verbatim utterances.

We hypothesized that the independence assumption of Hess' account is wrong and that subject-oriented readings of expressives are typically accompanied by

the attribution of the content of the whole clause to the subject, as in a covert (continued) report. That is, we expect that commitment *de lingua* attribution is not independent from assertoric commitment attribution but correlates with it. This hypothesis is inspired by prior research on appositives—another typically speaker-oriented category—by Koev (2014), who found that shifted appositives are usually understood as uttered in a secondary (i.e., reported) speech context. We tested our hypothesis in three experiments presented here as Series 1.[1]

3 Experiments series 1: Expressive and sentence attribution

We conducted three experiments to investigate whether subject-oriented (i.e., non-speaker-oriented) readings of expressives are typically accompanied by the attribution of the commitment to the content of the whole sentence to the subject.

Exp. 1 replicated Harris and Potts' experiment with some changes. Participants read two-sentence vignettes like (3) and indicated on a five-point scale to what extent they attributed the expressive to the speaker or to the subject of the first sentence.

Exp. 2 used the same materials as Exp. 1, but instead asked participants to indicate, again on a five-point scale, to what extent they attributed the content of the entire second sentence to the speaker or to the subject of the first sentence.

We expect that items in which the expressive is likely to receive a subject-oriented interpretation are also ones in which the content of the entire second sentence is likely to be attributed to the subject; in other words, we expect a robust correlation between the results of Exps. 1 and 2.

Exp. 3 essentially replicates Exps. 1 and 2 using a within-participants design. Participants in the experiment read the same vignettes used in Exps. 1 and 2. However, in this experiment, each item was followed by two questions, inquiring (i) to what extent the expressive was attributed to the speaker or the subject (i.e., the question asked in Exp. 1), and (ii) to what extent the content of the entire second clause was attributed to the speaker or the subject (i.e., the question asked in Exp. 2). We predicted a substantial correlation between participants' answers to (i) and (ii), i.e., we expect that subject-oriented readings of the expressive are typically accompanied by subject-oriented readings of the entire second sentence.

In the next section, we describe the experiments in detail and discuss the results.

1 These results have been previously reported in Bary, Hess & van Tiel (2022) and are included (with some more details) here to present a full picture of our research.

Experiments 1 & 2: Expressive and sentence attribution

Participants Exp. 1

50 participants were recruited on Prolific. Their mean age was 37 (standard deviation: 11, range: 20–73). 22 participants identified as male; 28 as female. One participant was removed from the analysis because they indicated that their native language was not English.

Participants Exp. 2

50 participants were recruited on Prolific. Their mean age was 34 (standard deviation: 11, range: 19–58). 20 participants identified as male; 21 as female. 7 participants expressed a different gender identity. Two participants were removed from the analysis because they indicated that their native language was not English.

Materials and procedure

Participants were instructed to carefully read short messages that a fictional first person (i.e., the speaker) wrote. In both experiments, there were 30 such messages. An example is:

(7) My classmate Sheila said that her history professor gave her a really low grade. The jerk always favors long papers.

15 of these messages were taken from Harris & Potts (2009: Exp. 2). Harris and Potts further manipulated two properties of the items: (i) whether the first sentence described a positive or negative action, and (ii) whether the first sentence contained an intensifier (e.g., 'really') or not. Here, we only used items describing a negative action and containing an intensifier. In what follows, we only refer to this subset of items from Harris and Potts' study. The remaining 15 messages were created by us. The messages that we created were structurally similar to the ones from Harris and Potts. The items were divided into 20 *target* items and 10 *control* items.

Each item was associated with a question. For control items, the question had a straightforward correct answer that could be easily determined on the basis of the text. For five of the control items, the correct answer was the speaker, i.e., the person transmitting the messages. For the other five control items, the correct answer was the subject of the first sentence (e.g., Sheila).

For target items, the question varied across the two experiments. In Exp. 1, the question asked whether participants attributed the expressive used in the second sentence to the speaker or to the subject of the first sentence. For example, (7) was associated with the following question:

(8) Who is calling Sheila's history professor a jerk?

Note that our question is formulated slightly differently than in Harris and Potts' study, which asked 'Whose view is it that Sheila's professor is a jerk?'. We made this change to guide the participants' attention as much as possible to the linguistic form of the text rather than to the opinions and attitudes expressed. This reflects our focus on the attribution of *de lingua* commitments rather than inferences about speaker's and subject's mental states.

In Exp. 2, the question asked whether participants attributed the content of the second sentence to the speaker or to the subject of the first sentence. For example, (7) was associated with the following question:

(9) Who is claiming that Sheila's history professor always favors long papers?

In both experiments, participants answered the questions by marking a value on a five-point scale. On this scale, a value of 1 indicated that the answer was clearly the speaker ('Clearly me'). A value of 5 indicated that the answer was clearly the subject of the first sentence (e.g., 'Clearly Sheila'). Intermediate values indicated that the answer was less clear. Participants were familiarised with the scale by means of two annotated examples.

The order of presentation was randomised for each participant. All experiments were hosted on the PCIbex Farm (Zehr & Schwarz 2018). The two experiments can be accessed here (Exp. 1) and here (Exp. 2).

Data treatment

In Exp. 1, results for ten trials had to be removed because of a technical error. In addition, five (Exp. 1) and two (Exp. 2) participants were removed from the analysis because they made mistakes in more than 20% of the control items.

Results

Fig. 1 shows the distribution of responses for target items in Exps. 1 and 2. In Exp. 1, the mean rating for target items was 2.95, indicating that participants were roughly equally likely to attribute the expressive to the speaker or to the subject of the first sentence. In Exp. 2, the mean rating was 3.43, indicating a slight preference for attributing the content of the second sentence to the subject rather than the speaker.

The percentage of subject-oriented responses in Exp. 1 (i.e., values of 4 or 5) was substantially higher than the percentage of participants that attributed the expressive to the subject in Harris and Potts' experiment (38% vs. 17%). A likely explanation for this difference lies in the answer structure. Participants in Harris and Potts'

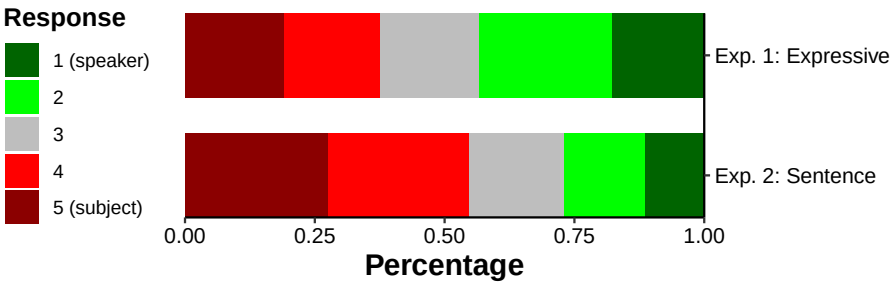

Figure 1 Distribution of responses for target items in Exps. 1 and 2.

experiment had to choose between the answers 'Mine' (i.e., the speaker's), 'Sheila's' (i.e., the subject's), or 'Both'. Given that the first sentence always described a negative action, participants in Harris and Potts' experiment might have inferred that it is very likely that both the speaker and the subject have a negative view of the person in question. In line with this assumption, 'Both' responses were very frequent (29%); much more so than neutral (i.e., 3) responses in our experiment (19%). It is likely that a substantial portion of the 'Both' responses in Harris and Potts' experiment actually reflect interpretations leaning towards a subject-oriented reading (e.g. 4 values on our scale), and that their experiment therefore underestimated the prevalence of subject-oriented readings.

Our main hypothesis was that subject-oriented interpretations of expressives were connected to subject-oriented interpretations of the sentences in which they occur. To test this hypothesis, we calculated the Pearson correlation between the mean ratings for each item in Exps. 1 and 2. Fig. 2 plots these mean ratings. In line with our hypothesis, there was a robust correlation between the mean ratings in Exps. 1 and 2 ($r = .65$, $t(18) = 3.62$, $p = .002$).

Experiment 3: Within-participants replication

Exp. 3 seeks to provide more direct evidence for the association between expressive and sentence attributions by asking the same participants to indicate both the source of the expressive and the source of the second sentence, i.e., by combining Exps. 1 and 2 in a within-participants design.

Participants

50 participants were recruited on Prolific. Due to a technical error, no demographic information (age, gender, and native language) was obtained from four participants. These participants were nevertheless included in the analysis. Their inclusion has

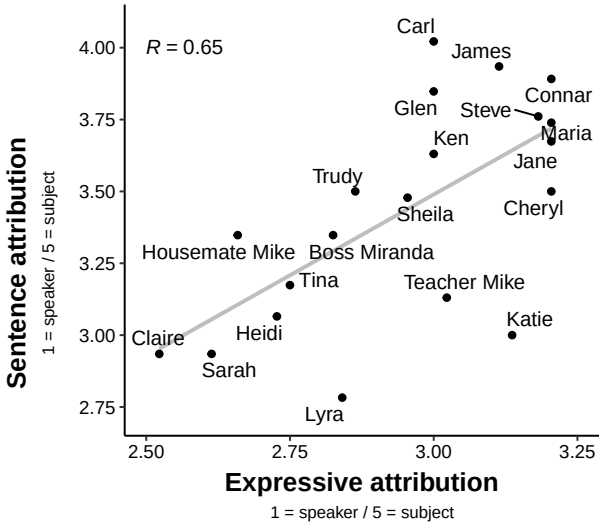

Figure 2 Mean ratings for target items in Exps. 1 and 2.

no pertinent consequences on the outcome of the analysis. The mean age of the remaining participants was 37 (standard deviation: 13, range: 21–72). 19 participants identified as male; 24 as female. Two participants had a different gender identity. One participant was removed from the analyses because they indicated that their native language was not English.

Materials and procedure

The materials and procedure were the same as for Exps. 1 and 2.

The only difference was that, for each message, two questions were asked instead of one. For target items, the first question was the same as the question from Exp. 1, asking to whom the expressive was attributed. The second question was the same as the question from Exp. 2, asking to whom the second sentence was attributed. For control items, one question had the speaker as correct answer; the other question had the subject of the first sentence as correct answer. The two questions were shown on the same screen as the corresponding message. The order in which the questions were presented was randomised on each trial.

As before, participants indicated their answer by marking a value on a five-point scale. On this scale, a value of 1 indicated that the answer was clearly the speaker; a value of 5 indicated the answer was clearly subject of the first sentence. Intermediate values indicated that the answer was less clear.

The experiment can be accessed here.

Data treatment

Five trials had to be removed because of a technical error. Two participants were removed from the analysis because they made mistakes in more than 20% of the control items.

Results

Fig. 3 shows the distribution of responses for both target questions. The mean rating for the expressive question was 2.90; for the sentence question it was 3.10. These means were similar to the means from Exps. 1 and 2 (i.e., 2.95 and 3.43).

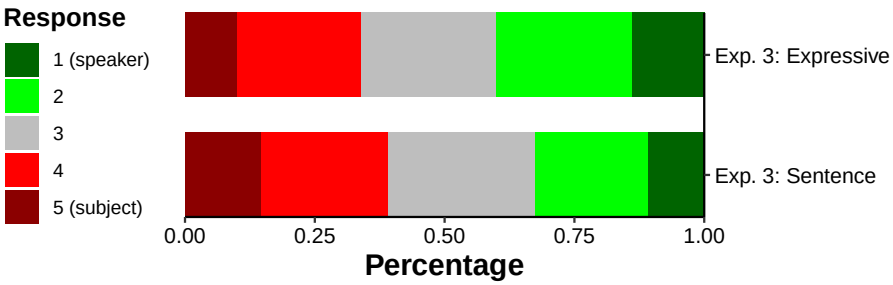

Figure 3 Distribution of responses in Exp. 3

Fig. 4 shows the frequency of each combination of responses to the two questions. This figure suggests that participants gave similar answers to both questions. To analyse whether this association was statistically significant, we constructed an ordinal mixed effects regression model predicting responses to the expressive question on the basis of responses to the sentence question, including random intercepts for participants and items. For this analysis, we relied on the 'clmm()' function from the 'ordinal' package (Christensen 2022) in R (R Core Team 2022). This analysis confirmed that responses to the expressive question were significantly predicted by responses to the sentence question ($\beta = 6.1$, $SE = 0.3$, $Z = 19.2$, $p < .001$).

For comparison with the results from Exps. 1 and 2, we also analysed whether the mean expressive attribution ratings for each item correlated with the corresponding mean sentence attribution ratings. These means are shown in Fig. 5. In line with our hypothesis, there was a robust correlation between the mean responses to the two questions ($r = .91$, $t(18) = 9.51$, $p < .001$).

Taken together, the results of Exps. 1–3 provide robust evidence for the hypothesis that expressive attributions and sentence attributions tend to go hand-in-hand.

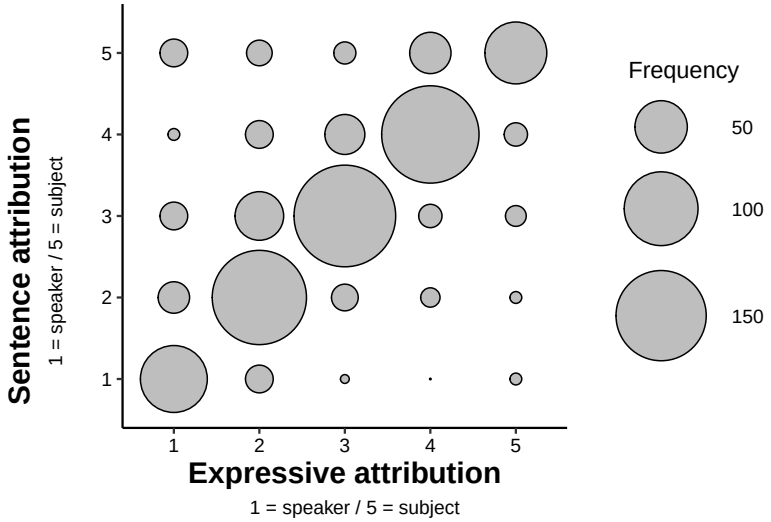

Figure 4 Scatterplot of responses in Exp. 3. The size of the points represents the frequency of each combination of responses to the two questions.

4 Theoretical background: Factors influencing sentence attribution

Kaiser (2015) conducted a similar study to ours, also based partly on Harris & Potts (2009), with items of a somewhat different structure. Here is an example from Kaiser's experiment concerning expressives, presenting two conditions of one vignette:

(10) 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.

The structure of these items is similar to ours in that the first sentence introduces a non-speaker subject (as well as another person), while the second is possibly ambiguous with regard to whether its content should be attributed to the subject or the main speaker. Kaiser asked the participants questions concerning the attribution of the content of the second sentence (e.g., 'Who didn't care about using foul language?'), which makes her study directly comparable to our Exp. 2.

Kaiser (2015) manipulated the presence/absence of the expressive term as in (10). She found that non-speaker-oriented interpretations were more likely when the expressive was present. In other words, the use of an expressive can boost non-speaker-oriented readings in the contexts that she worked with.

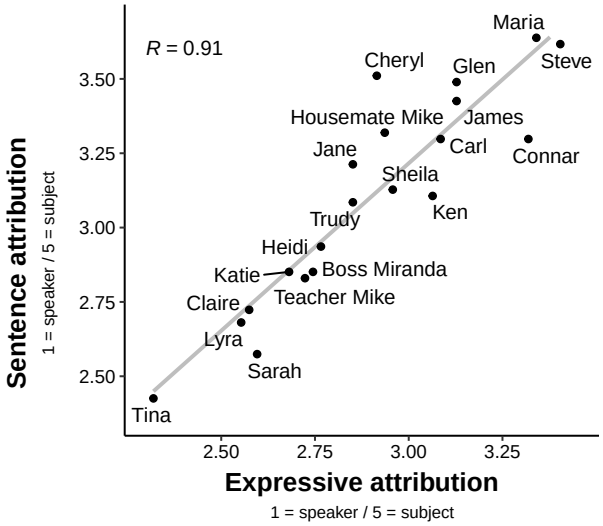

Figure 5 Mean ratings for target items in Exp. 3.

We wanted to know whether we would find the same result with our items and experimental design. This led to Exp. 4 in which we used the same items as Exps. 1-3, but the expressive in the second sentence was replaced with a simple pronoun (e.g., 'He always favors long papers.')

The result may be surprising at first sight: participants in Exp. 4 (with pronoun) were significantly *more* likely to attribute the content of the sentence to the subject compared to Exp. 2 (with expressive). This indirectly confirms the idea from the literature that expressives have a strong preference for speaker-oriented readings: if we take into account the result from Exps. 1–3 (assertoric and *de lingua* commitments tend to be attributed jointly), the finding that the content of a sentence with expressive is more frequently attributed to the speaker than the same sentence with a pronoun means that there is a tendency to attribute the *de lingua* commitment for the expressive to the speaker. So the results are in line with what we would expect. However, it is the exact opposite of Kaiser's results.

We hypothesized that the differences between the two experiments are due to the fact that Kaiser's items were much more easily interpreted as *free indirect discourse* than ours. The notion of free indirect discourse also plays a crucial role in Kaiser's own interpretation of the results of her experiment. Free indirect discourse is a narratological technique where the thoughts or speech of a character in the story is presented, but not in the form of an overt report (with quotation marks or embedding constructions like 'Mary said that . . . '). (11) provides an example:

(11) The hair was curled, and the maid sent away, and Emma sat down to think and

> to be miserable. – It was a wretched business, indeed! – Such an overthrow of everything she had been wishing for. – Such a development of everything most unwelcome! – Such a blow for Harriet! – That was the worst of all.
>
> Austen, *Emma*, cited in Eckardt (2015)

After the introductory sentence, the reader is presented with Emma's rather than the narrator's thoughts.

Our hypothesis led to Exp. 5. In that experiment, we tested whether the results moved into Kaiser's direction if we removed all references to the speaker (both in the instructions of the task and in the test items) and if we consistently used a past tense in the second sentence of the items (e.g., 'favored' rather than 'favors' in (7)). The first change is motivated by the fact that a free indirect discourse reading is only possible when the actual speaker has moved to the background. In our experiments so far the linguistic salience of the speaker precludes a free indirect discourse reading. The second change is motivated by the fact that past tense would be the free indirect discourse form of the verb given that the verb introducing the speech report in our items is always in the past ('said'). In other words, we expected that these changes would make our vignettes more naturally interpreted as narrative passages, in which free indirect discourse is possible, rather than direct utterances, in which such discourse is much less likely.

5 Experiments series 2: Manipulating sentence attribution

We conducted two experiments to investigate which factors influence the attribution of the sentence content:

In **Exp. 4**, the expressive in the second sentence (e.g., 'the jerk') was removed and replaced by a pronoun ('he' or 'she'). We expect that this replacement leads to a higher number of subject-oriented readings of the sentence compared to Exp. 2. This hypothesis is based on the fact that, in the literature, expressives are associated with a strong default speaker-orientation combined with the result from our first series that commitments *de lingua* and assertoric commitments tend to go hand in hand.

In **Exp. 5** the instructions stated that participants would read stories rather than messages. In addition, the possessive 'my' in the first sentence was removed and we added a distinct addressee for the speech report in the first sentence. For example, instead of 'My classmate Sheila said', the text now started with 'Sheila told her friends'. In these ways, we made the speaker less prominent. In addition, the second sentence in the text was always in the past tense. In this way, we encouraged participants to interpret the second sentence as a form of free indirect discourse.

The Appendix illustrates the changes made to our items in these two experiments. In the next sections, we describe them in more detail and discuss the results.

Participants Exp. 4

50 participants were recruited on Prolific. Their mean age was 34 (standard deviation: 13, range: 18–74). 15 participants identified as male; 27 as female. Five participants had a different gender identity. Three participants were removed from the analysis because their native language was not English.

Participants Exp. 5

50 participants were recruited on Prolific. Their mean age was 38 (standard deviation: 12, range: 18–71). 32 participants identified as male; 16 as female. Two participants had a different gender identity. All participants indicated that they were native speakers of English.

Materials and procedure

The materials and procedure were the same as for Exp. 2. However, both experiments contained minor modifications that we hypothesised might increase the probability that participants attributed the second sentence to the subject. We have already listed these modifications above. The experiments can be accessed here (Exp. 4) and here (Exp. 5).

Data treatment

Four (Exp. 4) and one (Exp. 5) participants were removed from the analysis because they made mistakes in more than 20% of the control items.

Results

Fig. 6 shows the distribution of responses for both experiments, alongside the results from Exp. 2. The mean ratings for target items were 3.84 (Exp. 4) and 3.97 (Exp. 5). These ratings were numerically higher than the mean rating in Exp. 2 (i.e., 3.43).

To see whether the sentence attribution ratings were significantly higher in Exps. 4 and 5 compared to Exp. 2, we constructed an ordinal mixed effects regression model predicting rating on the basis of experiment, with random intercepts for participants. Due to convergence issues, item was included as a fixed rather than random factor. Exp. 2 was used as reference level. This analysis indicated that, compared to Exp. 2, ratings were significantly higher in both Exp. 4 (with pronoun instead of expressive) ($\beta = 1.0$, $SE = 0.4$, $Z = 2.2$, $p = .03$) and Exp. 5 (free indirect discourse-like) ($\beta = 1.5$, $SE = 0.4$, $Z = 3.4$, $p < .001$). These results suggest that

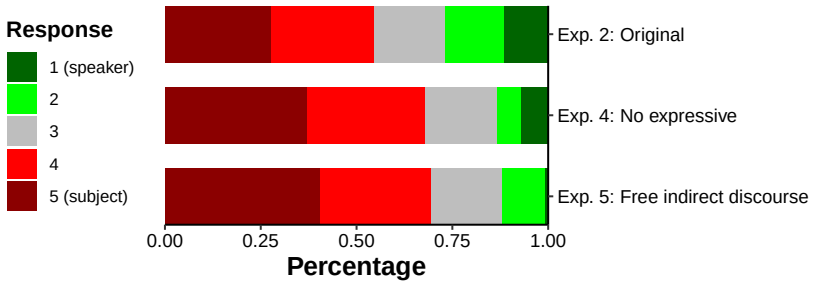

Figure 6 Distribution of responses in Exps. 2, 4 and 5.

the use of an expressive decreases the salience of subject-oriented readings, but a combination of other factors (that is, factors that favor a narrative interpretation) may increase their salience even in the presence of an expressive.

To conclude, the results from Exp. 4 provide evidence for the hypothesis that the presence of expressives leads to a higher number of speaker-oriented interpretations of the sentence (compared to the same sentence with pronoun). Exp. 5 suggests that the difference between Kaiser's results and ours (in Exp. 4) can indeed be explained as the result of interpreting the short text as belonging to a different genre or narrative mode.

6 Discussion

We corroborated the systematic availability of non-speaker-oriented readings of expressives observed by Harris and Potts. Expressives may usually be interpreted from the actual speaker's perspective, but in the right context (i.e. when a different subject is introduced into the discourse as a reported speaker), it is possible to interpret the expressive from a non-speaker's perspective. Crucially, for such a shifted interpretation it is not necessary that the expressive occurs syntactically in the scope of the verb of speaking, as we showed in Exp. 1 (as did Harris and Potts in their experiments). In our test items (as in theirs) only the first sentence had the form of an overt speech report and the expressive occurred in the second, and still participants were roughly equally likely to attribute the expressive to the speaker or to the subject of the first sentence. This goes against configurational approaches that assume semantic binding by speech or attitude predicates (Schlenker 2007; Sauerland 2007).

Still the intuition that a shifted expressive is somehow 'part of a speech report' turns out to be correct. Exp. 3 shows that there is a strong correlation between the attribution of the expressive and that of the sentence content: participants who attribute the expressive to the subject also tend to attribute the sentence as a whole

to the subject. In other words, shifted interpretations of expressives do occur in the right context, but tend to go hand-in-hand with a subject-oriented reading of the sentence in which they occur.

While a configurational approach would have to assume covert operators or binding across sentences to explain this, the results receive a more natural explanation on an account that is pragmatic in nature. By choosing words we usually take on a commitment to their appropriateness, a commitment *de lingua*. From an interpretation perspective, when we hear a sentence we will usually attribute this commitment to the actual speaker, unless there are clues such as quotation intonation, quotation marks, or expressions like 'so-called', to block this attribution. Our experiments show that the prominent introduction of a reported speaker also works as such a clue that the anchor of the commitments is moved away from the speaker. In this picture, unlike in Potts (2005), expressives do not have a separate layer of meaning compared to other words, a layer that 'projects' (to explain the usual speaker-orientation). Commitment *de lingua* uptake is a general phenomenon for all our vocabulary choices, but we only register it for loaded words or when there are clear alternatives (e.g., the use of 'soda' vs. 'pop' as signalling dialectal differences).

Such an account was developed in Hess (2018), but it rested on the problematic assumption of independence. What Exps. 2 and 3 now show is that this assumption is empirically inaccurate, because commitments *de lingua* tend to be attributed in concert with assertoric commitments, i.e., the commitments to the truth of the proposition expressed. (Again, this can be blocked by the use of scare-quotes or similar devices, as discussed in Harris 2016.) This need not mean that the second sentence in our vignettes is syntactically a report. But it is reportative in this more pragmatic sense: the assertoric commitments are attributed to someone else than the speaker.

The results of our second series of experiments fit well within the conceptual apparatus sketched above. Exp. 4 indirectly confirms the idea from the literature that expressives have a strong preference for speaker-oriented readings: if we take into account the result from Exps. 1–3 (assertoric and *de lingua* commitments tend to be attributed jointly), the finding that the content of a sentence with expressive is more frequently attributed to the speaker than the same sentence with a pronoun means that there is a tendency to attribute the *de lingua* commitment for the expressive to the speaker.

The fact that Kaiser found the opposite results for her items can be explained as follows. Her items are constructed in such a way as if they are part of a narrative. For one thing, there is no reference to the actual speaker. If in such contexts, participants come across heavily loaded words like expressives, they will, as always, look for a salient anchor and now find this only in the form of the person whose perception is reported in the first sentence. (Note that in her examples it is always perception verbs,

and while we usually have access to each other's speech what we perceive is more private. That may also make the reported person more salient as an anchor.) In such a context, with the actual speaker absent as a clear anchor in the story, the presence of heavily loaded words will actually function as a trigger to interpret the text as free indirect discourse, and hence lead to a higher prevalence of subject-oriented readings of the whole sentence compared to the neutral pronoun version. The fact that heavily loaded words require an anchor then overrules the default speaker-orientation.

In our Exps. 1–3 the actual speaker was present and hence available as an anchor, resulting in both speaker- and subject-oriented readings of expressive and sentence. As expected, when we removed the reference to the speaker and adjusted the tense to facilitate a free indirect discourse reading as in Kaiser's experiment, the number of subject-oriented readings grew significantly.

The picture that emerges is this. We propose that there are (at least) three constraints at work in the interpretation of expressives:

C1: Commitments *de lingua* for expressives need a salient anchor

C2: Commitments *de lingua* tend to be attributed in concert with assertoric commitments.

C3: The main speaker is by default the most salient anchor for *de lingua* commitments

The third constraint operates only by default, and may be obviated if the speaker is backgrounded, as in Kaiser's experiment and our Exp. 5. In that case another subject becomes the most salient anchor. By C1 the *de lingua* commitment for the expressive is attributed to that subject, and by C2 the assertoric commitment to the whole sentence follows. Thus, the three constraints jointly explain two crucial observations from our second series of experiments: on the one hand, that the use of an expressive facilitates speaker-oriented readings when the speaker is prominent; on the other hand, as indicated by Kaiser's study, that the expressive has the opposite effect when the speaker is backgrounded.

The most interesting further question that these results bring up concerns the contrast between two ways of interpreting a discourse: as a message from a prominent speaker or as a narrative-like text in which the speaker is backgrounded. What factors guide recipients to one or another reading? What consequences does this difference have for the interpretation of other lexical or grammatical categories? These issues are left for future research.

Appendix: Overview of the experiments

Introduction to EXP. 1–4: In this experiment I will write short messages. Please read these messages carefully.

Introduction to EXP. 5: In this experiment I will tell you short stories. Please read these stories carefully.

EXPS. 1–3

My classmate Sheila said that her history professor gave her a really low grade. The jerk always favors long papers.

Who is calling Sheila's history professor a jerk?

Clearly me ○ ○ ○ ○ ○ Clearly Sheila

Who is claiming that Sheila's history professor always favors long papers

Clearly me ○ ○ ○ ○ ○ Clearly Sheila

EXP. 4

My classmate Sheila said that her history professor gave her a really low grade. He always favors long papers.

EXP. 5

Sheila told her classmates that her history professor gave her a really low grade. The jerk always favored long papers.

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