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1 Introduction

This paper presents the results of a series of studies concerning the availability of "shifted", i.e. non-speaker-oriented interpretations of expressives. Potts (2005) claimed that the content of expressives (words directly conveying a strong, typically negative, attitude, e.g., 'the bastard') is always speaker-oriented, unless the expressive is part of overt quotation.

This claim was soon falsified by examples like (1) (Amaral et al., 2007):

(1) [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 (1) is at least possible, if not preferred. To see if such readings are restricted to speech and attitude reports, Harris and Potts (2009) conducted an experiment with vignettes like (2):

(2) 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 ('the cretin') 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 (2), 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.

This pragmatic account relies on the assumption that, in examples such as (2), the expressive should not be construed as covertly embedded in a report, even when its content is attributed to the subject, and not the speaker. Consequently, the pragmatic account assumes that the attribution of the content of the expressive is to a large degree independent from the attribution of the content of the clause in which it occurs. This goes against configurational approaches that assume semantic binding by attitude predicates (Schlenker, 2007; Sauerland, 2007).

Hess (2018) further develops the pragmatic account, arguing that the content of an expressive is attributed as commitment *de lingua* (a concept introduced in Harris 2016: a commitment to the appropriateness of a certain expression in a given context), which is independent of assertoric commitments (i.e. ones concerning the main propositional content of a clause).

In what follows, we employ the terminology of commitment attributions, which are to be distinguished from attributions of literal utterances. Thus, (3), with a direct quotation, attributes the exact words to John, while (4) only attributes the commitment to the proposition that Tories will loose.

- (3) John said "Those bloody Tories will loose the next election".
- (4) John said that the Tories will loose the next election.
- (5) 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, (5) (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.

We hypothesized that the assumption of the pragmatic account is wrong and that subjectoriented readings of expressives are typically accompanied by the attribution of the content of the whole clause to the subject, as in a covert report (continuing the report from the previous sentence), i.e., that commitment *de lingua* attribution is not independent of assertoric commitment attribution. 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 a series of experimental studies.

2 Experimental studies

We conducted three experiments to investigate whether subject-oriented (i.e., non-speakeroriented) 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 twosentence stories such as (2) and had to indicate, 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. If subject-oriented readings of expressives indeed involve covert speech reports, we expect that stories in which the expressive is likely to receive a subject-oriented interpretation are also stories 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 short stories used in the previous experiments. However, in this experiment, each story 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 predict 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 sections, we describe the experiments in more detail, and discuss the results. All experiments were hosted on the PCIbex Farm (farm.ibex.net) (Zehr and Schwarz, 2018).

2.1 Experiment 1: Expressive attribution

2.1.1 Participants

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

2.1.2 Materials and procedure

The materials consisted of 30 two-sentence stories, such as (2). In each story, the first sentence was a speech report describing a negative event (e.g., 'My friend Mike said that his housemate threw a horrible party'). The second sentence always contained an expressive referring to the person being singled out in the speech report (e.g., 'The cretin always invites a lot of people', where 'the cretin' refers to Mike's housemate).

Half of the stories were borrowed from Harris and Potts (2009, Exp. 2); the remaining ones were constructed by us, using Harris and Potts' stories as a template.

Each story was followed by a question. 20 stories (including all of the ones that were borrowed from Harris and Potts, 2009, Exp. 2) were followed by a target question, which asked whether participants attributed the expressive to the speaker or the subject of the first sentence. For example, (2) was paired with the following question:

(6) Who is calling Mike's housemate a cretin?

To answer this question, participants could mark a value on a five-point scale, where 1 indicated a clearly speaker-oriented interpretation ('Clearly me'), and 5 indicated a clearly subjectoriented interpretation ('Clearly Mike'). Fig. 1 shows an example item.

> My secretary Cheryl said that her husband made a complete mess of the basement renovation. The oaf spent a lot of money buying equipment.

> > Who is calling Cheryl's husband an oaf?

Clearly me $\circ \circ \circ \circ \circ \circ$ Clearly Cheryl

Figure 1: Example trial from Exp. 1

The remaining 10 stories were followed by control questions that had a clear-cut answer. For 5 stories, the correct answer was the speaker; for 5 stories, the correct answer was the subject of the first sentence. The response options were the same as for target questions. The order of presentation was randomised for each participant.

Exp. 1 differed from Harris and Potts (2009, Exp. 2) in a number of important respects. First, Harris and Potts varied whether or not the expressive in the second sentence was congruent with the information expressed by the subject in the first sentence. For example, in (2), they varied whether Mike's housemate was said to have thrown a horrible party (congruent) or a fantastic party (incongruent). In our stories, the expressive was always congruent, i.e., the first sentence always set up a negative context in line with the negative connotation of the expressive. Second, Harris and Potts varied whether or not the first sentence contained an intensifier (e.g., 'really', 'totally'). We only used stories without intensifiers. Third, Harris and Potts asked participants *whose view* it is that, e.g., Mike's housemate is a cretin, whereas we ask *who is calling* Mike's housemate a cretin. This was intended to target attribution of commitment *de lingua*, as opposed to a "whose view" question asking only about the attitude expressed, or a "who called" question asking about specific words used.

2.1.3 Results

Results for 10 trials had to be removed because of a technical error. Five participants were removed from the analysis because they made mistakes on more than 20% of the control items. The error rate of the remaining participants was 3%.

The mean rating for target items was 2.95, which is close to the middle of the scale. Speakeroriented responses (i.e., 1 or 2) were given on 43% of the trials; subject-oriented responses (i.e., 4 or 5) on 38% of the trials. The middle value was marked on 19% of the trials. Mean ratings were relatively stable across target items, ranging from 2.52 to 3.20.

These findings show that, although there was a slight preference for expressives to receive a speaker-oriented interpretation, subject-oriented readings were readily available. In Exp. 2, we investigate whether the availability of subject-oriented readings is correlated with the probability with which the second sentence as a whole is attributed to the subject.

2.2 Experiment 2: Sentence attribution

2.2.1 Participants

50 participants were recruited on Prolific. Their mean age was 34 (range: 19–58). 20 participants identified as female, 23 as male, 7 had a different gender identity. Two participants were removed from the analysis because they indicated their native language was not English.

2.2.2 Materials and procedure

The materials were the same as for Exp. 1. However, in this experiment, the target question asked whether participants attributed the content of the second sentence to the speaker or the subject of the first sentence. For example, (2) was paired with the following question:

(7) Who is claiming that Mike's housemate always invites a lot of people?

As in Exp. 1, participants answered by marking a value on a five-point scale, where 1 indicated a clearly speaker-oriented interpretation ('Clearly me'), and 5 indicated a clearly subject-oriented interpretation ('Clearly Mike').

The order of presentation was randomised for each participant.

2.2.3 Results

Two participants were removed from the analysis because they made mistakes on more than 20% of the control items. The error rate of the remaining participants was 3%.

The mean rating for target items was 3.44, which indicates a slight preference for attributing the content of the second sentence to the subject rather than the speaker. Such subject-oriented readings suggest that participants readily construed the second sentence as a covert speech report continuing from the previous sentence.

Fig. 2a plots, for each target item, the average ratings in Exp. 1 and Exp. 2. We observed a robust correlation between these ratings (r(18) = .66, p = .002). Hence, items where the expressive often received a subject-oriented interpretation tended to be items where the content

of the entire second sentence was attributed to the subject, thus supporting the idea that subject-oriented readings of expressives involve covert speech reports.



Figure 2: Scatterplots showing, for each story, the average rating for the expressive (1 = speaker-oriented, 5 = subject-oriented) against the average rating for the whole sentence (1 = speaker-oriented, 5 = subject-oriented).

Exp. 3 seeks to provide more direct evidence 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.

2.3 Experiment 3: Expressive and sentence content attribution

2.3.1 Participants

50 participants were recruited on Prolific. Their mean age was 37 (range: 21–72). 24 participants identified as female, 20 as male, 2 had a different gender identity. One participant was removed from the analysis because they indicated their native language was not English.

2.3.2 Materials and procedure

The materials were the same as for Exps. 1 and 2. However, in this experiment, each story was followed by two questions rather than one. For target items, the first question asked whether participants attributed the expressive to the speaker or to the subject of the first sentence (i.e., the target question from Exp. 1); the second question asked whether participants attributed the content of the second sentence to the speaker or to the subject of the first sentence (i.e., the target question from Exp. 2). 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 order of presentation of the two questions was randomised on each trial. The order of presentation of the stories was randomised for each participant.

2.3.3 Results

For four participants, demographic information was not recorded due to a technical error. Data for these participants was still included in the analysis. Two participants were removed from the analysis for making mistakes on more than 20% of the control items. The error rate of the remaining participants was 3%.

The mean ratings were 2.89 for the expressive attribution question and 3.1 for the sentence attribution question. These means are similar to what we observed in Exps. 1 and 2 (i.e., 2.95 and 3.44).

Fig. 2b plots, for each target item, the average ratings for the two questions. These ratings were strongly correlated (r(18) = .91, p < .001). We also analysed the overall correlation between participants' ratings to the two questions without aggregating over items. Again, we observed a robust correlation (r(938) = .71, p < .001).

The latter analysis is the more relevant one, since it shows that participants who attributed the expressive to the subject were also likely to attribute the sentence in which it occurred to the subject, which supports the idea that commitments *de lingua* and assertoric commitments tend to be attributed jointly.

3 Discussion

We corroborated the systematic availability of non-speaker-oriented readings of expressives observed by Harris and Potts. At the same time, our experiments confirmed the hypothesis that the assumption of the pragmatic shift account is wrong: non-speaker-oriented interpretations of expressives are typically accompanied by non-speaker-oriented interpretations of the whole clause in which they occur; i.e. commitments *de lingua* tend to be attributed in concert with assertoric commitments. This suggests that subject-oriented readings of expressives—at least in examples like (7)—should be construed as cases where the expressive is covertly embedded in a report, which undermines the motivation for the pragmatic account.

At the same time, these subject-oriented readings of expressives do not lend themselves easily to a quotational analysis such as proposed by Anand (2007). Quotation is normally entirely flexible in scope and should make it possible to attribute a single word to the subject without attributing the content of the whole sentence (e.g. 'Mike didn't know that the 'cretin' wanted to do something nice for him.').

Our results also shed light on the scope and meaning of the "shift together" constraint posited by Anand and Nevins (2004): the reason that multiple perspectival elements in one clause/domain tend to shift to the same perspective may be simply that the whole clause/domain is interpreted as attributed to someone else. This opens up the possibility of reducing many complex and puzzling semantic phenomena to interactions between *de lingua* and assertoric commitments. The precise relations between commitment attribution on the one hand and mechanisms of (covert) quotation or shift-together constraints requires much further theoretical analysis, as well as empirical investigation.

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