

The Perspective-Sensitivity of Presuppositions

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Abstract

Presuppositions are perspective-sensitive: they may be evaluated with respect to the beliefs of a salient protagonist. This happens not only in well-known cases of perspective shift such as *free indirect discourse*, but also when the perspective shift is less obvious, but still present, such as in examples of so-called *protagonist projection* (Holton 1997). In this paper I show that this simple observation explains many puzzling facts noted in connection with presuppositions over the last fifty years, concerning for example emotive and cognitive factives, temporal clauses and reason clauses.

1 Introduction

According to a widely accepted view, the content of presuppositions needs to be entailed by the common ground of the interlocutors, or at least by what is believed by the speaker of the utterance to be compatible with the common ground cf. Stalnaker (1974). It is also widely known that certain data contradict the predictions of this account. An example is the case of emotive factives such as *regret*, *be glad*, etc. Although traditionally taken to be core cases of factive verbs, emotive factives can be acceptable in contexts that establish the falsity of the embedded clause:

- (1) Jane misheard that the dinner was free and she was glad not to have to pay. (after Karttunen 2016)

Similar examples lead Klein (1975) and later scholars to argue that emotive factives do not really presuppose their complements, only a weaker statement, e.g. that the subject believes the truth of the complement. Gazdar (1979) proposed an alternative approach,

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according to which in the second conjunct of the example in (1) we are observing some type of perspective shift, making the point of view of a relevant protagonist salient for the evaluation of the presupposition. Gazdar's (1979) idea, however, has been mostly forgotten.

The idea that presuppositions can be satisfied not in (what the speaker believes to be) the common ground but in what some character of a story believes (to be common ground) has resurfaced more recently in the work of Holton (1997), who argued that non-factive readings of cognitive factives such as *know* in (2) can be explained by assuming perspective shift in the first conjunct:

- (2) She knew that he would never let her down, but, like all the others, he did. (Holton 1997)

In his four-page paper Holton (1997) coined a name, *protagonist projection*, for the perspective shift he described, but did not give a formal analysis of the phenomenon and how it interacts with presuppositions. In a later paper, Holton (2017) suggested that *protagonist projection* might be *free indirect discourse* (FID). FID is a style that retains certain aspects of a character's speech (or inner monologue), without being a direct quotation. It is exemplified by the second sentence in (3) below:

- (3) Mary really liked the song by Kendrick Lamar that she heard on the radio on her way home. *She would buy his new album tomorrow.* (Hinterwimmer 2017)

While the pronoun *she* and the past tense is interpreted from the narrator's perspective, the temporal adverb *tomorrow* is interpreted from the point of view of Mary.

The idea that in FID presuppositions, similarly to the temporal adverb above, could be interpreted with respect to the belief state of some salient protagonist is plausible. The problem is that the examples (1) and (2) above are not cases of FID. One reason for this conclusion is that FID, as usually understood, cannot be embedded, it can only apply to matrix clauses. E.g. in the following example the second clause cannot be understood as FID, cf. Hinterwimmer (2017):

- (4) #Because Mary really liked the song by Kendrick Lamar that she heard on the radio on her way home, *she would buy his new album tomorrow.*

Yet in (1) and (2) the clauses that need to be understood under perspective shift are embedded. Perhaps we should then give up on the idea of perspective shift being able to explain certain non-factive readings of factive verbs?

Still, the solution that attempts to derive (1) and (2) from some special property of factive verbs is not satisfactory: Many other presuppositional expressions are also sensitive to perspective, for example the presuppositions of temporal modifiers or preposed *because*-clauses:

- (5) Because the train was about to depart, James ran towards it as fast as he could. What James did not know was that the train drivers were on strike that day.

The content of preposed *because*-clauses is normally assumed to be presupposed. But in the case of the above example, it is interpreted as only being true according to what James believes. This is entirely parallel to the case of emotive factives mentioned above. Overall,

such data show that we are dealing with systematic facts of perspective-sensitivity that should not be tied to individual types of presupposition triggers.

If not FID, then what sort of perspective shift is manifested in examples (1), (2) and (5)? Studies in literature have since long noted a type of mixed perspective representation, distinct from FID, that records subjective experiences of perception. Observe (6):

- (6) The train was full of fellows: *a long long chocolate train with cream facings ... The telegraph poles were passing, passing.* (Joyces 1969: 20, cited in Brinton 1980, p.374)

The description above presents a perceptive experience from some character's perspective, but there is no suggestion that it records an inner monologue. This style has been known under various names, e.g. *non-reflective consciousness* (Banfield 1982), *represented perception* (Brinton 1980), *narrated perception* (Fludernik 1993) and more recently in philosophy and linguistics as *protagonist projection* (Holton 1997, Stokke 2013, Buckwalter 2014, Abrusán 2020) or *viewpoint shift* (Hinterwimmer 2017). I will use the term *protagonist projection* (PP).

In this paper I discuss a number of puzzling examples in which a predicted presupposition does not seem to place a requirement on the speaker and her common ground, but can be interpreted from a character's point of view. I propose a unified analysis of all these examples that does not attribute the source of the puzzle to some peculiarity of the presupposition triggers discussed. Rather, the clause in which the presupposition is embedded is interpreted as protagonist projection. As a consequence, the presupposition can be evaluated in a context other than the utterance context. I argue that presuppositions, in general, can be interpreted in a protagonist-related way and propose a concrete analysis of their shifted interpretation. Once we realise that the character whose beliefs are relevant for presupposition satisfaction (or accommodation) can be a protagonist whose thoughts or perceptions are salient in the discourse, many puzzling problems of weakened or cancelled presuppositions disappear.

Many, but not all. It is not claimed that all examples of canceled or weakened presuppositions are due to perspective shift. Facts of presuppositions are sensitive to various linguistic and discourse factors (e.g. focus, topic, the probability of presupposed content, etc.) that greatly influence what is (perceived as) the presupposition of a sentence (see Abrusán *to appear* for an overview). What this paper shows is that perspective shift is a factor that influences presupposition interpretation in subtle ways, and we need to pay attention to it.

2 Examples of perspective-sensitivity of presuppositions

This section first reviews some cases of factive verbs that fail to project or allow a weakened interpretation. I also add new data concerning presuppositional subordinated clauses that behave in a similar way. I argue that the unexpected behaviour of presuppositions in these examples is due to interpreting the presupposition from the perspective of someone other than the speaker. In this paper I concentrate on propositional presuppositions. Though I

cannot discuss a wider range of presuppositional expressions due to space limitations, the proposal developed in this paper is expected to carry over to other types of presuppositions as well.

2.1 Emotive factives

Emotive factives such as *regret* were assumed to be prime examples of factive verbs since the earliest modern discussions of factivity in linguistics (cf. Kiparsky and Kiparsky 1970, Karttunen 1971). This is in accordance with the intuition that from (7a) one tends to infer that it is raining and that (7b) seems to be contradictory:

- (7) a. I doubt that John regrets that it is raining
b. #It is not raining but John regrets that it is raining.

Not only were emotives shown to be factive, Karttunen (1971) observed that in some sense emotive factives are more factive than cognitive factives (e.g. *discover*), based on examples such as (8).

- (8) If I {regret/discover} later that I have not told the truth, I will confess it to everyone.

The example with the verb *discover* does not suggest that I have not told the truth; in contrast, using the verb *regret* in this example amounts to an admission of the truth of the complement. Accordingly, cognitive factives such as *discover* were proposed to be semi-factives, while emotive factives such as *regret* were argued to be (true) factives.

Nevertheless, an interesting challenge was raised for analysing emotive factives as true factives already in the seventies. The observation, first made by Klein 1975, is that sentences with *regret* are acceptable in contexts in which a false belief attributed to the subject entails the falsity of the complement of *regret*, as shown in (9a). Later, similar examples were multiplied in the literature by various authors, cf. (9b-d) as well as (1) above:

- (9) a. Falsely believing that he had inflicted a fatal wound, Oedipus regretted killing the stranger on the road to Thebes (Klein 1975, quoted in Gazdar 1979:122)
b. Mary, who was under the illusion that it was Sunday, was glad that she could stay in bed. (Gazdar 1979:122)
c. John wrongly believes that Mary got married, and he regrets that she is no longer single. (Egré 2008, based on Schlenker 2003)
d. Sally misremembered not having left a tip and regretted it. (Karttunen 2016)

In all the above examples, the first conjunct entails the falsity of the complement of *regret*, still the sentences are acceptable. Does this mean that a factive analysis is untenable?

This is indeed what Klein (1975) argued: according to him emotive factives only presuppose that the attitude holder believes the truth of the complement. If this is the case, the examples above can be explained easily since there is no contradiction between the presupposition of *regret* and the first clause of the sentence. This idea was later adopted by a number of researchers, cf. e.g. Schlenker (2003), Egré (2008). Nevertheless, there is a price to pay: these accounts need to invoke some extra pragmatic strengthening mecha-

nism to explain the data in which sentences with *regret* do appear to be straightforwardly factive, as in (7) and (8) above. One such mechanism might be *exportation*, namely the assumption that the beliefs of the attitude holder, under the right circumstances, can be inherited by the speaker of the utterance or even become part of the common ground of the interlocutors. However, as was argued at length by Geurts (1999), *exportation* is a mechanism that raises at least as many questions as it answers. This is because we do not, in typical circumstances, automatically inherit the beliefs of the people we talk about.

Another idea was explored by Huddleston et al. (2002): according to them, *regret* is factive, but not entailing. This idea was endorsed by Klinedinst (2012) and also Djärv et al. (2018). If presuppositions can be locally accommodated, this move might allow us to avoid the contradiction in the examples in (9). However, the claim that some presuppositions are entailed but others are not is controversial. In this paper I follow the more standard assumption that presuppositions are also entailed, thus factives are veridical and presuppositional.

A different type of reply to the problematic examples in (9) was given by Gazdar (1979). According to him, these examples involve some kind of shift to the perspective of the attitude holder. Therefore, they do not give sufficient grounds for the claim that verbs such as *regret* are not factive. Gazdar (1979) says the following:

“What seems to be happening in such sentences is that the verb of propositional attitude in the subordinate clause delimits a restricted set of worlds (not including the actual world), and it is only with respect to this set of worlds that the verb of propositional attitude in the matrix sentence gets evaluated.” Gazdar (1979), p.

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Gazdar’s idea was mostly forgotten, although see remarks pointing in a similar direction in Karttunen (2016) and Abrusán (2011). A recent approach to emotive factives that is somewhat similar in spirit is that of Djärv (2019) who proposes that emotive factives presuppose that the attitude holder’s evidential modal base entails *p* and also that the attitude holder’s evidence for *p* must be contextually recoverable. This approach, though not cast in terms of perspective shift, predicts variation in the presupposition of emotive factives based on the perceived “cognitive distance” between speaker and attitude holder. This account differs however from Gazdar (1979) and the proposal developed in this paper in that it stipulates a special type of presupposition for emotive factives.

The advantage of the account appealing to perspective shift is that nothing special needs to be said about examples where emotive factives behave as regular factives. The question remains though, what kind of shift to the protagonist’s perspective are we observing in the examples in (9)? Gazdar (1979) mentions that the relevant type of perspective shift might be free indirect discourse (FID). However, this cannot be the full story: Although the examples bear some similarity to sentences in FID, they also show important differences. For example, FID, as understood in the semantics literature, is standardly thought to be a report of a mental or spoken speech act. Yet, this does not seem to be required for the examples above. Second, examples of FID cannot be embedded, as was shown in the introduction. However, in the examples above the relevant clauses were embedded. Thus we are still left with a puzzle.¹

¹Gazdar (1979) observed that similarly to factives, certain examples of anaphoric pronouns can also

2.2 Other types of factives

In defence of his idea concerning emotives, Gazdar (1979) mentions that similar examples are possible with cognitive factives such as *aware* and *realize* as well. In the philosophy literature, non-factive examples with *know*, *realize* and *learn* have sparked a debate about the nature of factivity, with some even questioning whether truly factive verbs exist at all (cf. Hazlett 2010):

- (11)
- a. Believing that he had inflicted a fatal wound, Oedipus slowly became aware that he was a murderer. But the wound was not mortal. (based on Gazdar 1979)
 - b. Jones had trouble breathing, sharp pains in his side, several broken ribs and a partially collapsed lung, and he was in the middle of nowhere without any real rescue assets—it was then that he realized he was going to die out there. But miraculously, he was rescued. (based on Hazlett 2010)
 - c. She knew that he would never let her down, but, like all the others, he did. (Holton 1997)
 - d. It's not what he doesn't know that bothers me, it's what he does know for sure but just isn't true. (Will Rogers about Ronald Reagan, from Yablo 2008)
 - e. Everyone knew that stress caused ulcers, before two Australian doctors in the early 80s proved that ulcers are actually caused by bacterial infection. (Hazlett 2010)

Holton (1997, 2017) argued that what happens examples such as (11c) is a type of perspective shift that he calls *protagonist projection*:

I suggest that these sentences work by projecting us into the point of view of the protagonist; let us call the phenomenon *protagonist projection*. In each case the point of view into which we are projected involves a false belief. We describe the false belief using words that the protagonists might use themselves, words that embody their mistake. So we deliberately use words in ways that do not fit the case. That is why they provide no evidence that (...) *knows* is not a factive. (Holton 1997, p.626)

Thus, once we understand the relevant clauses as interpreted from the perspective of a protagonist, the above examples do not show the verb *know* is not factive. Many researchers have adopted Holton's explanation (e.g. Stokke 2013, Buckwalter 2014), the

be interpreted under some kind of perspective shift, cf. (10a):

- (10)
- a. Oedipus, who (mistakenly) thought he had kidnapped the King of France, locked him in a broom cupboard.
 - b. Oedipus (mistakenly) thought he had kidnapped the King of France. He locked him in a broom cupboard.

In (10a) the pronoun *him* refers to the individual that Oedipus would describe as the king of France. Note that this example works similarly even if the last clause is in a separate phrase, as in (10b). It is highly probable that certain problematic cases of discourse anaphora and modal subordination can be subsumed under the analysis of perspective shift outlined in this paper. However, since the topic of discourse anaphora is extremely complex, it would take us too far to develop it in detail in this paper.

latter presenting experimental evidence that subjects do interpret examples such as the above under some kind of perspective shift.

Note that the explanation appealing to perspective shift probably does not apply to every case of non-factive reading of factives. For instance, semi-factives such as *realize* and *discover* were subject to a lot of discussion in linguistics. A promising line of analysis argues that in some cases the special behaviour of this class can be explained by factivity being sensitive to the effects of focus on the embedded constituent, cf. Beaver (2010), Abrusán (2011), Simons et al. (2016). Thus perspective shift is only one possible reason why non-factive readings might arise with factives, but not the only one.

Admittedly, it is harder to find perspective-shifted interpretations of examples with cognitive factives (other than *know*) than with emotive factives. It is well known that there are differences among various types of factive predicates (and even individual predicates within the same class) in how easily they allow processes that weaken the factive inference such as focus or explicit cancellation of the factive presupposition, see for example Abrusán (2016), Tonhauser et al. (2018), Djärv et al. (2018) and Schwarz et al. (2020). These differences might also be connected to why perspective shift seems to be harder with cognitive than with emotive factives. One reason for this might be that emotive lexical content makes the protagonist-related reading more salient than the lexical content of cognitive factives. The important point to note is that perspective-shifted readings are sometimes possible and seem to be at play in many examples commonly discussed.

Sill, the nature of this shift remains unclear: Holton (1997), made very important observations and coined the term *protagonist projection*, but he did not give an analysis of this phenomenon in his short paper. Holton (2017) suggests that what we are observing is an instance of the literary technique *free indirect speech*, (aka FID), mentioned above. As I show below, this cannot quite be true, but is not far from the truth either: FID and protagonist projection are subtypes of a single broader category of perspective shift.²

2.3 Temporal clauses

Temporal clauses headed by *before*, *after*, *since*, etc. are widely thought to be factive (cf. Heinämäki 1978, Beaver and Condoravdi 2003, among others). For example, (12a) seems to presuppose that the president resigned and (12b) that the referent of *he* rock'n'roll'd at some point:

- (12) a. The president released this video before he resigned. (a variant of an example by Beaver and Geurts 2014)
b. It has been a long time since he rock'n'roll'd. (Condoravdi 2010)

Still, it is easy to find examples in which factive inference of temporal clauses seems to disappear due to perspectival reasoning: The examples in (13) can be understood as reporting a situation in which John misunderstood Mary's intention. This is shown by

²In literary theory FID (or *represented speech or thought* in Banfield's (1982) terminology) is sometimes used to cover a wider set of phenomena, including the ones discussed in this paper. In linguistics, the term is used to refer to a rather specific case of a report of the protagonist's inner or external speech: thoughts that were given a linguistic form by the protagonist herself. I use FID in the latter sense of the term.

the fact that they can be felicitously followed by *But in fact she only made an innocent remark*.

- (13) a. John left after Mary made fun of him.
- b. John avoids Mary ever since she sent him an abusive email.

We might also create analogous examples to those seen with emotive factives in the previous subsection:

- (14) Oedipus was depressed after he killed the stranger on the road to Thebes. But the wound he inflicted was not fatal.

Note that the examples in (13) and (14) involve *after* and *since*, for which non-veridical readings have not been reported. The case of *before*-clauses is slightly different as they are known to allow certain non-veridical readings: (15) illustrates the so-called counterfactual reading, and (16) the non-committal reading:

- (15) *counterfactual reading*
Mozart died before he finished the Requiem. (Beaver and Condoravdi 2003)
- (16) *non-committal reading*
 - a. I left Trafalgar Square about half an hour ago and it started to look scary. The happy crowd that had made its way towards the square for some reason got cut off by the police and the Trade Union Congress march was prevented from getting in for their planned meeting. I gather that McDonalds has been trashed. Tourists seemed to be mingling curiously with the demonstrators in the square, but there was no violence at that time. Yet the police seem to be blocking off all the exits. *I decided to leave before there was any trouble.* (Condoravdi 2010)
 - b. John attended a party held at Bill's house. Bill drank a lot and looked as if he was going to get drunk. Since John hates to deal with drunkards, *he left before Bill got drunk.* (Ogihara 1995).

Many researches since Anscombe (1964) have taken the possibility of non-veridical readings with *before*-clauses to show that these temporal clauses should not be given a meaning that entails and presupposes the truth of the temporal clause. However, as Condoravdi (2010) argues convincingly, in contexts which do not support a counterfactual or non-committal construals the veridical implication is inevitable and uncancellable:

- (17) #Ed left before we were in the room. In fact, we never made it into the room at all.

Following Condoravdi (2010), Beaver and Condoravdi (2003) and others, I assume that *before*-clauses are veridical and factive. According to these authors, the counterfactual implication of (17) can be analysed via introducing modal alternative worlds in which the temporal clause could be true.

As for the non-committal reading, although Beaver and Condoravdi (2003) and Condoravdi (2010) extend their modal analysis to explain these cases as well, we might notice that the content of the *before*-clause is interpreted from the subject's point of view, rather

than the point of view of the speaker. This is hard to see in the case of (16a) as it involves a first person subject, but becomes more evident if we change the example and give it a third person subject: in this case the speaker of the discourse is committed to the falsity of the content of the temporal clause:

- (18) John decided to leave before there was any trouble. But in fact everyone was very peaceful and he really had no reason to worry.

An argument in favour of this conclusion is that, as was already noted by Heinämäki (1978), the non-veridicality (and their lack of presupposition) in the above cases is highly context-dependent: the information in the preceding context helps establish the relevant reading. Without it, the examples could also have a veridical or even counterfactual reading. But what the context does in the above examples is precisely making the point of view of the protagonist salient. I propose therefore that non-committal readings of *before*-clauses also belong to the class of examples in which the temporal clause is interpreted under some type of perspective shift. Note that a version of (13a) with *before* also allows this interpretation:

- (19) John left before Mary made fun of him.

In sum, temporal clauses, similarly to factives discussed above, allow an interpretation in which their veridical and presupposed content is interpreted from the perspective of a relevant protagonist.

2.4 Preposed *because*-clauses

Preposed *because*-clauses are normally assumed to be factive, i.e. they both entail and presuppose the content of the embedded clause, cf. e.g. Hooper and Thompson (1973), Larson and Sawada (2012):

- (20) a. Because it rained in the afternoon, the picnic was cancelled.
b. Because her son owns stock in Xerox, Mildred drives a Mercedes. (Larson and Sawada 2012)

In contrast, *because*-clauses that are not preposed typically are not presupposed, instead in this case it is the main clause that can function as if it was presupposed:

- (21) a. The picnic was cancelled because it rained in the afternoon.
b. Mildred drives a Mercedes because her son owns stock in Xerox.

It is easy to find examples with preposed *because*-clauses in which the truth of the complement is neither entailed by the sentence nor presupposed by the speaker. What is implied in these examples, instead, is that some protagonist believes the truth of the content of the *because*-clause:

- (22) a. Because the train was about to depart, James ran towards it as fast as he could. What James did not know was that the train drivers were on strike that day.

- b. Because he needed money very quickly, Fred robbed a bank. Unbeknownst to him, he just won a million dollars on the lottery. (based on an example in Larson and Sawada 2012)
- c. Because Mary made fun of him, John left the room. But in fact she only made an innocent remark.

It is interesting to note that Charnavel (2019) observed recently that non-preposed (hence non-factive) *because*-clauses can be interpreted from the perspective of a participant in the main clause. She cites three empirical arguments for this conclusion: First, *because*-clauses can contain anaphors exempt from Condition A whose antecedent is an event participant the main clause, such as *herself* in (23a). Second, certain epistemic modals in *because*-clauses can be anchored to the event participant in the main clause, cf. (23b). Third, evaluative elements in the *because*-clause such as *embarrassing* in (23a) or *great* in (23c) can also be tied to an event participant in the main clause.

- (23)
- a. Liz_i left the party because there was an embarrassing picture of herself_i going around.
 - b. Airplanes frighten John because they might crash. (after Stephenson 2007)
 - c. Liz voted for Trump because he was going to be a great President.
(examples from Charnavel 2019)

Charnavel (2019) explains these cases by assuming that the lexical meaning of the causal connective *because* is relativised to a judge parameter.

We might wonder if Charnavel’s (2019) theory can be extended to explain the perspective sensitivity of the factive inference observed above in connection with the examples in (22). One would need to say that the factive inference, when it arises, could also be tied to the judge parameter: it is the judge who needs to presuppose the truth of the *because*-clauses. However, I will pursue a different type of explanation, one that allows us to give a uniform explanation of all the examples discussed in this paper.³

2.5 Preview

I argue that all the examples discussed above are interpreted under the type of perspective shift that, inspired by Holton’s (1997) paper, came to be known recently as *protagonist projection* (PP) (cf. Stokke 2013; Buckwalter 2014; Abrusán 2020.) Similarly to FID, PP indicates that the relevant clause is interpreted simultaneously with respect to two contexts: The context of utterance and the context of thought of a relevant protagonist. Unlike FID, PP can be embedded and does not imply that the protagonist uttered the corresponding sentence explicitly or silently in her mind. The presuppositions of clauses in PP only need to be satisfied in the beliefs of the protagonist: this is why the examples discussed in this section did not make any requirements on the global context or the

³Some have argued that all preposed adverbial clauses are pragmatically presupposed, cf. Givón (2001), Verstraete (2004). However, the validity of this general claim has yet to be established. Preposed *although*-clauses, for example, seem to allow non-presuppositional readings, as in *Although Mary was tired, she tried to finish her paper*. Still, note that Kiparsky and Kiparsky (1970) has also observed that preposing certain subordinate clauses makes them factive, eg. *That the president was shot dead was (not) reported by the UPI* (Kiparsky and Kiparsky 1970, example slightly modified).

beliefs of the author of the utterance context, i.e. the narrator.

In the next section I discuss PP in more detail and outline an analysis based on Abrusán 2020. In Section 4 I show how analysing the problematic examples as PP can explain their unexpected projection properties. Although I develop the argument within a particular analysis of PP, note that the idea that presuppositions might be satisfied in the beliefs of the protagonist due to PP (or other types of perspective shift) is independent from this analysis and is in principle compatible with alternative ways of thinking about PP as well, e.g. Hinterwimmer (2017) or Stokke (*to appear*).

3 Protagonist projection

According to standard wisdom, there are three modes of representing a character’s point of view in discourse: *direct discourse* (aka quotation, DD), *indirect discourse* (ID) and *free indirect discourse* (FID). In DD the perspective of a character is represented linguistically in a context whose coordinates have completely shifted to the character’s discourse; in ID they are assumed to be those of the narrator’s discourse; and in FID they are a mixture of the two:

- (24) a. Mary told John: “I will leave you tomorrow.” [DD]
b. Mary told John that she would leave him the day after. [ID]
c. Mary looked at John. *She would leave him tomorrow.* [FID]

The FID-mode of interpretation fixes which context-sensitive elements need to be interpreted from the perspective of the character (in (24c), *tomorrow*) and which ones from the perspective of the narrator (in (24c), the pronouns *she*, *him* and the past tense).

However, the intermediate category of mixed perspectives contains more than just FID. An important aspect of FID is that it rephrases a character’s speech, whether it was uttered out loud or only in the form of mental speech. Yet some examples in which we see a mixed perspective represent not so much (inner) speech but rather a perceptive experience that need not have a linguistic form, cf. (6) repeated below:

- (6) The train was full of fellows: *a long long chocolate train with cream facings ... The telegraph poles were passing, passing.* (Joyces 1969: 20, cited in Brinton 1980, p.374)

The protagonist need not tell herself “the telegraph poles are passing, passing”, most likely she only registers this in her consciousness in a non-verbal form. Cases like this have been sometimes discussed in literary theory under the names *non-reflective consciousness* (Banfield 1982), *represented perception* (Brinton 1980), *narrated perception* (Fludernik 1993) and in analytical philosophy and linguistics under yet other names (*protagonist projection* (Holton 1997, Stokke 2013, Buckwalter 2014, Abrusán 2020), *viewpoint shift* (Hinterwimmer 2017) or *perspective shift* (Harris and Potts 2009):

- (25) *Protagonist projection*
a. *He gave her a ring studded with diamonds*, but they turned out to be glass. (Holton 1997)

- b. When Mary stepped out of the boat, *the ground was shaking beneath her feet* for a couple of seconds. (Hinterwimmer 2017)
- c. A great brush swept smooth across his mind, sweeping across it moving branches, children’s voices, the shuffle of feet, and people passing, and humming traffic, rising and falling traffic. *Down he sank into the plumes and feathers of sleep, sank, sank and was muffled over.* (Mrs Dalloway, cited in Oltean 1993, p.711)

Following Abrusán (2020), I subsume all these examples under the term *protagonist projection* (PP).

3.1 Empirical properties of PP vs. FID

Let us compare *protagonist projection* (PP) to its better understood cousin, *free indirect discourse* (FID), shown in italics below:

- (26) a. Tom sighed. *Now he was rich.* (Schlenker 2004)
- b. Tom frowned. *Unfortunately, the damn ghost in the attic was making noises again.* (based on Eckardt 2014)

PP is similar to FID in that the perspective shift is not marked by any overt perspective-shifting operator. But the two differ in two important respects:

(a) Firstly, not the same elements can receive a shifted interpretation in FID as in PP. In FID, indexical adverbs (e.g. *now, today, yesterday, here, etc.*), evaluative expressions (e.g. adverbs such as *unfortunately*, adjectives (e.g. *dear*), nicknames and attitudinal nouns), presuppositions⁴ (e.g. the presupposition of *the ghost* in (26b)), and expressive meaning (e.g. *damn*) are interpreted from the point of view of the protagonist, while pronouns⁵ and tense (e.g. past tense in (26)) are interpreted from the narrator’s (speaker’s) perspective.

In PP, indexical adverbs such as *yesterday, tomorrow* cannot be interpreted from the perspective of the protagonist, as was observed by Stokke (2013):⁶

- (27) A week ago, Ann was pacing around after coming home from the jeweller, disappointed and angry with John. *#Yesterday/the day before he gave her a ring studded with diamonds, but they turned out to be glass.* (Stokke 2013)

At the same time, evaluative expressions, presuppositions and expressive meaning can be interpreted from the protagonist’s perspective in PP, cf. Stokke (2013) and Abrusán (2020). Tense (e.g. the past tense in the example above) and pronouns (e.g. *her* in the example above) are interpreted from the narrator’s (or speaker’s) perspective, as in FID.

⁴In Schlenker’s (2004) analysis of FID, some presuppositions are interpreted from the perspective of the narrator. See Abrusán (2020) for discussion.

⁵More precisely, gender features—in contrast to person features—can shift in FID, as was shown in Sharvit (2008).

⁶The adverbs *now* and *here* can (though rather infrequently) appear in PP (cf. Brinton 1980 and Abrusán 2020). However, these items were argued to be unreliable tests for indexical shifting by Eckardt (2014).

(b) The second important difference between PP and FID concerns whether they report a (possibly silent) utterance made by the protagonist, or merely represent the mental state of a protagonist. FID is a more or less faithful reproduction of the protagonist’s internal speech/thoughts (their “stream of consciousness”), as shown by the possibility of adding *x thought/said*, as an afterthought or interjection, cf. (28a). PP, on the other hand, is not necessarily an internal speech or thought report: if a parenthetical is added to a sentence interpretable as PP, it turns into an example of FID cf. (28b), cf. Brinton (1980):

- (28) a. *Tomorrow was her sixth year anniversary with Spencer, she thought, and it had been the best six years of her life.* (Maier 2015)
b. *A few drops of rain were falling, she thought/realized.*

Instead of parentheticals, PP is more likely introduced in texts by so-called “perception indicators” or “window openers”, such as *Look!*; *She turned round; he looked up, etc.:*

- (29) He looked back from the door: *Now she was astonishingly beautiful.*

Although PP describes the perceptions and mental states of a protagonist, taking her point of view, the linguistic characterisation of the internal world of the protagonist is external to the protagonist: The actual linguistic form that describes these perceptions and mental states is created by the narrator, and not (or at least not necessarily) by the protagonist herself. (cf. Brinton 1980, Banfield 1982, Oltean 1993 and Hinterwimmer 2017, Abrusán 2020). There is no presumption of a silent (or loud), internal (or external) speech act, cf. the examples in (25).

The quotation-like aspect of FID is also shown by the fact that except for parentheticals such as *she thought* above, examples of FID cannot be syntactically embedded, as was shown by (4). In contrast, examples of PP can be found in syntactically embedded positions, see for example (25a) and (25b).

3.2 An analysis of PP

Most current analyses of FID propose that phrases used in this mode are interpreted simultaneously with respect to two contexts: the context of utterance which is the context of the narrator (speaker) and an internal context (the context of thought) that is tied to the protagonist (cf. Doron 1991; Recanati 2000, 2010; Schlenker 2004; Sharvit 2008; Eckardt 2014). Recently, Stokke (2013) and Abrusán (2020) proposed a bi-contextual analysis for PP as well. Below I briefly introduce Abrusán’s (2020) analysis, which is the framework in which the proposal in the next section will be cast. Note, however, that the main point of the paper is independent of the particular analysis chosen here; as far as I can see, it could be expressed within alternative analyses of PP as well.

Abrusán’s (2020) analysis is based on the idea that FID and PP are special cases of the same larger category, *perspective shift*. Formally, this proposal extends Eckardt’s (2014) framework for FID so that it can cover cases of PP as well. Under the resulting theory, perspective shift is a bi-contextual interpretation system that needs to be pragmatically licensed by the context and the nature of this licensing determines whether we get FID or PP.

Let us discuss briefly some of the formal aspects of the analysis in a nutshell. Assume

that the logical language contains at least the following set of variables (R and r are variables for reference time):

$$(30) \quad \{\text{AUTH}, \textit{auth}, \text{AD}, \textit{ad}, \text{NOW}, \textit{now}, \text{HERE}, \textit{here}, \text{WORLD}, \textit{world}, \text{R}, \textit{r}\}$$

Utterances can be interpreted in two ways. Under the ordinary interpretation they are interpreted wrt. to an external context $\llbracket \varphi \rrbracket^{M,g,C}$. But they can also be interpreted with respect to a pair of external and internal contexts $\llbracket \varphi \rrbracket^{M,g,\langle C,d \rangle}$. Formally, contexts are assumed to be special purpose variable assignments:

- (31) a. An external context C is an assignment with the following properties:
 $C: \{\text{AUTH}, \textit{auth}, \text{AD}, \textit{ad}, \text{NOW}, \textit{now}, \text{HERE}, \textit{here}, \text{WORLD}, \textit{world}, \text{R}, \textit{r}\} \rightarrow M$
with $C(\text{AUTH})=C(\textit{auth}), C(\text{AD})=C(\textit{ad}), \dots, C(\text{R})=C(\textit{r})$
- b. An internal context d is an assignment on the following variables:
 $d: \{\textit{auth}, \textit{ad}, \textit{here}, \textit{now}, \textit{world}, \textit{r}\} \rightarrow M$

The two types of contexts, the single context $\llbracket \cdot \rrbracket^{M,g,C}$ and the double context or $\llbracket \cdot \rrbracket^{M,g,\langle C,d \rangle}$ are defined as follows:

$$(32) \quad \begin{array}{ll} \text{a.} & \llbracket \textit{auth} \rrbracket^{M,g,C} = C(\textit{auth}) & \llbracket \text{AUTH} \rrbracket^{M,g,C} = C(\text{AUTH}) \\ & \llbracket \textit{ad} \rrbracket^{M,g,C} = C(\textit{ad}) & \llbracket \text{AD} \rrbracket^{M,g,C} = C(\text{AD}) \\ & \text{etc.} & \\ \text{b.} & \llbracket \textit{auth} \rrbracket^{M,g,\langle C,d \rangle} = d(\textit{auth}) & \llbracket \text{AUTH} \rrbracket^{M,g,\langle C,d \rangle} = C(\text{AUTH}) \\ & \llbracket \textit{ad} \rrbracket^{M,g,\langle C,d \rangle} = d(\textit{ad}) & \llbracket \text{AD} \rrbracket^{M,g,\langle C,d \rangle} = C(\text{AD}) \\ & \text{etc.} & \end{array}$$

Variables in small capitals behave as unshiftable parameters, since they can be only interpreted by C. Variables in lowercase letters, however, can be interpreted either by C (in single contexts) or d (in double contexts) and therefore they can receive a shifted interpretation. As a result, items that do not shift are translated into the the logical language with small capitals, while shiftable items are translated with lowercase letters.

Temporal and locative indexical adverbs behave differently in FID and PP: While we find examples of these adverbs with a shifted reading in FID (e.g. example (28a) above), similar examples seem to be impossible with PP, as was shown in (27). Abruśán (2020) proposes that the unavailability of a shifted interpretation of these items in PP follows from the fact that they come with a lexical presupposition that makes their interpretation contingent on being used in a speech act:

- (33) *yesterday*
- a. asserted content: $\lambda e.\tau(e) \subset \iota t. t \text{ DAY-BEFORE } (\textit{now})$
- b. presupposed content: it occurs as part of a speech act by *auth*.

In other words, shiftable indexical adverbs presuppose a mental state that involves (self-)talk, thus can only be used as part of a speech act. For this reason, they can have a shifted reading in FID, but not in PP.

How do sentences under perspective shift contribute to the overall story? Let STORY_{n-1} be the set of worlds that represents the content of the story up to sentence s_{n-1} . If s_n is interpreted in a single mode $\llbracket s_n \rrbracket^{M,g,C}$, its asserted content p updates STORY_{n-1} directly,

by intersection:

$$(34) \quad \text{STORY}_n = \text{STORY}_{n-1} \cap \llbracket s_n \rrbracket^{M,g,C}$$

If s_n is interpreted in a bi-contextual mode ($\llbracket s_n \rrbracket^{M,g,d,C}$), its asserted content p updates STORY_{n-1} as follows:

- (35)
- a. If d is plausibly a context of thought, STORY_{n-1} is updated with $\lambda w. \text{THINK}(\text{author}_d, \text{now}_d, w, p)$
 - b. If d is plausibly a context of speech, STORY_{n-1} is updated with $\lambda w. \text{SAY}(\text{author}_d, \text{now}_d, w, p)$
 - c. *If d is plausibly a context of perception, e.g. feeling, seeing, hearing, etc.:*
 $\lambda w. \text{FEEL/SEE/HEAR/ETC.}(\text{author}_d, \text{now}_d, w, p)$
 - d. *If d is plausibly a context of non-verbal (or implicit) belief:*
 $\lambda w. \text{BELIEVE}(\text{author}_d, \text{now}_d, w, p)$

Presuppositions of sentences in FID and PP update the story differently: they need to be entailed by (or accommodated in) the beliefs of the author of the internal context.⁷ Observe the following example, from Eckardt (2014):⁸

(36) Tom frowned. *The ghost in the attic was making noises again.*

The second sentence in the example above is interpreted as FID. The presupposition of the definite description ‘there is exactly one relevant ghost’ or the presupposition of *again* does not need to be understood as being part of the story, they are only assumed to be true in Tom’s beliefs. Abrusán (2020) proposed that PP works in a similar way to FID: its presuppositions need to be satisfied in the beliefs of the protagonist.

Presuppositions can be exported to become the presuppositions of the author of the external context as well, as long as there is nothing in the story that is incompatible with this. This is the case with the presupposition of the definite description *the attic* in the example in (36). In journalistic or real-life examples of FID or PP the author of the external context is the journalist or the person speaking. Simplifying somewhat, assume that in examples taken from fiction the author of the external context is the narrator. The presuppositions of the narrator at some point n in the fiction can be represented by the set of worlds that are compatible with the ensemble of the propositions expressed up to point n in the fiction, i.e. the story up to n (STORY_{n-1}). Accommodating a presupposition made by the narrator then means restricting STORY_{n-1} with the content of the presupposition.

Finally, note that the context shift in both FID and PP is free in the sense that the internal context (i.e. the context of thought) can be introduced without any operator. However, in order to be recoverable by the hearer (or reader), it needs to be pragmatically licensed by a rich discourse context. If there is nothing in the context that would make a perspective shift salient, it will not happen.

⁷NB: In the case of self-directed speech or a description of a perception, the requirement that the speaker (author) also needs to believe that the presupposition is compatible with the common ground is mute.

⁸Expressive content, on the other hand, updates the story directly.

4 The proposal

I propose a unified analysis of all the examples reviewed in Section 2. This analysis does not attribute the source of the puzzle to some peculiarity of the presupposition triggers discussed. Rather, the clause in which the presupposition is embedded is interpreted as protagonist projection. As a consequence, it is evaluated with respect to two contexts simultaneously, the context of utterance and the context of thought of the protagonist. Presuppositions of sentences interpreted in a bi-contextual mode need to be satisfied in the beliefs of the protagonist, as was discussed above. This is why the presuppositions of our examples also need not be satisfied in the beliefs of the author of the external context, and only require that the beliefs of the protagonist entail it.

The presupposition of a sentence interpreted in a bi-contextual mode can be inherited by the external context as well, as long as nothing in the beliefs of the speaker prevents this. This might give us a double-sided interpretation where both the protagonist and the speaker share a certain presupposition.

Finally, the proposal can also easily explain why emotive factives and the other triggers discussed in this paper behave most of the time just as they are expected. This is because when the sentence they are embedded in is interpreted in a single context, the presupposition is predicted to behave in an unremarkable way.⁹

Let's apply the proposal to some of the examples discussed in Section 2. As was noted above, unlike FID, PP does not have to apply to the whole utterance but can target clauses as well. In (37a-b) (repeated from (9)), for example, it is the second clause that is interpreted as PP:

- (37) Emotive factives
- a. John wrongly believes that Mary got married, and
 [[he regrets that she is no longer single.]]^{*M,g,<C,d>*}
 - b. Jane misheard that the dinner was free and
 [[she was glad to not to have to pay.]]^{*M,g,<C,d>*}

When a clause is understood as PP it is interpreted with respect to two contexts, the utterance context and the context of thought of a relevant protagonist. This protagonist can be identified in the sentence itself or the surrounding context, in (37a) it is John. Interpreting the second clause as PP means that we attribute to John a mental state with the content that could be paraphrased as “I regret that Mary is no longer single”, without however requiring that he actually uttered this sentence, even silently to himself.

A sign that we are indeed dealing with cases of perspective shift is that expressive (e.g. *damn*, *bloody*) and evaluative expressions (e.g. *luckily*), which are normally speaker-oriented, receive a protagonist-related interpretation:¹⁰

- (38) a. Believing that he had inflicted a fatal wound, Oedipus regretted killing the

⁹Modulo other factors that have been discussed in literature, e.g. focus/QUD dependence, cf. Beaver (2010), Abrusán (2011), Simons et al. (2016).

¹⁰There is a certain amount of disagreement in the literature whether attitude contexts allow a shifted reading of expressives or whether such examples require perspective shift. I follow Harris and Potts (2009) who argue that perspective shift is needed for such readings, and attitude predicates only act as facilitators.

- damn* stranger on the road to Thebes.
- b. She knew that *luckily* he would never let her down, but, like all the others, he did.
 - c. Because the *bloody* train was about to depart, James ran towards it as fast as he could.

Unlike in FID, which is a rather faithful report of the protagonist's literal thought or utterance, the description of the mental state of the protagonist in PP is external to him, it is a description of the mental state of the protagonist by someone else, the speaker or the narrator.¹¹ That we are dealing with PP instead of FID is also shown by the fact that it is not possible to insert temporal adverbs such as *yesterday* with a shifted reading into the embedded clause:

- (39) Falsely believing that he had inflicted a fatal wound,
 [[Oedipus regretted killing the stranger #yesterday on the road to Thebes.]]^{M,g,<C,d>}

In (37b), the clause in PP reports a mental state of Jane, without however requiring her to have the corresponding literal thought. On the other hand, since the clauses in PP report the mental content of a protagonist from her perspective, the presuppositions embedded in them are also interpreted from the perspective of the the author of the internal context, namely the protagonist. This is why the presupposition of *regret* in (37a) needs to be satisfied by the beliefs of John, and the presupposition of *glad* in (37b) in the beliefs of Jane.¹²

The shifted reading of (11b) and (11c) can be derived in a similar parallel way:

- (40) Cognitive factives
- a. Jones had trouble breathing, sharp pains in his side, (...) It was then that [[he realized he was going to die out there.]]^{M,g,<C,d>} But he was rescued.
 - b. [[She knew that he would never let her down]]^{M,g,<C,d>}, but, like all the others, he did.

In (40a) the second clause is interpreted as PP: we attribute to Jones the mental state with the content of realizing that he is going to die, but not the form of this description. The presupposition of *realize* needs to be satisfied in the beliefs of Jones, which is why it does not place any requirements on the context of utterance. In (40b), discussed also by Holton (1997) and Stokke (2013), it is the first clause that is interpreted as PP. Since the presuppositions of sentences interpreted in a double context need to be satisfied in the beliefs of the protagonist, (40b) only implies that the protagonist needs to believe the truth of the factive presupposition.¹³

¹¹One might wonder how to analyse examples such as (11e) in which the protagonist is apparently quantified over. I discuss this issue in Author (2020), the main idea being that quantification happens at the level of story update. Since presuppositions project universally from the scope of universal quantifiers, every protagonist is predicted to believe the content of the factive presupposition.

¹²The definite description *the stranger* is also interpreted from Oedipus's perspective in (39). Under presuppositional analyses of definite descriptions, this fact might have a similar explanation as the one proposed for the factive presupposition. But since the topic of descriptions under attitudes is extremely complex, I leave the discussion of this issue to another occasion.

¹³Stokke's (2013) explanation of why this example does not appear to be factive is technically different,

Likewise, the content of presuppositional subordinate clauses such as temporal adverbial clauses and preposed *because*-clauses can also be interpreted as PP, as in examples (13a) and (22a), repeated below:

- (41) Temporal adverbial clauses
John left after \llbracket Mary ridiculed him $\rrbracket^{M,g,<C,d>}$. But in fact she only made an innocent remark.
- (42) Preposed *because*-clauses
Because \llbracket the train was about to depart $\rrbracket^{M,g,<C,d>}$, James ran towards it as fast as he could. What James did not know was that the train drivers were on strike that day.

The relevant protagonist whose mental state is being conveyed by the clause in PP needs to be identified in the context. Normally, such a character can be found in the preceding context, as in (41): here clearly the protagonist whose perspective is taken is John. As a consequence, the presupposition needs to be accommodated in John's belief state. Sometimes, however, we see backwards identification of protagonists, as in (42): the protagonist is not identifiable immediately when the clause appears, only after the whole sentence has been processed: in this case the the protagonist, James, is only introduced after the clause interpreted under the shifted perspective.¹⁴

Note that non-preposed *because*-clauses can also be understood as PP. In these cases no factive presupposition is triggered, but the evaluative terms inside the clause are interpreted from the perspective of the protagonist. This is the case in the examples in (23), repeated below:

- (44) a. Liz_i left the party
because \llbracket there was an embarrassing picture of herself_i going around $\rrbracket^{M,g,<C,d>}$
b. Airplanes frighten John because \llbracket they might crash $\rrbracket^{M,g,<C,d>}$
c. Liz voted for Trump because \llbracket he was going to be a great President $\rrbracket^{M,g,<C,d>}$

Evaluatives such as *embarrassing*, *great* and epistemic modals are perspective-sensitive expressions, and in the cases above the relevant perspective holder is the author of the internal context in which they appear.¹⁵

Overall, I have demonstrated that the examples discussed in Section 2 show the characteristics of PP. This observation, coupled with recent advances in our understanding of various cases of perspective shift including PP, predicts the surprising behaviour of the presuppositions embedded in these examples. No special rules or special presuppositions need to be assumed for the factive and subordinating constructions discussed: the vari-

but is globally in the same spirit.

¹⁴Note that backwards identification of protagonists is also possible in the case of FID, as was discussed in Wiebe (1994) in connection with (43), which is a sentence at the beginning of a novel:

- (43) Captain Scalawag's treasure! It was the first thing Pete thought of when he woke up. (Loriner, *The Mystery of the Missing Treasure*, p.1, cited in Wiebe 1994, p.19)

¹⁵In theory the connective *because* could also be in the scope of PP. If, as was argued by Charnavel 2019, this connective is perspective sensitive itself, interpreting it under PP would signal that the explanation is that of the protagonist.

able strength of their presuppositions depends on discourse factors and whether or not a perspective shift needs to be assumed.

5 Conclusion

Subtle perspective shifts are very widespread in natural language. I argued that this has a consequence for the interpretation of presuppositions: when understood under perspective shift, presuppositions can appear in a weakened form or seemingly disappear altogether. I showed that a number of examples with puzzling properties—involving emotive factives, cognitive factives, temporal adverbial clauses and preposed *because*-clauses—can be explained once we realise the extent to which such subtle perspective shifts are possible in natural language. When presuppositions are embedded in sentences showing some form of perspective shift, the presupposition can be interpreted with respect to the beliefs of a salient protagonist. Finally, note that the survey of empirical facts in this paper is not meant to be complete: for example, I have mentioned only briefly cases of perspective-sensitive interpretations of definite descriptions and discourse anaphora. The discussion of these extremely complex topics in connection with protagonist projection will have to wait for another occasion.

References

- Abrusán, M. (2011). Predicting the presuppositions of soft triggers. *Linguistics and Philosophy* 34(6), 491–535.
- Abrusán, M. (2016). Presupposition cancellation: explaining the ‘soft–hard’ trigger distinction. *Natural Language Semantics* 24(2), 165–202.
- Abrusán, M. (2020). The spectrum of perspective shift: protagonist projection versus free indirect discourse. *Linguistics and Philosophy*, <https://doi.org/10.1007/s10988-020-09300-z>.
- Abrusán, M. (to appear). Presuppositions. In D. Altshuler (Ed.), *Linguistics meets Philosophy*. Cambridge University Press, forthcoming.
- Anscombe, G. E. M. (1964). Before and after. *The Philosophical Review*, 3–24.
- Author (2020). Quantifying over protagonists: Free indirect discourse and other cases of perspective shift. *submitted*.
- Banfield, A. (1982). *Unspeakable Sentences: Narration and Representation in the Language of Fiction*. Routledge.
- Beaver, D. (2010). Have you noticed that your belly button lint colour is related to the colour of your clothing? In R. Bäuerle, U. Reyle, and T. E. Zimmerman (Eds.), *Presupposition: Papers in Honor of Hans Kamp*. Bingley, UK: Emerald.
- Beaver, D. and C. Condoravdi (2003). A uniform analysis of ‘before’ and ‘after’. In *Semantics and Linguistic Theory*, Volume 13, pp. 37–54.
- Beaver, D. I. and B. Geurts (2014). Presupposition. In E. N. Zalta (Ed.), *The Stanford Encyclopedia of Philosophy* (Winter 2014 ed.). Metaphysics Research Lab, Stanford University.
- Brinton, L. (1980). ‘Represented perception’: A study in narrative style. *Poetics* 9(4), 363–381.
- Buckwalter, W. (2014). Factive verbs and protagonist projection. *Episteme* 11(04), 391–409.
- Charnavel, I. (2019). Perspectives in causal clauses. *Natural Language & Linguistic Theory* 37(2), 389–424.
- Condoravdi, C. (2010). Npi licensing in temporal clauses. *Natural Language & Linguistic Theory* 28(4), 877–910.

- Djäv, K. (2019). *Factive and assertive attitude reports*. Ph. D. thesis, University of Pennsylvania.
- Djäv, K., J. Zehr, and F. Schwarz (2018). Cognitive vs. emotive factives: An experimental differentiation. In *Proceedings of Sinn und Bedeutung*, Volume 21, pp. 367–386.
- Doron, E. (1991). Point of view as a factor of content. In *Semantics and Linguistic Theory*, Volume 1, pp. 51–64.
- Eckardt, R. (2014). *The semantics of free indirect discourse: How texts allow us to mind-read and eavesdrop*. Brill.
- Egré, P. (2008). Question-Embedding and Factivity. In F. Lihoreau (Ed.), *Grazer Philosophische Studien 77*, pp. 85–125.
- Fludernik, M. (1993). The fictions of language and the language of fiction. *The Linguistic Representation of Speech and Consciousness*. London and New York: Routledge.
- Gazdar, G. (1979). *Pragmatics: Implicature, presupposition and logical Form*. New York: Academic Press.
- Geurts, B. (1999). *Presuppositions and pronouns*. Elsevier New York.
- Givón, T. (2001). *Syntax: an introduction. Volume II*. John Benjamins.
- Harris, J. A. and C. Potts (2009). Perspective-shifting with appositives and expressives. *Linguistics and Philosophy* 32(6), 523–552.
- Hazlett, A. (2010). The myth of factive verbs. *Philosophy and Phenomenological Research* 80(3), 497–522.
- Heinämäki, O. (1978). *Semantics of English temporal connectives*. Publications. Indiana University Linguistics Club.
- Hinterwimmer, S. (2017). Two kinds of perspective taking in narrative texts. In *Semantics and Linguistic Theory*, Volume 27, pp. 282–301.
- Holton, R. (1997). Some telling examples: A reply to Tsohatzidis. *Journal of Pragmatics* 28(5), 625–628.
- Holton, R. (2017). Facts, factives, and contrafactuals. In *Aristotelian Society Supplementary Volume*, Volume 91, pp. 245–266. Oxford University Press.
- Hooper, J. B. and S. A. Thompson (1973). On the applicability of root transformations. *Linguistic inquiry* 4(4), 465–497.
- Huddleston, R., G. Pullum, et al. (2002). *The Cambridge Grammar of English*. Cambridge: Cambridge University Press.
- Karttunen, L. (1971). Some Observations on Factivity. *Papers in Linguistics* 5, 55–69.
- Karttunen, L. (2016). Presupposition: What went wrong? In *Semantics and Linguistic Theory*, Volume 26, pp. 705–731.
- Kiparsky, P. and C. Kiparsky (1970). Fact. In M. Bierwisch and K. Heidolph (Eds.), *Progress in linguistics*, pp. 143–173. The Hague:Mouton.
- Klein, E. (1975). Two sorts of factive predicate. Pragmatics Microfiche it 1.1. frames B5–C14.
- Klinedinst, N. (2012). *THCSP*. Dordrecht: Springer.
- Larson, R. K. and M. Sawada (2012). Root transformations 8: quantificational structure. *Main clause phenomena: New horizons* 190, 47.
- Maier, E. (2015). Quotation and unquotation in free indirect discourse. *Mind & Language* 30(3), 345–373.
- Ogihara, T. (1995). Non-factual before and adverbs of quantification. *Proceedings of SALT V, CLC Publications, Cornell*.
- Oltean, S. (1993). A survey of the pragmatic and referential functions of free indirect discourse. *Poetics Today*, 691–714.
- Recanati, F. (2000). *Oratio obliqua, oratio recta: an essay on metarepresentation*. MIT Press.
- Recanati, F. (2010). *Truth-conditional pragmatics*. Clarendon Press Oxford.

- Schlenker, P. (2003). The Lazy Frenchman's approach to the Subjunctive. *Proceedings of Romance Languages and Linguistic Theory*, 269–309.
- Schlenker, P. (2004). Context of thought and context of utterance: A note on free indirect discourse and the historical present. *Mind & Language* 19(3), 279–304.
- Schwarz, F., K. Djärv, and J. Zehr (2020). Do Italian factives entail their presupposition? yes, but... In R. Bhatt, I. Frana, and P. Menéndez-Benito (Eds.), *Making Worlds Accessible. Essays in Honor of Angelika Kratzer*, pp. 150. ScholarWorks at UMass.
- Sharvit, Y. (2008). The puzzle of free indirect discourse. *Linguistics and Philosophy* 31(3), 353–395.
- Simons, M., C. Roberts, D. Beaver, and J. Tonhauser (2016). The Best Question: Explaining the projection behavior of factive verbs. *Discourse Processes*. to appear.
- Stalnaker, R. C. (1974). Pragmatic presuppositions. In M. Munitz and P. Unger (Eds.), *Semantics and Philosophy: Essays*, pp. 197–214. New York: New York University Press.
- Stokke, A. (2013). Protagonist projection. *Mind & Language* 28(2), 204–232.
- Stokke, A. (this volume). Protagonist projection, character focus and mixed quotation. In E. Maier and A. Stokke (Eds.), *The Language of Fiction*. Oxford: Oxford Univ Press University Press.
- Tonhauser, J., D. I. Beaver, and J. Degen (2018, 06). How Projective is Projective Content? Gradience in Projectivity and At-issueness. *Journal of Semantics* 35(3), 495–542.
- Verstraete, J.-C. (2004). Initial and final position for adverbial clauses in English: the constructional basis of the discursive and syntactic differences. *Linguistics* 42(4), 819–853.
- Wiebe, J. M. (1994). Tracking point of view in narrative. *Computational Linguistics* 20(2), 233–287.
- Yablo, S. (2008). Semantic Arithmetic. manuscript, MIT.