How Free is Free Indirect Discourse?
Empirical Approaches to the Anchoring Mechanisms of Perspective-taking

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Abstract

This dissertation presents a discussion and empirical investigation of the anchoring mechanisms of free indirect discourse. Its main focus is on the claim that a discourse referent must be sufficiently activated in a linguistic context in order to serve as the anchor for a sentence in free indirect discourse mode. This issue becomes particularly pressing whenever more than one discourse referent is available as the perspectival center. I want to argue that whenever several referents compete, the referent with the highest activation is preferred as the perspectival center, while a sentence in FID mode anchored to a less activated referent sounds rather unnatural.

To approach this claim, I provide a number of examples that illustrate that the anchoring of free indirect discourse is related to linguistic activation. The observations indicate that:

(i) referents in subject position are preferred as anchors over referents in object position,

(ii) referents that are introduced with a proper name are preferred as anchors over referents that are introduced with an indefinite noun phrase,

(iii) referents that are activated in a larger context are preferred over referents that are activated in the sentence preceding the free indirect discourse, and

(iv) referents that are assigned particular verbal features are preferred over competing referents. In order to account for these observations, I present the results of a series of psycholinguistic experiments that indicate an effect of grammatical function, referential expression, global activation, and verbal features assigned to the referents by the verb in the preceding context on the anchoring of free indirect discourse.

Ultimately, the findings presented in this thesis indicate that the anchoring of free indirect discourse is not arbitrary but determined by referential activation.

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1 Introduction

This dissertation investigates the anchoring mechanisms of free indirect discourse (FID). FID is a way of speech and thought representation commonly found in narratives that typically does not require any formal marking.

(1)   Maria went to the principal's office. Gosh! Why her? That was so unfair.

The thoughts presented in (1), can easily be ascribed to Maria – even though it is not stated explicitly that it is in fact Maria who thinks. The attribution of the sentences to Maria is enforced by features typical of FID. First, the expression *Gosh!* is an interjection that expresses Maria's annoyance. Second, syntactically, the sentence *Why her?* lacks a predicate. While typically, incomplete syntax is unexpected when it is part of the narration, such phrasing is not uncommon when it represents an utterance or thought by a character. Third, the proposition is highly subjective. While Maria questions why she is sent to the principal's office, her teacher presumably had a plausible motivation to do so. Irrespective of the legitimacy of the action, the FID renders Maria's view on the events.

While in the example presented in (1), the thoughts must unambiguously be anchored to Maria, as she is the only protagonist that is mentioned in the discourse, the issue of anchoring FID to a protagonist is more pressing whenever several protagonists are mentioned in a discourse. Consider the following example (also discussed in Zimmermann et al. 2020):

(2)   When Thomas entered the pub on Friday a guy in a black coat punched him right
        in the face with his bare hand. Ouch, how that hurt!

In this example, the reader would most likely understand the last sentence to be a thought of Thomas. A reading in which the guy complains about his hand – that he potentially injured when he punched Thomas – would also be possible, but such a reading is rather absurd. The goal of this thesis will be to account for this intuitive absurdity.

Following Hinterwimmer (2019), I want to argue that a sentence in FID mode can only be anchored to the protagonist that is the current perspectival center. Although in example (2) the sentence in FID mode is potentially ambiguous (there is a reason for Thomas' face or the guy's hand to hurt) the sentence is typically ascribed to Thomas. I want to claim that in example (2) Thomas has a higher activation status compared to the referent introduced as *a guy* such that Thomas serves as the current perspectival center. Cues that

promote a referent's activation to be the anchor for a sentence in FID mode will be discussed and empirically tested.

Ultimately, FID is a means of shifting the perspective from that of the narrating instance to that of a protagonist. Though I refrain from generalizing from the investigation of FID to perspective-taking as a whole – perspective-taking in language is certainly a wide topic – I want to point out that the investigation of FID may be regarded as an investigation of the underlying perspective in a discourse.

1.1 Language and Perspective

The meaning of words and sentences depends not only on the linguistic content but, crucially, on the context as well (Kaplan 1989). According to Kaplan, such context depends on the place, time, and world a sentence is uttered in, on the speaker (i.e., his or her perspective), and on the addressee.

The context dependence of language becomes obvious in the case of expressions that require a fixed viewpoint such as *right*, *left*, *here*, and *there*. For such so-called deictic expressions, a meaningful interpretation is only possible if the hearer knows where to position the origin from where the speaker has referred to as *left*, *right*, *here*, or *there*. Deictic expressions may refer to places, points in time, or individuals; they only have a meaningful interpretation with respect to a deictic center. For example, the sentence *I will be here tomorrow* can only be interpreted with respect to a given context that reveals information with respect to the identity of the pronoun *I*, the place where that person is located, and the time setting *t* so that *tomorrow* can be interpreted to be *t+1*.

Not only deictic expressions need to be bound by a perspectival center, but many other expressions are typically only meaningful when the hearer knows according to whom a proposition must be interpreted. The perspective-dependent use of language may be illustrated by the example of a sports event: if two people report what happened at a particular soccer game, one may recapitulate a *good*, *fair*, and *exiting* game while the other person may describe the exact same event as *unfortunate* and *unfair*. The sentence *It was a good game* can thus be true for one but not true for another person (see Lasersohn 2005 for a discussion of predicates of personal taste). Furthermore, reference to one and the same person may vary depending on the speaker. *Tim* may be referred to with the noun phrase *the guy that scored the 90th minute*, *my father*, *my son*, *my fiancé* – he might be called *that idiot* – depending on the relation of the speaker and the person denoted by the expression.

Usually, whenever perspective-dependent words or phrases are uttered, there is no uncertainty; the proposition must be anchored to the speaker unless the speaker indicates that he or she is reporting somebody else's words. This may be done by way of direct or indirect speech and thought report. However, particularly in literature, reporting speech and thought that must be anchored to a protagonist rather than the narrating instance may also be done using FID.

As many of the aforementioned perspective-dependent expressions can be found in a sentence in FID mode, the investigation presented in this thesis may well be of interest to readers that are interested in the anchoring of deictic expressions, predicates of personal taste, and the like.

1.2 Free Indirect Discourse

Before I illustrate the research goals of this thesis that concern the issue of anchoring FID, I need to provide the reader with a rough definition and some examples of FID.

FID is a way of speech and thought representation that "report[s] a person's thoughts as if we could listen to the person talking to herself" (Eckardt 2014 p.2). While in direct and indirect speech it is made explicit who uttered or thought a sentence, in FID mode the reader does not get any straightforward indicators of to whom the sentence has to be ascribed; that is, FID "presents a character's speech or thoughts without embedding or explicit quotation marks" (Kaiser 2015 p.357). Rather, the attribution of the sentence underlies pragmatic and structural principles.

FID differs from direct speech (DS) not only with respect to the lack of markers but crucially by the use of pronouns and tense. While most of the phrase in FID mode reports what the anchor said or thought verbatim, pronouns (if there are any) and the tense of the finite verb (if there is one) remain bound to the narrating instance.

As such shifts of tense and pronouns are typical for indirect speech (IS) FID is sometimes regarded as a *hybrid* form (Steube 1985 p.392) (i.e., it shares features with both IS and DS).

(3)   DS: Jenna looked at her glass. She said to herself: "Ugh, I really hate pulp in my juice."
        IS: Jenna looked at her glass. She said that she really hated pulp in her juice.
        FID: Jenna looked at her glass. Ugh, she really hated pulp in her juice.

Similar to IS, in FID the protagonist in (3) is referred to with the third person pronouns *she* and *her*, while the tense of the verb, *hated*, is that of the narrator. Similar to DS, the

sentence in FID mode contains an interjection, *ugh*. The use of interjections is impossible in IS, see (4).

(4)   IS: Jenna looked at her glass. *She said that ugh she really hated pulp in her juice.

While literature on FID commonly discusses the form and function of FID (Genette 1980; Steube 1985; Discherl and Pafel 2015; Kaiser 2015) or more recently the semantics of FID (Doron 1991; Schlenker 2004; Sharvit 2008; Eckardt 2014; Maier 2015) there is little research with respect to the anchoring of FID (see first attempts in Bimpikou 2019, based on the assumptions presented in Hinterwimmer 2019). Rather, examples discussed in the literature are commonly presented in contexts with only one protagonist, so that naturally one protagonist is the anchor for the utterance or thought.

1.2.1 The Anchoring of FID

In this thesis I want to focus on examples where at least two referents compete for being the anchor for the FID. Consider the following example:

(5)   Jasmin went to over to her fiancé. She was furious. Without hesitating one second, she poured her drink right in his face.
a. That's what that idiot deserved!
b. Huh, why did she do that!?[1]

In narration it is not at all uncommon to find serval potential protagonists that interact, yet typically only one protagonist gets to be the perspectival center. While in (5) both continuations in FID mode are potentially possible, option a follows more naturally than option b. Without any contextual information, the reader expects to hear a thought anchored to Jasmin rather than her fiancé. Arguably, it is not the action that is performed that triggers one or the other, as illustrated in (6). Rather, the protagonist that serves as the perspective holder is assigned in the discourse.

(6)   Jasmin went to over to her fiancé. She sat down next to him when suddenly he poured his drink right in her face.
a. Huh, why did he do that!?
b. That's what she deserved!

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[1] As oddly anchored FID can be perceived to be unnatural, uncommon, or unexpected, yet, by no means ungrammatical, I will not mark examples of oddly anchored FID with diacritics such as *, ?, ??, ??? or ?*. I will rather make an effort to discuss my intuitions with respect to each example in its context.

Again, intuitively Jasmin's perspective, as in (6) a, is preferred over that of her fiancé, as in (6) b. That is, in the context that is provided, Jasmin is activated in a particular way that appoints her as the perspectival center.

FID is a means of speech and thought representation that may be regarded as lying in between direct and indirect speech. However, I want to claim that the licensing restrictions as they are investigated in this thesis differ from those of direct and indirect speech. It appears that direct and indirect speech may be anchored to even the least activated referent – may that be in terms of linguistic cues (i.e., by the use of an indefinite description) or with respect to the content that is narrated. For FID this does not seem to be the case, as indicated in (7).

(7)   Maria was waiting to meet Mrs. Miller in room 405.
        DS: A tall man opened the door and said: "Huh, what are you doing in here?"
        IS: A tall man opened the door and told her that she was probably in the wrong room.
        FID: A tall man opened the door. Huh, what was she doing in here?

While it is not uncommon for a newly introduced referent, introduced with an indefinite article, not specified any further than as *a tall man*, to be quoted by way of DS or IS, the use of FID is highly odd in (7). A first attempt to account for this difference may be that the sentence in FID mode is presumably interpreted to be a thought rather than a sentence uttered out loud. Insights into the mental states of a protagonist, however, require a certain activation of the referent. In (7), however, Maria is the perspectival center, as illustrated in (8).

(8)   Maria was waiting to meet Mrs. Miller in room 405. A tall man opened the door.
        a. Huh, what was he doing here?
        b. Huh, what was she doing in here?

The contrast in example (8) shows that, though Maria as well as the tall man are both potential perspectival centers that could be anchored to the thought presented in (8) a or b, the continuation in (8) a appears more natural than that in (8) b.

As indicated above, I want to claim that the availability of a protagonist depends on his or her activation. The claim that is central to the investigation in this thesis can thus be captured as follows:

(9)   Central claim
        A referent that is sufficiently activated in a linguistic context may serve as the anchor for a sentence in FID mode.

1.2.2 (Un-)Popular Anchors

In this thesis, I will focus on the empirical investigation of structural anchoring mechanisms of FID. For that reason, I will present assumptions regarding linguistic contexts and illustrate these assumptions with fictive examples[2]. I generally refrain from presenting examples found in novels as these hardly fit the purpose of the discussion (for a discussion of corpus data, see e.g., Brunner 2015; Egetenmeyer 2020). However, only in this section, I will discuss selected examples from popular fiction to demonstrate the relevance of the issue. I want to argue that:

(10)   (I) FID is a phenomenon commonly found in popular fiction,
        (II) it is not necessarily anchored to a protagonist based on popularity, empathy, or the like, and
        (III) it occurs in contexts where several potential anchors are activated.

For this reason, I will briefly present a small number of examples taken from the series of Harry Potter books by Joane K. Rowling.

To approach the issue of anchoring FID, I want to start with the trivial, but most intuitive claim: the perspectival center of the text is the protagonist that the reader is most likely willing to be empathetic with. This naïve claim inherently raises further questions: What character traits trigger empathy? Is a referent that is particularly likeable by default the perspective holder? If so, does a character that does not trigger empathetic feelings get excluded as the perspectival center? With respect to the limitations of this thesis I will not attempt a discussion or an investigation of character traits of protagonists and their availability as perspectival centers. Yet, I briefly want to illustrate that perspective-dependent phrases may also be anchored to protagonists that neither are popular nor enjoy the reader's empathy, in order to convince the reader that perspective-shifts are not – at least not exclusively – driven by the reader's attitude towards a protagonist. Rather, perspectival centers may be established structurally in terms of linguistic activation.

The following example is taken from the fourth book of the Harry Potter series. In the first chapter, a random muggle (a non-magician), unknown to the reader, witnesses a get together of the villains.

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[2] In the empirical part of this thesis, German stimuli will be tested. However, I want to argue that FID follows the same patterns in German and English. Results of these studies may thus be transferred to English easily. Examples that will be presented in the theoretical part of this thesis will be in English.

(11) "Out in the corridor, Frank suddenly became aware that the hand gripping his walking stick was slippery with sweat. The man with the cold voice had killed a woman. He was talking about it without any kind of remorse — with amusement. He was dangerous — a madman. And he was planning more murders — this boy, Harry Potter, whoever he was — was in danger — Frank knew what he must do. Now, if ever, was the time to go to the police." (Rowling, Harry Potter and the Goblet of Fire p.7)

In the first sentence we find a neutral description followed by stream of consciousness, another narrative mode that requires a shift in perspective, and a final sentence in FID mode. If the anchoring of FID depends on the reader's perception of the protagonist as likeable or popular, Frank should not be available as a perspective holder. He is not a character that is established in the Harry Potter universe – in fact he does not know *this boy, Harry Potter – whoever he was*. The function of choosing Frank as the current perspectival center is purely stylistically motivated; he serves as a witness that reports a scene that goes unnoted by Harry Potter and his friends.

I assume that any reader of the fourth Harry Potter book has a well-established sympathy for the protagonist, Harry Potter, but this example shows that circumstances allow for the perspective of a briefly introduced minor character.

While Frank, the muggle, may be considered to be rather neutral with respect to the reader's empathy, in the next example the reader must process a judgement from the perspective of a truly unpopular character: Harry's aunt Petunia, a secondary character that is known to be mean. The context in (12) describes the scene where a house elf magically appears at her house.

(12) "Aunt Petunia let out a hair-raising shriek; nothing this filthy had entered her house in living memory." (Rowling, Harry Potter and the Half-Blood Prince p.54)

The phrase *nothing this filthy* refers to the house elf. However, this reference is potentially problematic: despite their sightly odd appearance, house elves are portrayed as likeable little creatures. Thus, at this point, the evaluation, *filthy,* can only be interpreted coherently from Aunt Petunia's perspective.

That such a shift in perspective does not cause irritation may be explained in structural terms: though Aunt Petunia is not particularly likeable, she is highly activated in the linguistic context – Aunt Petunia is the subject of the preceding sentence with no competition. In line with the discussion presented in the previous section, it may be said that here the protagonist's high activation makes her available as the perspectival center. The role of grammatical function will be investigated in Chapter 4, where I will present

evidence that the referent that is mentioned in subject position is preferred as the anchor for a sentence in FID mode compared to a referent in object position.

The following example from the Harry Potter series is particularly interesting with respect to the anchoring mechanisms in larger contexts. In (13), a scene is described where the main protagonists, Ron and Hermione (accompanied by their friends), walk to class. The narration continues with further information regarding their teacher. Remarkably, even though Professor Binns is highly activated in the anecdote about his death and his routines in terms of frequent references – *his classes*, *his entering, he, he, He, his body, him, his routine* – the sentence *Today was as boring as ever* can be ascribed to the students without causing any irritation.

(13)   "The bell rang. Ron and Hermione led the way to History of Magic, bickering. History of Magic was the dullest subject on their schedule. Professor Binns, who taught it, was their only ghost teacher, and the most exciting thing that ever happened in his classes was his entering the room through the blackboard. Ancient and shriveled, many people said he hadn't noticed he was dead. He had simply got up to teach one day and left his body behind him in an armchair in front of the staff room fire; his routine had not varied in the slightest since. *Today was as boring as ever.* Professor Binns opened his notes and began to read in a flat drone like an old vacuum cleaner until nearly everyone in the class was in a deep stupor, occasionally coming to long enough to copy down a name or date, then falling asleep again."
(Rowling, Harry Potter and the Chamber of Secrets p.112-113; italics indicate the sentence in FID mode)

Ad hoc, I want to offer two explanations that boil down to the same thing: (i) reference to Professor Binns is part of a subordinate narration. The perspective that is already established in the novel is not affected. The sentence in FID mode can thus be anchored to the first two sentences presented in (11) (i.e., the main storyline), without causing irritation. (ii) Throughout the novel, the activation of Harry (and his friends) as the perspectival center dominates so that shifts to his (their) perspective are possible even without activation in the sentences preceding the FID. In any case, the presumably remarkable example presented in (13) can be explained with respect to the previous contextual activation of Harry Potter (and his friends).

Though I will not be able to account for the phenomenon that throughout an entire chapter, a book, or even a series, one perspective may prevail, I will offer a first empirical investigation of the impact of contextually activated perspectival centers. The phenomenon illustrated in example (13) may thus be accounted for by the results presented in Chapter 5, where I present evidence that indicates that a perspective that is

established in a short context overrides the preference for the perspective of a referent that is highly activated in the sentence preceding the FID.

1.2.3 Assumptions and Research Goals

Though there has been a tradition of investigating the characteristics of FID, the matter of anchoring FID has as yet been only sparsely addressed. Regine Eckardt raises the question, "[w]here can we locate the person who defines the perspective of a particular passage of text?" (2014 p.4). Still, she does not provide an answer that allows for a distinction between several potential anchors. While, lately, researchers have made attempts to empirically investigate the anchoring of perspective-dependent utterances (Harris and Potts 2009; Harris 2012) and the anchoring of FID (Kaiser 2015; Bimpikou 2019, based on the assumptions presented in Hinterwimmer 2019), there is no exhaustive approach to the issue.

Opposed to the conjecture that a protagonist gets to be the perspectival center upon being likeable or having certain character traits, I want to claim that a referent must be activated in a linguistic context in order to serve as the anchor for a sentence in FID mode. This claim comes with the following assumptions that will be addressed in this thesis.

(14) Assumptions
I. Referents must be activated linguistically
II. There is no exhaustive list of linguistic markers that activate a referent
III. A minimum of activation is necessary in order to serve as the anchor for FID
IV. Linguistic markers that are responsible for the activation of a referent may interact and override each other
V. Activation allows for a shift in perspective – it does not force it

The main goal of this thesis will be to empirically investigate the mechanisms that activate a referent as the perspectival center. Linguistic cues that will be investigated with respect to their activation potential are grammatical function, referential expression, and verbal features assigned by the verb that is used in the sentence that precedes a sentence in FID mode.

The impact of grammatical function and referential expression can be illustrated in example (15).

(15) Luisa bumped into a colleague in the hallway.
a. Huh, where did he come from?
b. Huh, that girl better watch where she is going!

Though the sentence in (15) b coherently picks up the perspective of the *colleague* that is annoyed about the accident, a continuation in FID mode from the colleague's perspective is rather unexpected in this context and causes irritation. A continuation from Luisa's perspective, on the other hand, is less problematic. This phenomenon will be discussed and tested in Chapter 4, where I will test the hypothesis that a protagonist that is more prominent in the sentence preceding the FID (e.g., in terms of referential expression and grammatical function), is more available as the anchor for the FID than a competing referent (see also Hinterwimmer 2019; Hinterwimmer and Meuser 2019).

While prominence in the immediate context appears to have an impact on the availability as the perspectival center, these findings shall also be looked at in larger discourse. That is, FID is a stylistic device that is commonly used in narratives. Though sequences of two sentences may serve well in terms of creating controlled test items, they do not necessarily account for examples found in narratives. This issue becomes obvious when considering contexts in which one protagonist is already established as the perspective-holder. If one perspectival center already prevails, is it possible to shift the perspectival center to the protagonist that is prominent in the sentence preceding the FID? Based on Hinterwimmer (2019), in Chapter 5, I hypothesize that protagonists that are highly activated in a discourse in terms of being repeatedly mentioned in subject position are more available as anchors for FID than protagonists that are less often referred to in a discourse but are in subject position in the sentence preceding the FID.

Another observation that will be addressed empirically is the impact of the action that is performed in the sentence preceding the FID. Compare the following examples:

(16) Jenna pushed Eric down the stairs.
      a. That's what he deserved.
      b. Huh, why did she do that?!

(17) The sun set and the temperature dropped.
      Leyla observed Lennard from behind the tree.
      a. Brr, why hadn't she brought a jacket?
      b. Brr, why hadn't he brought a jacket?

I want to argue that – despite a predicted subject preference – in (16), a continuation from the perspective of the object, the referent that got pushed down the stairs, sounds just as natural, if not more natural, that a continuation from the subject's perspective. For verbs similar to *to push s.o.*, I want to claim that the referent that is emotionally or physically affected serves well as the perspectival center. In (17), on the other hand, FID anchored to the object is hardly acceptable. For such a continuation to be coherent, the sequence

must be read in a rather marked context. For verbs similar to *to observe*, I want to claim that protagonists that are introduced into a context with a verb that leaves them unaware of the action may hardly be picked up as the perspectival center.

Still, the anchoring of FID does not follow a hardcoded set of rules. Rather, the distinction between odd and naturally anchored FID is based on a number of linguistic cues that potentially override and interact with each other. This thesis will not yield a comprehensive list of anchoring cues, but will attempt an approach that primarily shows that the anchoring of FID is not arbitrary. Such novel insights on the anchoring mechanisms of FID contribute to a more fine-grained picture of a phenomenon that is of interest to linguists as well as to narratologists. Further, methodologically, the empirical investigation presented in this thesis may be of interest to psycho-linguists investigating related perspective-dependent phenomena. That is, (i) though the effects are subtle, they yield reliable results in acceptability ratings. (ii) Experiments 5 and 6 show how sentence continuation tasks – commonly used to investigate referential activation (e.g., with respect to anaphoric choices) – may be used to investigate the underlying perspective of a context. That is, prompts have successfully triggered participants to continue a short discourse from the perspective of one or the other protagonist.

1.3 Structure of the Book

The main goal of this thesis is to present a series of experiments that empirically investigate the anchoring mechanisms of FID. Before I get to the empirical part, I will provide the reader with a thorough understanding of the phenomenon at hand, *free indirect discourse*, with its characteristics and its role within the study of literature and linguistics.

In particular, in Chapter 2, FID will be introduced in the context of narratology. As FID is a perspective-dependent phenomenon, I will define and elaborate on the notion of *perspective* in language and literature. I will briefly present how perspectives may temporally shift in narratives by way of protagonist projection, viewpoint shifting, and quotation. The characteristics of FID will be elaborated in the context of speech and thought representation.

In the third chapter, formal markers of FID will be illustrated in detail, as they are central to the creation of the stimuli used in the experiments presented in this thesis. Furthermore, the issue of the anchoring mechanisms of FID will be discussed in depth. Before I

continue with the empirical part of this thesis, a number of related empirical studies will be revised.

In Chapter 4, I will present a first acceptability rating study investigating the anchoring preferences of FID. The results indicate that, in fact, greater activation promotes a referent to be preferred as the anchor for a sentence in FID mode. The follow-up study attempts to draw a more fine-grained picture. Here the activation potential of proper names compared to indefinite noun phrases (NPs) for the referents in subject and in object position is tested. The results indicate that (i) FID is perceived to be more natural when it must be anchored to a referent in subject position rather than in object position, (ii) referents that are introduced with proper names are preferred as anchors for FID, and (iii) the potential of a referent to serve as the anchor for the FID depends on the prominence of the competing referent – that is, ratings are higher whenever the competing referent is less activated in terms of being introduced by an indefinite NP.

Based on the results presented in Chapter 4, in Chapter 5, I present a series of acceptability rating studies that investigate the subject preference in larger contexts. The experimental items presented short discourses where referents were introduced prominently in the context. In line with the predictions regarding the impact of global prominence, protagonists that were repeatedly mentioned in subject position were established as the perspectival center (i.e., they were preferred as the anchor for the FID over the competing referent that was in subject position in the sentence immediately preceding the FID).

In Chapter 6, again, the impact of the verb that is used to introduce referents in the context was investigated. Despite the subject preference, certain features that are assigned to arguments by verbs show a tendency to increase or decrease referents' availability to be anchors for FID. Unlike the preceding chapters, in Chapter 6, I present a series of sentence continuation studies. Participants were deliberately triggered to continue a prompt where two referents were introduced with a sentence that picks up one or the other perspective. The sentence continuations were annotated in two rounds. Continuations that were in FID mode and could clearly be ascribed to either the subject or the object were analyzed. The results indicate that (i) referents that are emotionally more affected by an action are more likely to be the anchor for a subsequent sentence in FID mode, (ii) referents that are (typically) non-sentient (i.e., unaware of an ongoing action) are hardly available as an anchor for a sentence in FID mode, and (iii) referents that perceive information are more likely to be the anchor for a sentence in FID mode compared to referents that are the source of information – regardless of their grammatical function.

2 Perspective-taking in Literature

The goal of the research presented in this thesis is to gain a better understanding of the anchoring mechanisms of sentences in FID mode. Although a characteristic feature of FID is said to be its lack of formal markers with respect to the anchoring of the speaker or thinker (Steube 1985 p.392), I want to argue that FID may not be used arbitrarily. Rather, a referent that will serve as the source of a thought in FID mode must be activated to a certain degree in the context preceding the FID. A discussion and empirical investigation of how linguistic features contribute to the activation of a protagonist, which is needed in order for the protagonist to serve as a perspectival center, will be the subject of Chapters 4, 5, and 6.

In this chapter, I want to elaborate on the importance of perspective-taking in literary studies. For one thing, despite the attempt to describe the linguistic features of an individual sentence in FID mode, FID is inherently rooted in narratives and is a technique used to create the illusion of perspectivation in texts. Second, the matter of which perspective is chosen to present a text has a long tradition in the study of narratives – dating back to Plato who differentiates *mimesis,* the unmediated imitation of a discourse, and *diegesis*, the presentation through a narrating instance. Insights on activation processes involved in perspective-taking may thus not only be considered valuable for future psycholinguistic approaches on perspective-taking in language but essentially contribute to a better understanding of perspective-taking in narratives beneficial to the study of literature, in particular the field of narratology.

As a subdiscipline of literary studies, narratology "is the study of narrative as a genre. Its objective is to describe the constants, variables and combinations typical of narrative and to clarify how these characteristics of narrative texts connect within the framework of theoretical models" (Fludernik 2009 p.8). The term narrative, as it is used in literary theory, "refer[s] to the narrative statement, the oral or written discourse that undertakes to tell of an event or a series of events" (Genette p.25)[3]. Fludernik specifies:

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[3] The term narrative must be set apart from the content that is narrated, referred to as the *story* in the following (Genette 1980 p.27; also Fr. *histoire*, Genette 1980 p.27 or Ger. *die Geschichte*, Fludernik 2014 p.10), and the act of telling the story (i.e., the *narrating*) (Genette 1980 p.27; also Fr. *narration,* Genette 1980 p.27 or Ger. *der Erzählakt*, Fludernik 2014 p.10).

"A narrative (Fr. *récrit*; Ger. *Erzählung*) is a representation of a possible world in a linguistic and/or visual medium, at whose centre there are one or several protagonists of an anthropomorphic nature who are existentially anchored in a temporal and spatial sense and who (mostly) perform goal-directed actions (action and plot structure). It is the experience of these protagonists that narratives focus on, allowing readers to immerse themselves in a different world and in the life of the protagonists." (2009 p.6)

Fludernik not only puts a focus on the importance of the actions of protagonists, but also addresses a crucial characteristic that makes up the appeal of narratives[4]: the possibility to immerse oneself in a world different from one's own. This immersion is closely connected to the matter of perspective, that is, in order to create the effect of immersion, techniques of perspectivation come into play. Narrative modes such as first-person narration, for example, may invite the reader to adopt a protagonist's perspective and thus become a witness of the events presented in the fictional world.

In the long tradition of narratology much attention has been put on the depiction of narrative instances and their classification with respect to the perspective a story is presented from. Narratologists have particularly classified narrating instances depending on questions such as (i) whether the text reveals a certain perspective, (ii) whether the narrator's knowledge is limited to a point of view or the narrator is omniscient, (iii) whether the point of view is that of a character present in the story or abstract, (iv) whether the perspective changes throughout the text and (v) whether the text is presented from the perspective of a first- or third-person narrator[5].

While in oral discourse, a speaker usually reports a certain event where he or she is the perspectival center of the utterance[6], in narratives it is not the author who writes down his or her story, shares memories, or perceives a situation, but a narrating instance that is created by an author[7].

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[4] While in Genette's (1980) definition narratives may be presented orally, Fludernik (2009) classifies visually presented content as part of the genre of narratives. Bal broadly defines narratives as "text in which an agent or subject conveys to an addressee […] a story in a medium, such as language imagery, sound, buildings, or a combination thereof" (2017 p.5). The question with respect to media shall be left uncommented on, as the focus in this thesis is on written discourse.

[5] This is merely a collection of factors that underlay popular approaches to classifying narrating instances. However, these questions are not truly of the same nature and should be treated separately as argued by Genette (1980). The differentiation between first- and third-person narration, for example, is a matter of how the text is presented (a matter of *voice*; Genette 1980 p.212) and entirely independent from perspective (a matter of *mood*; Genette 1980 p.161). This issue will be discussed in Section 2.2.

[6] Unless he or she indicates a change in perspective (e.g., by quoting another person).

[7] The idea to dissociate the text and the person that created it goes back to Roland Barthes's famous essay *The death of the author* (1967): "it is language which speaks, not the author".

This approach is mostly limited to fictional texts. Imagine a note on the refrigerator saying, "I ate the cake". Here it is fair to assume that the author of the note ate the cake. An interpretation in which a narrator who is not the author ate the cake would be absurd.

In the tradition of literary studies, I will therefore not refer to the author's perspective but to the narrator's perspective[8]. Keep in mind that when I speak of a narrator, the term narrator refers to an abstract narrating instance that may appear to be a character within the story. Yet, the narrator is not an actual person.

I will start this chapter with an introduction of the terms perspective, point of view, and viewpoint in their application to language and literature. Further, I will elaborate on the importance of perspective-taking in the field of narratology with respect to different classifications of narrating instances. I will continue with a brief depiction of different techniques used to indicate perspective shifts in texts (i.e., *protagonist projection*) (following Holton 1997) and speech and thought representation in terms of direct, indirect, and free indirect discourse. FID will be discussed with respect to its role within the framework of speech and thought representation in more detail. An in-depth depiction of the indicators and linguistic features of FID will be the subject of the third chapter.

2.1 Definition of Perspective in Language and Literary Studies

> "Viewpoint permeates human cognition and communication – predictably, since we never have experience of the world except as a viewpoint-equipped, embodied self among other viewpointed, embodied selves." (Sweetser 2012 p.1)

The topic of perspective, viewpoint, or point of view has long been discussed in the humanities, and is of special interest to philosophers, linguists, cognitive scientists, literary scholars (in particular, narratologists), and many others.

In linguistics, the investigation of perspective has been the subject of analyses of logophoric pronouns (e.g., Culy 1997), demonstrative pronouns (Hinterwimmer and Bosch 2016), pronouns in general (Dancygier 2017; Brilmayer et al. 2019), and semantics (Eckardt 2014; Maier 2015).

More recently, perspectivation has been the subject of studies on sign language and co-speech gestures (e.g., Hinterwimmer et al. 2021). The latter was famously investigated by Parrill (2009), who examined a corpus of video data where participants were asked to retell a story of a skunk hopping up and down. While some participants chose observer-viewpoint gestures (i.e., by tracing the path of the skunk hopping up and down with their fingers), others chose character viewpoint gestures by imitating the skunk's movement

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[8] For the sake of completeness, it is necessary to point out that there are in fact narratives where the author and narrator are one and the same person, or where the author creates a narrating instance that is him- or herself (see Fludernik 2009, Chapter 3 for more details and examples).

and facial expression (see McNeill 1992 for the definitions of *character* and *observer viewpoint gestures*).

In the field of narratology, the depiction of perspectives stands in a long tradition with a focus on the question of which perspective(s) is (are) chosen to narrate the events from (Stanzel 1984; Genette 1980), as well as on the techniques used to indicate perspective shifts, such as speech and thought representation (Fludernik 2014; Discherl and Pafel 2015; Bal 2017).

Despite the growing interest in the topic with respect to language, the terms perspective, viewpoint, and point of view still lack a consistent definition (see for an overview e.g., Klein and von Stutterheim 2002). In the following, I will briefly elaborate on the application of this terminology in language and literature, as it underlies the perspective-related discussion in this thesis.

When we approach perspective-taking in language, we have to consider that the common understanding of the notion *perspective* refers to visual perception that is limited according to the observer's position. An object that is looked at from a certain perspective cannot be seen in its entirety unless the observer changes his or her position (Zeman 2017 p.1) or the object itself moves. The term perspective is metaphorically applied in literature and may be defined as the linguistic and extralinguistic choices that are limited with respect to a certain point of view (Stanzel 1984). Dancygier and Vandelanotte (2016 p.14) define the term viewpoint in narratives as "a discourse participant's alignment with an aspect of a frame or situation". In other words, similar to the visual concept, a narrative from a protagonist's perspective or viewpoint presents information the particular protagonist has according to his or her position in a given narrative[9].

Perspective-taking in the visual sense limits the observer, usually[10], to only one angle from where a view may be directed, that is, it is either possible to see the inside or the outside of a house (example taken from Zeman 2017). Perspective-taking in literature conventionally allows for multiple points of view or mixed perspectives. In narratives it is possible to read about the same event narrated by different protagonists, which allows for different points of view, or the perspective may change as the story goes on so that one event may be presented from one protagonist's perspective while the following event

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[9] Note that in fictional texts it is the choice of an author of a narrative to present the narrative from a certain point of view. The narrative is thus not limited per se but the author choses to limit the information presented in order to yield a certain effect.

[10] Mirrors and cameras may allow for multiple perspectives.

is presented from another protagonist's perspective, or an event is presented from the perspective of a protagonist while at the same time the narrating instance presents background information that is beyond the protagonist's knowledge. Perspectivation in a narrative thus requires the reader to identify the perspective holder in a given discourse and to be able to follow a shift in perspective from one protagonist to another, or from a narrating instance to a protagonist's point of view, and vice versa.

In its mixed form, perspective is not limited to either the narrator *or* a character. I will briefly elaborate on this idea, taking an example from Zeman (2017) that illustrates how the use of propositional attitude verbs, such as *to believe*, commonly licenses (at least) dual perspectivation.

(18)   Little Red Riding Hood believes that the wolf is her grandmother.

In (18) the reader must accommodate an external and an internal reading. The internal reading presents the perspective of Little Red Riding Hood: *Little Red Riding Hood believes she sees her grandmother*. This reading has to be updated with an external viewpoint that is beyond the character's knowledge: *The wolf pretends to be Little Red Riding Hood's grandmother*. In other words, the sentence presented in (18) could not be interpreted coherently without the integration of multiple perspectives, otherwise the reader would be limited to either Little Red Riding Hood's point of view or the narrator's point of view.

2.2 Narrators and Perspectives in Narratology

When in search of a way to approach perspective-taking in narratives, one will inevitably be confronted with numerous attempts to classify the perspective a story is narrated from; scholars have set up manifold classifications of the narrating instance regarding whether or not a certain perspectivation is in play. The present section surveys two widely acknowledged – and much debated – approaches, one by Gérard Genette and one by Franz Karl Stanzel.

While prototypically a first-person narrator narrates an event from his or her perspective, a third-person narrator may be omniscient or take on the perspective of a protagonist[11]. That this classification serves merely as a starting point and lacks complexity becomes

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[11] This depiction is a simplified representation of the classification offered by Stanzel (1984).

obvious in particular with respect to what Genette[12] (1980) refers to as the differentiation of *voice* and *mood*. A narrator that speaks in a first-person voice may not be limited to his or her own perspective (mood) but may share insights with a fellow protagonist or have omniscient knowledge (e.g., when the story is narrated in retrospect). In this case, voice and mood do not align. Likewise, a third-person narrator may take on a protagonist's perspective without necessarily sticking to that particular character's point of view. Here the voice remains that of a third-person narrator while the mood shifts.

The question of how to classify narrating instances has been answered in many ways, as it stands in a long tradition. Plato differentiates narrative modes according to whether the author of a text appears in the text as the speaker (i.e., *diêgesis*) or a narrating instance other than him- or herself imitates speech (i.e., *mimesis*). A more recent approach to the question of how the narrating instance is presented is the distinction between the *overt* and the *covert* narrator. An overt narrating instance may appear to be playing an actual role within the narrative while a covert narrator remains purely abstract (Chatman 1978). A similar differentiation is that between a *homodiegetic* narrator, which is part of the narrative, and a *heterodiegetic* narrator, who is present as an actual character (Genette 1980 p.244-245). While these distinctions allow one to characterize the nature of the narrating instance as present or absent, a more fine-grained classification is needed with respect to perspectivation.

One of the most acknowledged approaches is that of Stanzel (1984)[13]. He distinguishes *first-person*, *authorial*, and *figural narrative situations*. While these three *narrative situations* are commonly used to characterize the narrating instance, it is misleading to reduce Stanzel's approach to this trichotomy. Rather, Stanzel proposes a typological circle with the three typical narrative situations as poles. The *peripheric first-person narrator,* for example, who may be a minor character that narrates from a distance, marks the transition to authorial narrative situation. Perspective is displayed on three opposing axes within the typological circle, namely *narrator* vs. *reflector*, *identity* vs. *nonidentity of being*, and *internal* vs. *external* perspective.

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[12] Gerard Genette's *Discours du recit* was first published in French in 1972 as part of *Figures III*. I quote the English translation by Lewin and Culler (1980).

[13] Stanzel's famous *Theorie des Erzählens* was first published in 1979. I quote the English translation by Charlotte Goedsche from 1984.

Genette points out a confusion that is inherent in placing narrative situations and perspectives within one circle[14], which may be trivial when in search of a classification of narrating instances, yet is crucial for the topic of perspective taking:

> "However, to my mind most of the theoretical works on this subject (which are mainly classifications) suffer from a regrettable confusion between what I call here *mood* and *voice*, a confusion between the question *who is the character whose point of view orients the narrative perspective?* And the very different question *who is the* narrator – or, more simply, the question who sees? And the question *who speaks?"* (Genette 1980 p.186, italicization taken from the original)

Based on his attempt to differentiate *voice* and *mood*, Genette coined the term focalization – ultimately the same concept as perspective and point of view, but without the connotation of a visual experience (1980 p.189). Genette differentiates between (i) *nonfocalized/zero focalization*, which has been referred to as the omniscient narrator, (ii) *internal focalization*, and (iii) *external focalization*, which offers no insights to a character's thoughts at all (1980 p.189 ff).

Genette further subcategorizes *internal focalization* as (i) *fixed*, (ii) *variable*, or (iii) *multiple*, depending on whether (i) the point of view sticks to one protagonist, (ii) the point of view may switch from one protagonist to another (1980 p.189), or (iii) "the same event may be evoked several times according to the point of view of several […] characters" (1980 p.190). While Genette's approach to categorizing perspective in narratives accounts for the multitude of types of perspective-taking in narratives, his terminology is not without flaws. The term *internal* focalization, for example, suggest that the reader gets to see the inside of a character's mind while at the same time that character may describe an event or other characters in an *external* fashion (i.e., from the outside) (Bal 2004 p.270). For a critique of Genette's approach, see works by Mieke Bal (e.g., Bal 2004).

These two approaches, exemplarily chosen, indicate how perspective-taking is theoretically anchored in the classification of narrating instances. While each classification offers a different terminology and a different approach regarding the placement of perspectivation within the framework, they address the same matter, namely narrating instances, which, depending on whether they speak in first- or third-person mode, allow for varying degrees and shifts of perspective.

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[14] I use Stanzel's terminology here. However, Genette's objection is not directed explicitly at Stanzel's approach, but also applies to other popular frameworks.

The subject of this thesis that will be discussed and empirically investigated is concerned with texts that are narrated in a third-person voice. Making use of the terminology introduced by Genette, the issue I want to address with respect to the matter of mood is: which linguistic features license a shift from an external or zero focalization to an internal focalization? In other words, if in a given context there are no indicators that the reader will get insight into a character's mind, under which conditions is it possible to temporarily shift focalization from a narrating instance to a character's point of view? Which linguistic features single out/activate one particular protagonist – co-occurring with a second protagonist – in a context in order to allow subsequent insights into his or her thoughts?

2.3 Perspective-shifts in Narratives

The topic of this thesis is shifts in perspective. In particular, I investigate contexts that precede a shift in perspective from the narrating instance to an internal focalization of one of the protagonists.

To achieve the impression that a story or an event is witnessed from a certain perspective or to give insights into a protagonist's thoughts and feelings, different techniques are available. The most straightforward way to indicate that a proposition is anchored in the perspective of a protagonist rather than the narrating instance is by way of quotation (e.g., by formally marking the proposition with quotation marks or embedding an utterance under a propositional attitude verb such as *to say* or *to think*. I will focus on the depiction of the characteristics of the trichotomy of direct, indirect, and free indirect speech and thought in order to provide the reader with a better understanding of the characteristics of FID, which is the main subject that will ultimately be investigated in this thesis.

In the course of this section, I will elaborate on speech and thought representation – presumably the most common way to shift perspective in narratives. However, I will start with an excursion on *protagonist projection* and *viewpoint shifting*, as they share a distinctive feature with FID: they indicate a temporal shift in perspective without overt linguistic marking.

2.3.1 Protagonist Projection and Viewpoint Shifting

Protagonist projection (Holton 1997; further outlined by Stokke 2013) is "a technique whereby things are described using words that the protagonist of the story would use,

although they do not necessarily correspond to what the speaker herself believes" (Stokke 2013 p.205). That is, in a text that appears to be reported from a fixed perspective, individual propositions – but also larger discourse episodes – may represent the perspective of a protagonist without any indication that the perspective has shifted. In example (19), taken from Holton (1997 p.626), an event is reported presumably from the perspective of a narrating instance, while at the same time the false belief that is reported must be projected to the protagonist.

(19)   He gave her a ring studded with diamonds, but they turned out to be glass.

The propositions presented in (19) must be attributed to two different sources, as either the proposition *the stones the ring is studded with are diamonds* or the proposition *the stones the ring is studded with are glass*, but not both, may be true with respect to one doxastic state.

Similar examples have been discussed by Hinterwimmer (2017) under the notion of *viewpoint shifting*.

(20)   When Mary stepped out of the boat, the ground was shaking beneath her feet for
        a couple of seconds.

Example (20) shows similarities to the false belief example in (19), but does not explicitly express the false belief, as the subjective proposition *the ground is shaking* is not explicitly opposed to a contradicting proposition. Rather, the perception of Mary deviates from the presupposed matter of fact that the ground does not shake in the story world.

In yet another example taken from Hinterwimmer (2017 p.289), the shift in perspective from the narrating instance to the character's point of view is indicated by an otherwise odd illicit use of the definite and the indefinite article. Example (21) must be read in a context where two little dinosaurs are being chased, but they do not know that the chaser is a T-Rex.

(21)   The T-Rex hesitated. Maybe the little dinosaurs had hidden themselves in the
        cave on his left. When Billy looked up in his hiding place a few seconds later, a
        T-Rex bent down to the entrance of the cave and squinted into the dark.

While the narrating instance knows that the chaser is a T-Rex, the use of the indefinite article (i.e., *a T-Rex*) in the last sentence indicates that the particular T-Rex is new to Billy the little dinosaur, as otherwise a reference to an antecedent that has previously been introduced with a definite article contradicts the common use of articles in English. In a

broad sense, again, two doxastic states deviate; while the narrator is aware that the chaser is a T-Rex, this information is new to the protagonist.

Semantically, the shift in perspective in examples (19)-(21) may be captured by an approach by Regine Eckardt (2014). Although she models the perspective shift for FID, her approach is likewise applicable to protagonist projection. She postulates an account in which two contexts must be considered: the narrator's context *C* and the protagonist's context *c* where *C(WORLD) ≠ c(world)*. That is, whenever there is a proposition denoted by a sentence interpreted with respect to *c*, the proposition is not interpreted as true with respect to the worlds compatible with the story worlds C, but only as true in the worlds compatible with the beliefs of the protagonist (Eckardt 2014; see Chapter 3 for semantic approaches on perspective shifts).

Holton's *protagonist projection* and Hinterwimmer's *viewpoint shifting* differ with respect to their temporal structure, that is, while in Hinterwimmer's viewpoint shifting the trigger event and doxastic state are in temporal relation, this is not the case for the examples presented by Holton (Jordan-Bertinelli 2019 p.49). Yet, Jordan-Bertinelli (2019) and Abrusán (2020) argue that both depict the same phenomenon with respect to the shift in perspective.

Essentially both types of perspective shifts share the same characteristics as FID: a temporal shift in perspective from the narrating instance to a protagonist that is not indicated by way of formal marking.

Crucially, unlike FID, viewpoint shift and protagonist projection do not necessarily represent an utterance or thought but the depiction of an event from a particular perspective. The shift in perspective is enforced by the reader's interpretation of two presumably contradictory propositions. The shift in perspective in FID, on the other hand, may but *does not necessarily* contain the protagonist's doxastic state that deviates from that of the narrating instance (Jordan-Bertinelli 2019 p.49).

With respect to the research question at hand (i.e., *who gets to be the perspectival center when multiple protagonists are introduced in the context?*), Hinterwimmer assumes that in viewpoint shifting "a situation is described as it is perceived by a salient protagonist" (2017 p.283). However, he does not specify the conditions under which a protagonist is salient and thus becomes available as the anchor for an internal perspective.

Based on the similarities between viewpoint shifting and protagonist projection and FID (i.e., that they temporarily shift the perspective towards a protagonist without formally indicating the shift by way of embedding or the use of quotation marks), the anchoring

mechanisms investigated in this thesis presumably may also apply to *viewpoint* shifting and *protagonist projection*. However, this claim requires further investigation,[15] which goes beyond the scope of this thesis.

2.3.2 Speech and Thought Representation

While language is the medium through which the narrative is narrated, language may also be part of the fictional world. That is, language may be used to describe the setting, events, and protagonists, while at the same time in speech representation language may be part of what is narrated[16].

While I will focus on FID and its role within the classification of direct and indirect speech and thought, for the sake of completeness, it must be mentioned that there have been manifold attempts to classify more than the three ways of speech and thought representation already mentioned, such as the addition to the trichotomy of *distancing indirect speech and thought* (DIST), which "involves an initiating clause being introduced into the discourse as a straightforward Speaker claim, only to be nuanced afterwards in a sort of distancing or disclaiming afterthought" (Vandelanotte 2004 p.496), as in (22):

(22)   He mailed you earlier today, he said, so please do answer him.

As this phenomenon may be regarded as a subcategory of indirect speech, I will not consider DIST in the depiction of FID within the framework of speech and thought representation.

Another approach essentially different from the trichotomy of FID, direct speech, and indirect speech is that of Genette (1980). He classifies speech and thought representation on a more functional level using the terms *reported* and *transposed* speech (Genette 1980 p.171-172). While depicting direct and indirect speech, Genette's three states of characters' speech are less concerned with the formal aspects of quotation, instead

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[15] Conclusions may not be drawn with respect to the empirical research presented in this thesis, as viewpoint shifting and FID essentially differ in their syntactic structure. While usually an entire sentence (or several sentences) is (are) in FID mode, viewpoint shifting and protagonist projection may occur in a matrix sentence. For such cases, anchoring mechanisms must be investigated at the sentence level.
[16] The idea that language represents actual speech is misleading; what is represented by way of direct quotation is usually a revised version of what actually has or could have been uttered. Unlike actual speech, reported speech is usually free of grammatical and syntactical mistakes, hesitation, repetition, and the like. Though direct speech is commonly put in shape/straightened out for reasons of intelligibility, characteristics of actual speech as well as dialectal or idiolectal features are not excluded and may be found in narratives.

focusing on the degree of mimesis, or as he phrases it, the matter of *narrative distance* (Genette 1980 p.171). That is, *reported speech* (marked by the use of direct quotation) is highly mimetic (i.e., it imitates the character's words as it gives the impression that the words were in fact uttered as such) (Genette 1980 p.172). *Transposed speech* (typically indirect quotation), on the other hand, "never gives the reader any guarantee […] of literal fidelity to the words 'really' uttered" (Genette 1980 p.171; quotation marks taken from the original) and is thus more distant to the utterance.

Genette further categorizes *narratized* or *narrated* speech (1980 p.171), where not the proposition that is uttered but merely the event of the speech act itself is presented to the reader without any further details, as in (23). Narrated speech is thus the most distant and most reduced.

(23)   Tim insulted the waiter.

The mere report of a speech act can be classified as a way of speech and thought representation (see *unspezifische Rededarstellung*, Dirscherl and Pafel 2015 p.21; or *Redebericht*, Fludernik 2014 p.80). Yet, for the purpose of this paper, I will not consider narrated speech as it does not involve any shift in perspective but must entirely be ascribed to the narrator.

In the following, I will not differentiate between the representation of speech (i.e., *spoken* words) and thoughts exclusively represented in the protagonist's mind. It may be argued that the representation of speech and thought may be treated separately as, for example, it is common to directly quote speech, but thoughts are frequently reported by way of indirect quotation. Also, the two differ with respect to their faithfulness to the syntax and words of the utterance or thought that is quoted (see Discherl and Pafel 2015 for a summary of different classifications that distinguish speech and thought). In German, *erlebte Rede* (i.e., free indirect speech) is commonly marked by the use of conjunctive mode (Eckard 2014 p.14). For the purpose of this thesis, it is not relevant whether a proposition is uttered out loud or not; I will follow in the tradition of linguistic research on FID and treat free indirect speech and thought as one (Eckardt 2014; Hinterwimmer 2017), referred to as free indirect *discourse*.

2.3.3 Direct, Indirect, and Free Indirect Speech and Thought

Before elaborating on the depiction of FID, which will be the main subject of interest in the empirical part of this thesis, I will provide a short review of direct and indirect speech

and thought representation in order to equip the reader with a better understanding of FID and its status in between direct and indirect quotation.

The most straightforward way to present speech and indicate that the proposition and the choice of words must entirely be attributed to a certain character – rather than the narrating instance – is direct speech (see example (24) a). While direct speech is indicated by way of quotation marks, indirect speech is typically embedded under a *verbum dicendi* (*to say, to tell, to shout, to ask*; see example (24) b).

(24) a. Tim told the waiter: "I'll take the lemon chicken, please."
        b. Tim told the waiter that he would take the lemon chicken.

This form of speech representation further differs from direct speech with respect to the use of deictic expressions. In (24) a, the use of quotation marks indicates a shift in voice and mood to Tim so that the pronoun *I* must be interpreted with respect to *Tim*. Indirect speech does not allow for a full shift. In (24) b, Tim can only be referred to with a third person pronoun. That pronouns are interpreted with respect to the narrator becomes obvious in example (25) a, where the first-person pronoun can only refer to the narrating instance, as in (25) b.

(25) a. Tim told the waiter that I would take the lemon chicken.
        b. Tim told the waiter that I$_{overt\ narrator}$ would take the lemon chicken.

A similar shift can be observed with respect to temporal deictic expressions, as in (26).

(26) a. Yesterday, Tim said: "Let's meet in front of the restaurant tomorrow".
        b. Yesterday, Tim said that he wanted to meet in front of the restaurant tomorrow.
        c. Yesterday, Tim said that he wanted to meet in front of the restaurant today.

While in (26) a, the expression *tomorrow* must be interpreted with respect to the time of Tim's utterance, in (26) b *tomorrow* is shifted with respect to the narrator and thus refers to the *day after (the narrator's) today*. For a correct interpretation, the temporal expression has to be shifted with respect to the narrator as in (26) c (i.e., *the day after the day that was denoted as yesterday*, which is *today*).

The same observation holds for spatial deictic expressions, as in (27) b; the expression *over there* sounds rather odd and, again, triggers an interpretation in which the narrator is overt (i.e., he or she is also in the restaurant together with Tim and Ben and points at a certain waiter).

(27) a. Tim asked Ben: "Could you wave at the waiter over there?"
        b. Tim asked Ben if he could wave at the waiter over there.

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While deictic expressions shift with respect to the narrator, other context-sensitive expressions remain bound to the protagonist. Predicates of personal taste, for example, remain part of the proposition and must exclusively be attributed to the protagonist.

(28)   a. Tim said: "The lemon chicken tasted disgusting!"
      b. Tim said that the lemon chicken tasted disgusting.
      c. Tim said that the lemon chicken tasted disgusting but for me it was the best lemon chicken I ever had!

That the proposition indirectly quoted in (28) b must exclusively be anchored to the protagonist becomes obvious in (28) c; here it is possible for the narrator to express the opposite without causing a contraction.

As direct quotation represents an actual or fictive utterance word for word, there are no syntactic restrictions – direct quotation allows for ellipses, repetitions, vocatives, and the like. It may also include dialects, sociolects, idiolects and even grammatical mistakes. Indirect speech, on the other hand, paraphrases a proposition embedded in a matrix clause and is thus highly restricted with respect to syntax.

(29)   a. Tim said to Ben: "Just wave! Not sure he knows we wanna pay."
      b. Tim asked Ben to wave at the waiter. Tim said that he was not sure if the waiter knew they wanted to pay.

The tense used in direct speech is independent of the tense of the narrative, as in (29) a. Quotation in indirect speech has to adapt the tense with respect to the narrator's tense, as in (29) b.

It may thus be said that direct speech mimics the protagonist's speech; it entirely commits to words, syntax, and the proposition, and consequently requires a full shift of perspective from the narrator to the protagonist as the deictic center that binds deictic expressions. It commits to the point of view that is limited to the protagonist and his or her doxastic state. Indirect discourse, on the other hand, only commits to the proposition while remaining bound to the narrator.

A third option for quoting speech or thought is free indirect speech or thought, collectively termed free indirect discourse (FID). FID may be regarded as a *hybrid* form (Steube 1985 p.392); as Genette puts it: "the character speaks through the voice of the narrator, and the two instances are then merged" (1980 p.174). Like direct quotation, FID "report[s] a person's thoughts as if we could listen to the person talking to herself" (Eckardt 2014 p.2).

(30) a. Tim took another look at his plate. Just gross!
   b. Tim put down his fork. Urgh, no way he'd eat another bite.
   c. Tim rolled his eyes. This was definitely the last time he would eat here.

Like in direct speech or thought, temporal and spatial deictic expressions must be interpreted with respect to the protagonist, as in (30) c (*this was definitely the last time* and *here*). Also, FID is hardly restricted with respect to syntax and may allow for exclamatives without a finite verb, such as in (30) a. If FID features a finite verb, however, that verb commonly takes the tense of the narrative in subjunctive mode, as in (30) b and c. Next to the matter of tense, crucially, FID resembles the narrating style of the narrator, as personal deictic expressions (i.e., pronouns) take the perspective of the narrator, as *he* does in (30) b and c.

	Direct speech and thought	FID	Indirect speech and thought
Personal deixis	protagonist perspective	narrator perspective	narrator perspective
Spatial deixis	protagonist perspective	protagonist perspective	narrator perspective
Temporal deixis	protagonist perspective	protagonist perspective	narrator perspective
Tense	protagonist	narrator	narrator
Faithfulness	high	medium	low
Syntactic restrictions	not restricted	hardly restricted (finite verbs take on the tense used in the narrative, typically in subjunctive mode, no imperatives or vocatives)	highly restricted (embedded under a *verbum dicendi*)

Table 1: Characteristics of direct and indirect speech and thought and FID
(inspired by Discherl and Pafel 2015 p.35 and Jordan-Bertinelli 2019 p.17)

This trichotomy, in particular the status of FID in between direct and indirect speech and thought, is controversial. The issue mainly concerns the question of whether FID should be classified amongst speech and thought representation or whether it represents a phenomenon of its own kind (see Jordan-Bertinelli 2019 p.20 ff for a summary of the controversy).

However, issues with respect to classification and terminology will not be discussed in this thesis. For the purpose of my research, I regard FID to be a sentence – or multiple sentences – that renders a proposition that is either uttered out loud or represented (word for word or paraphrased) on a protagonist's mind. Crucially, in order to interpret the sentence in FID mode correctly, the proposition must be anchored to a protagonist rather than the narrating instance. Unlike narratives that are presented from an internal perspective (i.e., that exclusively narrate events from a protagonist's perspective), FID is a temporal shift of one or several sentences that are embedded in a context that is narrated

from the perspective of a narrating instance other than the anchor of the sentence in FID mode.

While direct and indirect speech are formally marked and thus provide the reader with explicit cues that the proposition must be anchored to a protagonist, FID does not require formal marking. However, there are a number of linguistic markers that are typical of FID. These indicators of FID, as well as the semantic properties of FID will be surveyed in the course of the next chapter.

3 Linguistic Approaches and Empirical Investigations on FID

While in the previous chapter FID was introduced within the framework of speech and thought representation, in this chapter I will elaborate on the linguistic characteristics of FID in order to provide the reader with a thorough understanding of the phenomenon that will be investigated in the course of this thesis.

Typically, FID does not require any formal markers, yet there are a range of markers that are commonly found in sentences in FID mode: at the word level, in the syntax, or with respect to the content that is reported in FID mode.

Also, I will briefly discuss two competing accounts of the semantics of FID – *context shift* (Doron 1991; Schlenker 2004; Eckardt 2014) and *systematic unquotation* (Maier 2015). I will not argue in favor of one or the other, neither will I attempt to draw an exhaustive picture of the semantics of FID. I will rather elaborate on the challenges that FID poses for semanticists as these illustrate nicely what is referred to as *the mixed nature of FID*.

The chapter will further approach the issue of anchoring FID: is perspective-taking bound by (explicit) linguistic cues or can it be inferred by extra-linguistic cues provided by context? I want to argue that FID does not require explicit anchoring cues, but inference purely based on the extralinguistic context does not suffice. Rather, I want to propose the following:

(31) A referent that is sufficiently activated in a linguistic context may serve as the anchor for a sentence in FID mode.

In the course of this chapter, I will elaborate on the implications of my claim and state what is presupposed in my approach.

(32) I. Referents must be activated linguistically
II. There is no exhaustive list of linguistic markers that activate a referent
III. A minimum of activation is necessary in order to serve as the anchor
IV. Linguistic markers that are responsible for the activation of a referent may interact and override each other
V. Activation allows for a shift in perspective – it does not force it

Further, I will discuss a number of examples indicating that anchoring preferences or restrictions depend on linguistic cues, arguing in favor of the claim presented in (31). I will elaborate on the notion of prominence and how it may account for the selection of one particular protagonist as the perspectival center in contexts where two protagonists compete.

Based on the discussion, I will come to the following assumptions, which will be investigated empirically:

(33)   I. Referents functioning as subjects are more available as anchors for FID than referents functioning as objects.
II. Referents referred to with a proper name are more available as an anchor for a sentence in FID mode than referents that are referred to with an indefinite NP.
III. Referents that are emotionally more affected by an action are more likely to be the anchor for a subsequent sentence in FID mode than a competing referent – regardless of their grammatical function.
IV. Referents that are (typically) non-sentient (i.e., unaware of an ongoing action) are hardly available as an anchor for a sentence in FID mode – regardless of their grammatical function.
V. Referents that perceive information are just as likely to be an anchor for a sentence in FID mode as referents that are sources of information – regardless of their grammatical function.

I will close this chapter with a review of selected studies that give central insights on the issue at hand, in particular with respect to the empirical investigation presented in Chapters 4, 5, and 6:

(34)   I. Perspective-taking affects the processing of information presented in a narrative (Pichert and Anderson 1977)
II. Perspective-taking in language is encoded and processed in mental representation (Millis 1995)
III. Perspective-establishing cues have an effect on the perception of a narrative (Hartung et al. 2016)
IV. The linguistic context has an effect on the interpretation of a perspective-dependent expression or phrase (Harris and Potts 2009; Kaiser 2015; van Krieken 2018; Kaiser 2018)

Finally, I will review selected studies that approach the licensing of FID empirically. In recent years, linguists have investigated licensing with respect to temporal structures that precede FID (Egetenmeyer, in prep.), anchoring with respect to a narrator or a protagonist (Kaiser 2015; van Krieken 2018) and anchoring with respect to a narrator or two competing protagonist (Bimpikou 2019).

3.1 Formal Markers of FID

Regarding the formal depiction of FID, two perspectives have been taken. First, FID may be described in terms of the range of markers that are frequently found in sentences in FID mode, that is, one may identify FID by either phrases or individual expressions that are perspective-dependent and thus indicate that the sentence must be attributed to a referent rather than the narrator. A second approach to the formal nature of FID puts the

cart before the horse by stating that the entire sentence in FID mode must be attributed to a referent per se – with two exceptions, namely pronouns and tense markers.

Note that these two approaches are not competing but depend on the research question. An investigation of the processing of perspective-dependent sentences, such as the research of Elsi Kaiser or Jesse A. Harris, focuses on particular markers that signal that a sentence must be attributed to the character. Semantic approaches, such as the work of Regine Eckardt or Emar Maier, aim at a precise attribution of individual expressions with respect to a correct judge; semanticists rather focus on the exceptional nature of tense and pronouns, as these exceptions challenge formal semantics.

In the following, I attempt a detailed depiction of FID; I present markers that are frequently found to signal FID as well as a discussion of the exceptional nature of tense and pronouns.

As outlined in the previous chapter, FID is a temporal change of perspective – specifically, while the voice remains that of the narrator, the proposition must be anchored to a character in the narrative. That this shift is limited with respect to one sentence or a sequence of sentences is nicely outlined in the definition of FID provided by Uri Margolin (in Hühn et al. 2014 p.660):

> "[A] narrator can speak of himself qua narrative agent as of another, that is, in the second or third person […]. The reasons for such a deictic shift are numerous and local, but the transfer can never encompass the whole text; otherwise, it will not be identifiable."

As FID may render all words verbatim, that is, as they were uttered or thought in the real world or in fictional text worlds, FID barely underlies formal rules. With respect to syntax, FID may be regarded as truly free – as opposed to indirect discourse, FID is not syntactically restricted. Sentences in FID mode may include markers of hesitation, repetitions, and ellipses. While the sentence may lack a finite verb, any finite verb that is used in a sentence in FID mode is restricted with respect to tense, namely the tense of the narration.

It should be mentioned that instances of FID "may (but need not) be accompanied by a parenthetical clause" (Banfield 1982 p.76), as in (5) a. As such an explicit anchoring of FID does not require the reader to identify the perspectival center, cases of parenthetically embedded FID will not be discussed in this thesis. However, note that even a shift that is enforced by a verbum dicendi is less acceptable if the anchor for the FID is not sufficiently activated to be preferred as the perspectival center.

31

(35)   a. Maria arrived at school at 7:30. She was waiting to meet Mrs. Miller in room
         405. Why wasn't she here yet? Maria wondered.
         b. Maria arrived at school at 7:30. She was waiting to meet Mrs. Miller in room
         405. Huh, what was she doing in here? A tall man that just opened the door
         wondered.

The contrast presented in (35) indicates that post-hoc licensing is possible to resolve an otherwise incoherent sentence, but I want to argue that (35) b demands rather costly processing from the reader.

At the word level, FID may feature epithets (e.g., *jerk*), interjections (e.g., *well, hmm, ok*), intensifiers (e.g., *totally*), epistemic modals (e.g., *might*), as well as dialectical or sociolectical expressions (e.g., *y'all*, *sonfabitch*).

Also, sentences in FID mode may be questions or exclamations. Like direct quotation, FID allows for the use of question or exclamation marks.

(36)   a. direct speech: Maria was waiting to meet Mrs. Miller in room 405. "Why isn't
         Mrs. Miller here yet?"
         b. indirect speech: Maria was waiting to meet Mrs. Miller in room 405. She
         wondered why Mrs. Miller wasn't there yet.
         c. FID: Maria was waiting to meet Mrs. Miller in room 405. Why wasn't she
         here yet?

As already discussed in the previous chapter, deictic expressions behave exceptionally. Recall example (30) c, repeated as (37):

(37)   Tim rolled his eyes. This was definitely the last time he would eat here.

While the temporal and spatial deictic expressions in the second sentence, *this was the last time* and *here*, must be interpreted with respect to the protagonist, the personal deictic expression, *he*, remains bound by the narrating instance. Note that direct quotation demands a shift of all deictic expressions. A shift of the pronoun in the second sentence in (37) can only be interpreted as a comment by a narrator, as in (38):

(38)   Tim rolled his eyes. This was definitely the last time I would eat here.

The shift of temporal deictic expressions is particularly remarkable in a sentence in FID mode with a finite verb. Here the discrepancy of the two perspectives can result in seemingly odd constructions: a deictic expression refers to a future time, while a finite verb modifies the future time point in past tense (see (39)).

(39)   Tomorrow was Monday. (Lawrence, Women in Love p.185; first cited in
         Banfield 1982 p.98; also discussed in Doron 1991 p.53 and Schlenker 2004 p.2).

A dilemma for a depiction of FID and crucially for any empirical investigation of FID is that "[m]anifestly, it is contextual cues more than formal features that determine, in many cases, whether or not a sentence will be interpreted as a free indirect representation of speech, thought or perception" (McHale 2014). The lack of markers poses numerous challenges for linguistic research on FID, including:

(40) I. Without overt marking, machine-based identification of FID is nearly impossible
II. Annotation guidelines lack hardcoded criteria, so manual corpus annotation remains rather subjective[17]
III. Without distinct marking, target sentences in FID mode may not be interpreted as FID by participants[18]

The content that is reported in FID mode stands out against the narrative context in terms of the doxastic state or the physical or emotional perspective on an event. That is, a sentence in FID mode may be identified as such if it contains information that can exclusively be anchored to the character. A famous example of information that must be attributed to the perspective of a character is that of false belief (i.e., when a proposition is uttered that contradicts what is held to be true in the given narrative). In the context of the Titanic – where it is known to any reader that the ship sank in the actual world and likewise the sinking of the Titanic will occur in the fictional world – at the beginning of the journey on the Titanic a character's thought may be expressed as in (41).

(41) Lucy stepped on board. This ship was truly unsinkable!

The second sentence is obviously counterfactual in the actual world as well as in the story world and must thus be ascribed to the referent who at the time the proposition was uttered or thought believed *the Titanic is unsinkable*. That the proposition must be anchored to the protagonist is enforced by the fact that the narrator may indicate the opposite is the case without causing a contradiction as in (42).

(42) Lucy stepped on board. This ship was truly unsinkable! But she turned out to be wrong. The next day that ship would hit an iceberg.

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[17] Annotation of the sentence continuation data presented in Chapter 6 addresses this issue by calculating interrater agreement as well as limiting the statistical analyses to data where all annotators agreed on the label *FID*.

[18] Experiments presented in Chapter 4 and Chapter 5 faced this issue. The issue was addressed by creating stimuli that continuously featured at least three markers of FID. Additionally, the content of the target sentence was designed to convey information limited to the perception or knowledge of one particular referent.

Another indicator that the sentence must be anchored to the character is a physical or psychological perspective on an event. In FID mode, the narrator may express a subjective emotion that the character experiences.

(43) a. Nele held her leg. Ouch, her knee was hurting so bad!
      b. Andreas put on his new pullover. Mmm, nice and warm!
      c. Joanna looked at Timo. How smart he looked with his new glasses!
      d. The little mouse looked at the rabbit. How tall he was!
      e. Markus looked around. Where was Thommy?

Similar to the Titanic example in (41), in (43) d the sentence in FID mode reflects the protagonist's belief that *the rabbit is tall* while for any human a rabbit is commonly a rather small animal. Here, however, it is not the mouse's false belief that *the rabbit is tall* – when compared to a human it is not – but a perspective-dependent appraisal of the situation that, judged correctly from the perspective of the mouse, *the rabbit is tall.*

Further, commonly expressed in FID mode are speculations, assertions, surprise, or doubt.

With respect to the ascription of individual words, the claim that *the voice remains that of the narrator* seems misleading and needs further clarification. Note that a sentence in FID mode must be ascribed entirely to the protagonist. The impression that the proposition that is to be ascribed to the protagonist is rendered by a narrator is based primarily on the fact that tense and pronouns remain bound by the narrator. Importantly, only tense, not the verb, and the person of the pronoun, not the denotation of it, are bound by the narrator. Though trivial, a clarification of the precise mix that makes up FID is crucial with respect to the following section.

(44) Heinz looked in the mirror. *How good he* (HEINZ, 3rd pers. sing.) *look*ed.

Consider example (44) for a clarification: The proposition of the second sentence marked in italics must be ascribed to the protagonist. That is, Heinz notices – he either thinks or utters – that at the time of his looking in the mirror *Heinz* looks good. While in direct quotation, reference to Heinz would require a shift to the first-person pronoun, *I*, typically FID requires a third person pronoun. While the pronoun takes on the perspective of the narrator, still, it gets its denotation from the proposition that is anchored to the protagonist (i.e., Heinz thinks that *Heinz* looks good – rather than any other male candidate potentially referred to with the pronoun). Likewise, the verb is bound by the protagonist, while only the tense is ascribed to the narrator. That is, the entire proposition *Heinz looks good* is anchored to Heinz – irrespective of the narrator's agreement on Heinz' good looks. That

it is tense information rather than the verb per se may be clarified in the fictional example (45), where the protagonist thinks that somethings smells good (i.e., Ger. *duften*), while the overt narrator may state that in fact the opposite was the case, (i.e., that it stinks, Ger. *stinken*).

(45)   Nach dem Verzehr einer ganzen Tüte Müll rülpste der Grinch zufrieden. Oh, wie das duftete!
Glaub mir, der Grinch war wahrlich ein komischer Kauz. Einen solchen Gestank kannst du dir kaum vorstellen.

After he had eaten an entire bag of trash, the Grinch burped contentedly. Oh, how sweet it smelled!
Believe you me, the Grinch truly was an odd fellow. You don't even want to imagine that stench!

That is, the narrator does not just disagree with the proposition that is uttered in FID mode, but the narrator specifically disagrees with what is expressed by the verb.

The separation of the denotation of the expressions and their grammatical features also accounts for exceptional cases, such as (46), where the gender of the pronoun used in a sentence in FID mode does not match the actual gender of the referent (the argument was first raised in Schlenker 2004; also discussed in Sharvit 2008; Eckardt 2014; and Maier 2015). In a context where Leah is awaiting her new apprentice whom she falsely believes to be female, the following sentence in FID mode is appropriate.

(46)   Leah was waiting for Kim in the lobby. Why wasn't she here yet?

In this case, the gender information that is assigned to the pronoun is anchored to the belief of the protagonist. Keep in mind that the proposition denoted by a sentence in FID mode must be attributed to a referent, while pronouns and verbs carry markers that are bound by the narrator. Yet, it is not just the verb or the pronoun that is anchored to the narrator, but also the tense of the verb and the person of the pronoun.

3.2 Semantic Approaches to FID

In order to grasp the challenge of any semantic approach to FID, we need to focus on the mixed nature of FID. As already outlined in the previous chapter, FID shares characteristics with both direct and indirect speech. Schlenker (2004 p.5) defines FID as follows:

> "Descriptively, Free Indirect Discourse behaves as a mix of direct and of indirect discourse: tenses and pronouns take the form that they would have in an attitude report […], while everything else -including *here, now, today, yesterday* and the demonstratives (e.g., *this*)- behaves as in direct discourse. In other words, a passage in Free Indirect Discourse may be obtained by changing the person and tense markers of a quotation to those of an indirect discourse embedded under an attitude verb in the desired person and tense."

In the literature, there is a general consensus that individual expressions must be attributed entirely to a character, as if they were directly quoted. That is, deictic expressions referring to space and time, epithets, interjections, and intensifiers are typically interpreted with respect to the character. As discussed in the previous section, the form of pronouns, specifically the person of pronouns, and the tense of finite verbs, however, must be attributed to the narrating instance.

There are two competing approaches to the issue of the mixed nature of FID. The first suggests treating the sentence in FID mode with respect to two different contexts, that of a narrating instance and that of a protagonist (Banfield 1982; Doron 1991; Schlenker 2004; and Eckardt 2014). Such an approach figuratively dissects the sentence into pieces that must then be analyzed individually. The second approach treats the stretch of FID as a whole, but allows for individual unquoted expressions – in Maier's terms we must regard the whole sentence as having "systematically punctured 'holes'" (Maier 2015 p.3). One of the earliest approaches that suggests analyzing FID with respect to two contexts is that of Doron (1991). She approaches the semantics of FID by including an attitude operator that allows for the speaker and the subject of consciousness to deviate. She states that "[o]nce we recognize that content must be factored into point of view and attitude, we must give up the simple picture according to which once the discourse situation is fixed, this already determines what is being said. What is said does not depend only on the discourse situation, but on the point of view as well" (Doron 1991 p.63).

I will briefly outline the approach of Schlenker (2004). Based on Banfield (1982) and Doron (1991), Schlenker also assumes that "(i) tenses and pronouns depend on the Context of Utterance [roughly Banfield's 'Text' and Doron's 'discourse situation'], while (ii) all other indexicals (including the demonstratives, as well as *here*, *now*, and *yesterday*) depend on the Context of Thought [roughly Banfield's 'E' and Doron's 'Point of View']" (2004 p.2). He proposes to analyze a sentence in FID mode *under the assignment s, in the context of utterance υ, and in the context of thought θ*" (italics taken from the original, Schlenker 2004 p.14) so that the sentence in (47) a takes the logical form of (47) b.

(47) a. Now he was rich (, John thought).
   b. Now λt rich (he_k, $past_m$, actually)
   c. (b) is $weird_{s, \upsilon, \theta}$ iff (i) $s(x_k)$ is not (in the world of υ) a male individual who is neither the speaker nor an addressee of υ, or (ii) the time of θ is not before the time of υ. Otherwise (b) is $true_{s, \upsilon, \theta}$ iff $s(x_k)$ is rich at the time of θ in the world of θ (example taken from Schlenker 2004 p.15)

Unlike Doron (1991) and Banfield (1982), Schlenker attempts a more in-depth explanation of why precisely pronouns and tenses behave differently from the rest of the sentence. He suggests treating pronouns and tense as variables that are bound by antecedents that satisfy their features. However, his approach faces the issue that a rigid ascription of pronouns to the Context of Utterance (i.e., the narrator) cannot account for a gender mismatch such as the one presented in (46). Schlenker offers an explanation for such cases, speculating that certain pronouns are actually pronouns of laziness that in fact represent an elided definite description – in the case of (46), *she* is actually a representation of *the girl*, *the apprentice*, or any similar description that refers to Kim. In his context shift framework, a definite description would have to be treated in the Context of Thought, and consequently allows for false beliefs with respect to the issue of gender. Similar to Banfield (1982), Doron (1991), and Schlenker (2004), Eckardt (2014) suggests interpreting FID with respect to two potential contexts. That is, to the context C (i.e., the narrator's context) is added a second context c (i.e., the protagonist's context).

Eckardt (2014) builds on Kaplan's (1989) notion of context. Kaplan proposes that any context is fixed according to functions (i.e., $f_{SPEAKER}$, $f_{ADDRESSEE}$, f_{PLACE}, f_{TIME}, f_{WORLD}) that allow for context-dependent expressions to have different denotations. Kaplan's approach to contexts allows one to compute the proposition of a sentence such as that in (46) to vary with respect to different utterance contexts.

(48)   I can see you now.

The proposition denoted in (48) can be true for the speaker Rita, who utters (48) at the time 15:56 on 4.4.1989 to the addressee Peter while both are part of the same world *w* and Rita can see Peter at 15:56 on 4.4.1989. Likewise, (48) can be a true statement for the speaker Lina who utters (48) at the time 9:00 on 06.01.2022 to the addressee Sabrina while both are part of the same world *w* and Lina can see Sabrina at 9:00 at 06.01.2022. Eckardt adds the variable of a reference time *R* in order to account for a deviation in the time a statement is uttered (*NOW*) and the time that is referred to in the utterance (*R*), so that R "maps each context to the time *about which* the speaker wants to talk" (2014 p.34).

This set of variables consists of tuples that allow for an interpretation with respect to c so that <SP, sp>, <AD, ad>, and so forth. For most utterances (e.g., in direct speech), C and c are in line, as in (49):

(49)   C(SP) = C(sp)
        C(AD) = C(ad)
        C(NOW) = C(now)
        C(R) = C(r)
        C(WORLD) = C(world)

Now, whenever a sentence is in FID mode, it calls for an interpretation with respect to *c* that differs from C. Specifically, all context-sensitive expressions with the exception of pronouns and tenses have to be interpreted with respect to *c* whenever *c* is available. Pronouns and tenses are always interpreted with respect to *C*. Whenever *c* is introduced, the proposition denoted by a sentence interpreted with respect to *c* as well as *C* is not interpreted as true with respect to the worlds compatible with the story worlds, but only as true in the worlds compatible with the beliefs of the respective protagonist.

(50)   Tim rolled his eyes. He would definitely never eat here again.

In the case of the second sentence in (50), the external context C deviates from the internal context c: while the narrator is C(SP), the referent, Tim, is c(sp), and the deictic expression here corresponds to c(ad).

Example (50) can thus be paraphrased as:

(51)   There is an event *e* of Tim rolling his eyes that is located in the past with respect to the time of *C* (= the narration time) and in all worlds that are compatible with the beliefs of the author of *c* (= Tim), and at the time of *c* (= the time of *e*) there is an event *e′* of Tim not wanting to eat at a place that is located with respect to *c* (= the location of e) and refers to the future with respect to the time of *c* (= the time of *e*).

A second approach to analyzing FID in terms of formal semantics is to regard FID as a special form of mixed quotation. Mixed quotation typically features quotation marks that mark individual words or phrases and attribute them to a source that is different from the speaker.

Maier (2015) argues, against the context shift approach, "that free indirect discourse should be analyzed as a species of direct discourse rather than indirect discourse" where "pronouns and tenses are systematically unquoted" (p.1). Accordingly, the logical form of example (50) is illustrated in (52), where quotation marks indicate that the words of

the second sentence must be ascribed to a protagonist while square brackets indicate individual unquoted words.

(52)   Tim rolled his eyes. "He [would] definitely never eat [here] again."

The issue of which expressions are to be unquoted is "not to be hardcoded in the syntax-semantics interface, but left for pragmatics to decide" (p.30). According to Maier, example (50) could be paraphrased as:

(53)   Tim rolled his eyes and (i) 'uttered' (internally) the construction '… …
        definitely never eat here again', thereby expressing property P; and (ii) Tim
        thought that P applied to himself (he) in the past (would).

Without explicitly addressing the issue of anchoring, both semantic approaches outlined in this section presume that either the entire stretch of FID (in a *context shift* framework) or individual parts of it (in a *systematic unquotation* framework) must be anchored to a salient referent different from the narrating instance. Thus, the research presented in my thesis does not challenge either account. Rather, it may provide novel insights on how to specify what has been called Point of View (Doron 1991), Context of Thought (Schlenker 2004), and Internal Context (Eckardt 2014).

Though the semantic properties of FID are not directly relevant for the purpose of this thesis, they point out one important aspect of FID the reader should bear in mind: FID constitutes two varying or mixed perspectives – that of the narrating instance and that of the protagonist. Note that in the course of this thesis the entire sentence in FID mode is referred to as being narrated from the *protagonist's perspective.* This terminology, therefore, falsely suggests that the entire utterance must be ascribed to the protagonist, when in fact the proposition as well as the words are anchored to a protagonist while the person of the pronoun and the tense of the finite verb are anchored to the narrator. For reasons of simplicity, I will, however, continue to refer to FID as narration from a character's perspective in contrast to the narrator's perspective.

3.3 Anchoring of FID

While semanticists have approached the depiction of perspective shifts, they have not specified the conditions that are necessary for an utterance to be anchored to a referent. Eckardt merely suggests that FID must be "linked to a protagonist who is accessible and salient at the current point of the story" (2014 p.50). Crucially, she does not define

features that make a referent *accessible* and *salient*, nor does she define the boundaries that specify *the current point of the story*.

Likewise, Harris concludes his investigation of the processing of perspective-dependent sentences by saying that "perspective shift was facilitated by features of the context which signal that a salient discourse agent has sharply opposing views which […] fit the attitude expressed" (2012 p.287). While Harris does not investigate the conditions that are necessary or contribute to the agent's availability as the perspectival center, he also claims that the agent must be salient. While presumably for Eckardt and Harris the question of anchoring is not an issue, let us take a look at the presuppositions that come with shifting and anchoring perspectives.

In the following, I want to outline the assumptions presupposed by the investigation of perspective shifts, starting with the very basic:

(54)   A stretch of text is presented from one perspective in order to allow for a
           temporal shift

That is, in line with the authors discussed in the previous section, I suppose that a text is presented from one perspective, which potentially does not feature any perspective markers and thus appears rather neutral[19]. Yet, regardless of whether the perspectival center of the text is overt or covert, it must differ from the perspective that is represented in FID, or else FID would not be identified as such.

Second, I assume that an utterance or a text is by default anchored to a source (i.e., the speaker of the utterance or the narrator[20] of a text). As stated previously, in a conversation the hearer assumes that any utterance is ascribed to the speaker. That is, unless the speaker signals that a certain proposition is not to be ascribed to him- or herself, the hearer can believe that the speaker is committed to the utterance, or as stated by Doron: "in everyday discourse the speaker is also the subject of consciousness" (2004 p.58). While this may sound rather trivial, especially for spoken discourse, it has a crucial impact on any investigation of perspectives in discourse. Harris (2012) proposes that the *speaker-orientation principle* is the "general interpretive principle […] which is to be followed in the absence of evidence to the contrary".

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[19] It has been argued that texts may not show any perspective, and thus appear entirely neutral. However, such a claim is controversial, as every text contains certain information, and the selection of which information is presented is thus limited with respect to the reporting source.
[20] Recall from Chapter 2 that it is the narrating instance that a text is ascribed to – not the author.

(55)   Speaker orientation by default:
        Assume that clause C is speaker-oriented. (p.9)

I will adopt Harris' principle for this thesis, but I need to explicitly extend his *speaker-orientation principle* to narration:

(56)   Narrator orientation by default:
        Assume that clause C is narrator-oriented.

I will follow this assumption for any kind of narration, while I am particularly interested in cases where there is *evidence to the contrary*, as stated by Harris (2012):

(57)   Agent orientation
        Let a be an agent. A clause C with denotation p is a-oriented in utterance U if,
        and only if, in uttering U, the speaker expresses, with C, that a is committed to p.
        (p.7)

That is, if a speaker, or a narrator, wants to indicate that the sentence is not to be interpreted as speaker- or narrator-oriented, it has to be indicated that some other agent is the anchor for the utterance.

Further, Harris raises precisely the right question that follows assumptions (54) to (57): "[H]ow do we characterize the mechanisms that override the speaker default and signal a shift in perspective?" (Harris 2012 p.15). Indicating that some other agent is committed to the proposition is commonly done by way of speech and though representation. The most straightforward way to indicate that agent *a* is responsible for a proposition *p* is by committing *a* to *p* by the use of a verbum dicendi (i.e., *a said/thought "p"* or *a said/thought that p*). While direct and indirect speech and thought representation may be regarded as the default, we need to acknowledge that perspective-dependent expressions may also be anchored to an agent different from the narrator without any overt marking, such as in FID. If, however, there is no overt marking, how does the reader know who is committed to the proposition? This question becomes even more pressing whenever a perspective-dependent expression is ambiguous with respect to several potential anchors – there could be a speaker or narrator and a number of salient agents that could plausibly be the anchor for an expression.

(58)   a. Nina, John and Joe were sitting at the table.
           How disgusting! There was a hair on her plate.
        b. Nina, John and Joe were sitting at the table. John looked at Nina's plate.
           How disgusting! There was a hair on her plate.

Example (58) a neatly illustrates the speaker/narrator orientation principle: though Nina, John, and Joe are salient and accessible (i.e., referred to with a proper name in subject

position), and all three of them may potentially notice the hair and thus possibly think that it is disgusting, the utterance gets to be attributed to the narrator.

The context in (58) b is presumably rather similar to that in (58) a: all three protagonists still are salient and accessible and all three of them may potentially notice the hair and thus think that it is disgusting. Yet, in (58) b, John gets to be the anchor for the utterance. One may argue that the ascription of the utterance to John may be explained in terms of coherence: John is looking at the plate and thus he notices the hair and thinks it is disgusting. I do not want to go into detail on how to account for the anchoring mechanisms until the next section. At this point, it is important to understand that an explanation based on the coherence of events is not suitable. That is, if the perception that is indicated in the preceding sentence (i.e., *John sees*) is responsible for the licensing of a subsequent utterance, conversely, all sentences in FID mode have to be licensed by a similar mechanism. While I do not want to propose an alternative just yet, consider example (59), which illustrates (i) that FID can be anchored to the protagonist without any explicit report of perception and (ii) that presumably the context provided in (58) a is sufficient to activate a referent as the perspectival center.

(59)   Nina was sitting at the table. How disgusting! There was a hair on her plate.

The goal of this thesis is to understand the anchoring of perspective-dependent sentences without explicit marking, more specifically, what conditions allow the reader to shift from narrator orientation to agent orientation without any overt marking. Before discussing anchoring mechanisms in section 3.3.2, I will briefly discuss the nature of this issue and, crucially, claim that the anchoring of FID is in fact dependent on the activation of a referent in terms of linguistic cues rather than a purely pragmatic phenomenon.

3.3.1 The Nature of Anchoring Perspective-dependent Expressions

As elaborated in Chapter 1, the anchoring of perspective-dependent phenomena in language has been only sparsely investigated. The lack of linguistic research may be due to the uncertainty that comes with the issue of perspective-taking: if there is no explicit marking, is the anchoring of a perspectival center dependent on linguistic cues, or a matter of coherence within a text, or even dependent on the extra-linguistic context? I want to argue for the first of these three, and give empirical evidence that will support the idea that linguistic cues promote a referent to be available as an anchor for a perspective-dependent thought or utterance.

With respect to the nature of the issue at hand, Harris (2012 p.46-47) postulates two hypotheses, (60) and (61), according to which the shift in perspective is either *configurational* or *contextual*.

(60)   Configurational
       Shifting the orientation of an expressive away from the speaker's perspective is achieved by semantic binding of the expressive. Only semantic binders, such as attitude predications, within the object language standing in a particular configuration with the expressive may shift the expressive onto another perspective

(61)   Contextual
       Perspectival information encoded within an expressive is calculated with respect to the interaction of various contextual and pragmatic factors, which favor speaker orientation for independent reasons. Embedding the expressive under an attitude predicate is not necessary to shift the perspective of the expressive onto another agent in the context, though it may facilitate it.

These two approaches may be regarded as representing two extreme positions: while the configurationalists claim that only explicit binding operators can shift perspective, the contextualist approach rather vaguely allows for *various contextual and pragmatic factors* to license perspective shifts.

Based on the approaches presented by Harris (2012), I want to argue for a third, less extreme position. In line with Harris, I believe that perspective-dependent sentences do not need an explicit binder, such as *attitude predications* (Harris 2012 p.46, repeated in (60)). However, I also want to argue that not just any *contextual and pragmatic factors*, but specifically cues that promote a referent's activation status, are crucial for perspective shifts. I claim that:

(62)   A referent that is sufficiently activated in a linguistic context may serve as the anchor for a sentence in FID mode.

Let me point out the implications of this claim that motivate the research presented in this thesis:

(63)   I. Referents must be activated linguistically
       II. There is no exhaustive list of linguistic markers that activate a referent
       III. A minimum of activation is necessary in order to serve as the anchor for FID
       IV. Linguistic markers that are responsible for the activation of a referent may interact and override each other
       V. Activation allows for a shift in perspective – it does not force it

Before we forge ahead to the discussion of markers that activate a referent, I briefly want to elaborate on the presuppositions necessary for an investigation of the anchoring

mechanisms of FID. As stated in (63) I, linguistic cues are responsible for the activation of a referent (i.e., I expect to find differences in the acceptability of a sentence in FID mode depending on the linguistic markers that activate the referent in the discourse, for example grammatical function).

Let me briefly illustrate that a sentence in FID mode cannot be anchored to a referent that has not been linguistically activated but that is prominent in terms of physical presence, singled out by pointing gestures or in terms of a visual presentation on a page. Though I cannot give any empirical evidence, I want to argue that such anchoring is not possible based on the following example.

Imagine a party. Lilly and Andy are in a conversation. Clarissa approaches the buffet. Lilly and Andy want to comment on Clarissa's attitude.

Though it may be exceptional, in spoken discourse it is possible to quote Clarissa without marking it parenthetically, such as *Clarissa probably just said* or *Clarissa must have been like*. Lilly or Andy may establish Clarissa as the source of the utterance by pointing at her, imitating her voice, or enacting her gestures: "Uhh, look at those tiny shrimps".

Such rendering in FID mode is infelicitous: *Uhh, how tiny those shrimps were* cannot be uttered by Lilly or Andy with the intention of mimicking Clarissa.

However, arguably, FID is generally hardly acceptable or common in spoken discourse (see Fludernik 1993 p.83-85), and as such, an utterance in FID mode may not be appropriate in the party example in the first place, independent of the lack of activation of the referent.

Imagine a narrative that reports the same event:

(64)   The party was in full swing. The music was exciting but still it was not too loud to have a decent conversation. In the corner there was a table with a sumptuous buffet.
Uhh, how tiny those shrimps were.

Even if the reader was provided with a picture of the scene that shows a girl that matches the attitude expressed in the utterance, I want to argue that without any linguistic activation, anchoring the sentence in FID mode is impossible.

While psycholinguistic research has done a great deal of investigation of the activation processes that are responsible for anaphoric choices and anaphora processing, there is no similar exhaustive work investigating the activation of a referent as the anchor for an utterance in FID mode. This thesis shall further investigate (63) II (for the first empirical work on this issue, see Hinterwimmer and Meuser 2019; Bimpikou 2020).

The assumption that a minimum of activation is necessary ((63) III) rests on two observations. First, referents have to be activated with a referring expression that denotes the referent; a presumable linguistic activation by means of an inference is not sufficient, as in (65) and (66).

(65)   The taxi stopped in front of the club. Hopefully tonight the passengers wouldn't all be blind drunk again.

(66)   a. The team was getting ready for the big game. The shoes were fitting awfully tight today.
        b. Leon was getting ready for the big game. The shoes were fitting awfully tight today.

While in (65), mentioning a taxi activates a taxi driver, it is impossible to anchor the sentence in FID mode to the inferred taxi driver. Likewise, in (66) a, it is impossible to infer one particular player from the team as the anchor for the utterance. The only interpretation is that of the entirety of the team as the anchor for the utterance in FID mode, which is rather odd with respect to the fit of shoes. However, a more general collective thought anchored to the team is possible, such as (67).

(67)   The team was getting ready for the big game. Hopefully they would win the game today.

The second observation with respect to a minimum of activation that is required is that reference with an indefinite article is insufficient, as in (68).

(68)   A girl was scratching her arm. Oh, how bad that itched.

Though the girl is the only referent in the context and likely to experience the sensation, the second sentence in (67) may rather be ascribed to an empathic narrator that witnesses the scene and comments that *it looks like it must itch badly for the girl*.

The claim made in (63) IV (i.e., markers may interact and override each other) is particularly interesting in contexts where there are several potential anchors, as in (69).

(69)   a. A young girl asked Martin for a tissue.
        Hmm, poor girl, she looked really sick.
        b. Lilli asked Martin for a tissue.
        Hmm, poor girl, she looked really sick.

While in (69) a, Martin gets to be the perspectival center so that the sentence in FID mode is perfectly acceptable, the FID in (69) b is highly unexpected. I want to argue that in (69) b the cues that activate the competing referent, Lilli, override the activation of Martin so that Martin is no longer preferred as an anchor for a perspective-dependent utterance, or

to use a different terminology, the referent with the higher prominence status gets to be the perspectival center (Hinterwimmer 2019).

The claim in (63) V simply states that a context-dependent utterance requires activation, yet activation of a referent does not force the following statement to be perspective-dependent.

(70)   Larissa was standing at the goal line. A ball approached her really fast.

Though in (70) Larissa is highly activated and available as an anchor for a perspective-dependent utterance, her activation status does not force a subjective interpretation of the second sentence. That is, *the fast approaching of the ball* may be interpreted in the context of the narrator so that the ball is fast in the story world (i.e., actually fast but possibly not perceived as fast by Larissa, as indicated by the continuation in (71) a). An interpretation in which the ball is exclusively perceived to be fast with respect to Larissa when it was actually not that fast in the story world is also possible, as indicated by the continuation in (71) b, yet such an interpretation is not the default and has to be made explicit in the context.

(71)   Larissa was standing at the goal line. A ball approached her really fast.
       a. But to her it did not even seem to be a fast ball. She was such a pro.
       b. But actually, the ball was not fast at all. It was just that Larissa was so terrified of balls.

3.3.2 Cues that Activate the Anchor for FID

In this section I want to discuss examples that highlight the impact of different linguistic cues on the anchoring of FID. At this point, I refrain from jumping to conclusions based on the discussion of these examples. Rather, I want to convince the reader that the anchoring of FID depends on various linguistic cues. In the following, I will argue that the referent that shall serve as the anchor for a sentence in FID mode must be sufficiently activated in the discourse. Cues that activate a referent as the perspectival center are the grammatical role, the referential expression, and the type of verb that is used to introduce the referent in the preceding sentence. However, this elaboration is by no means exhaustive nor do I claim that the observations made are representative for all comparable cases. Intuitions based on the discussion of examples shall set the ground for the empirical investigation presented in the following chapters.

To outline the impact of grammatical function on the anchoring of FID, the following examples should be read without any contextual presuppositions or emotional

involvement. That is, the two sentences presented in (72) should be treated separately from any context that could act in favor of one perspective or the other – the two protagonists are not part of a narration, a book, or any other medium that adds additional information with respect to either *Emma* or *Tom*. Free of any assumptions[21] regarding *Emma* and *Tom* and without any other contextual information I claim that we intuitively prefer the continuation in FID mode anchored to Emma, as in (72) a, rather than to Tom, as in (72) b.

(72) Emma met Tom at the gym.
      a. Huh, he didn't look like that typical sporty gym person at all.
      b. Huh, she didn't look like that typical sporty gym person at all.

While the FID in (72) a can only by understood as a thought of Emma judging Tom, (72) b must be interpreted from Tom's perspective. On the level of content, both sentences should be equally acceptable, as both protagonists are in the same position to have such a thought: we do not know more or less than that both protagonists are at the gym, that they both met there, and that presumably they knew each other from a different context. Even contextualizing the sentence – which I asked the reader not to do – does not act in favor of one or the other to be more likely to be looking like somebody that works out. That is, without having any evidence that he or she is more likely to have such thought, the reader depends on other cues that help in interpreting the sentence. Intuitively the more preferred continuation of the story is the thought that must be anchored to Emma (i.e., (72) a). Option b is not ungrammatical or entirely odd but causes some surprise.

At this point, I want to state the hypothesis that will be the subject of the research presented in Chapters 3, 4, and 5 (based on Hinterwimmer 2019, also investigated in Hinterwimmer and Meuser 2019):

(73) Protagonists functioning as subjects are more available as anchors for FID than protagonists functioning as objects.

That is, in example (72), *Emma* serves better as an anchor for FID than *Tom* because she is the subject of the preceding sentence while he is the object. The preference of the subject over the object may be explained in terms of prominence as an "underlying organizational principle of linguistic structuring" (Himmelmann and Primus 2015 p.52).

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[21] Except for a difference in gender that was chosen in order to unambiguously refer to either of them with a pronoun or an epithet.

That is, according to the hierarchy of grammatical function, referents in subject position receive a higher prominence status than referents in object position.

Consider the following examples to support this claim:

(74)   Maya greeted Frank.
       a. Such a friendly guy.
       b. Such a friendly girl.

(75)   Melanie yelled at Mike.
       a. Why did he always leave the door to the balcony open?
       b. Why did she always get so furious over nothing?

(76)   Ali asked Sandra for help.
       a. Hopefully, she knew what to do!
       b. Why did he always ask her?!

While the sentences in FID mode that are anchored to the subject in (74) to (76) are more natural than the continuations in b, the continuations in b are merely odd, but not ungrammatical. Intuitively, the continuations in b trigger a reading from a narrator's perspective. This observation is in line with the claim, made in this chapter, that a referent that is not sufficiently activated is not available as a perspectival center. In order to repair the issue of a missing anchor on the level of referents, the reader attributes the utterance to a narrator, which is available as an anchor by default (recall *the narrator-orientation principle* stated in (56)).

The impact of grammatical role on the anchoring of FID will be investigated in the empirical part of this thesis by looking at simple transitive subject-verb-object sentences. Though it will not be part of the empirical investigation, I will briefly show how the preference of the subject as the perspectival center persists independent of the position. That is, the perspectival center is unaffected by syntactic variation such as passives or object-verb-subject structures (OVS, possible in German).

(77)   a. The policeman interviewed the burglar. Hmm, he better not underestimate him!
       b. The policeman was interviewed by the burglar. Hmm, he better not underestimate him!

For the active-passive variation in (77), I want to suggest that the potentially ambiguous utterance in FID mode must be ascribed to the policeman in (77) a (i.e., the subject of the first sentence), while in (77) b the utterance is rather ascribed to the burglar (i.e., again the subject of the first sentence, though in a passive construction).

In an OVS sentence, the object is fronted, but the perspective ascription remains unchanged.

(78) a. Der Polizist interviewte den Einbrecher. Hmm, der sollte ihn mal lieber nicht unterschätzen!
The policeman interviewed the burglar. Hmm, he better not underestimate him!
b. Den Polizisten interviewte der Einbrecher. Hmm, der sollte ihn mal lieber nicht unterschätzen!
The policeman(obj.) interviewed the burglar(subj.). Hmm, he better not underestimate him!

It is interesting that although grammatical function promotes a referent to become the perspectival center, it must single out precisely one perspectival center. That is, a compound of two NPs in subject position does not allow for only one of them to be the perspectival center.

(79) Sally and Tom looked at each other.
a. That dumb jerk better watch his mouth.
b. That bitch better watch her mouth.

Again, (79) a and b allow for a coherent reading in which it is Sally wanting Tom to watch his mouth as well as Tom wanting Sally to watch her mouth. The reading that seems to be most intuitive is one in which the epithets in (79) a and b refer to neither Tom or Sally but a third protagonist so that Sally and Tom are both committed to the FID. This example also shows that the order of mentioning does not play a role in cases where neither referent is singled out in terms of any other activation cue.

Another feature that contributes to the referent's activation is the type of referring expression. If two referents compete, the referent that is introduced with a proper name is more available as the anchor for the sentence in FID mode than a competing referent that is introduced with an indefinite NP.

(80) When Luna was walking through the park on Sunday, a boy was crawling on the grass.
a. What was he looking for?
b. Hmm, it must have been exactly here where he had lost his keys.

Though the continuation in (80) b is coherent, (80) a appears more natural. That is, the referent that is referred to with a proper name is more prominent and thus more likely to be the perspectival center.

In the case presented above, the referent that is introduced with a proper name competes with a referent that has a presumably lower activation status by being introduced with an

indefinite article. Example (81) indicates that the activation that is lent by a proper name persists even if the competing referent is referred to with a definite article.

(81)   Luna slowly approached the boy.
        a. What was he looking for?
        b. Hmm, it must have been exactly here where he had lost his keys.

While proper names serve well as cues that activate referents to become the perspectival center, indefinite descriptions hardly allow for the anchoring of FID.

(82)   a. A girl was staring at the sea. Oh, how beautiful the sunset was today!
        b. A girl asked a boy for a tissue. So nice of him to help her out.

In both (82) a and b, the sentence in FID mode can hardly be anchored to a protagonist, but rather evokes the impression that a narrating instance comments.

(83)   Jane pushed a boy into the stinging nettles. Uhh, how bad that itched.

The strong preference for a referent that is in subject position and referred to with a proper name is nicely captured in example (83). Here the content of the utterance strongly suggests that the referent that is pushed experiences the itch, yet the reader will again rather attribute the sentence to a narrator or, arguably, to Jane, who empathically thinks that it must itch for the boy.

With respect to referring expressions, these observations lead to the following assumption (based on Hinterwimmer 2019, also investigated in Hinterwimmer and Meuser 2019):

(84)   Referents referred to with a proper name are more available as an anchor for a
        sentence in FID mode than referents that are referred to with an indefinite NP.

Another factor that seems to impact the availability as the anchor for FID is competition. In (85) a, the referent in object position is referred to with a proper name and serves well as an anchor for the continuation in FID mode, but in (85) b, the competition of a referent that is also referred to with a proper name and the subject overrides Martin's activation.

(85)   a. A young girl asked Martin for a tissue.
        Hmm, poor girl, she looked really sick.
        b. Lilli asked Martin for a tissue.
        Hmm, poor girl, she looked really sick.

This example indicates an interaction of activating cues that are captured in (86) (see Hinterwimmer 2019).

(86)   If several referents compete as the perspectival center, the referent with the highest prominence status gets to be preferred as the anchor for a sentence in FID mode.[22]

Note that the contrast of referential activation lent by the referring expression seems to override the preference for the subject that was argued for above (see (85), even more evident in (87)).

(87)   When Luna was walking through the park on Sunday, a boy was crawling on the grass. He was carefully tapping every inch of the ground with his hands.
        a. What was he looking for?
        b. Hmm, it must have been exactly here where he had lost his keys.

The intuition with respect to the high prominence status of Luna in (87) may be captured by the notion of topicality. Following Reinhart (1981), in example (87) Luna can be regarded as the aboutness topic. That is, if we assume that the discourse is the answer to an implicit question (Roberts 1996), the question would be one about Luna, such as *what did Luna experience in the park?* A question about the competing referent, *a boy*, such as *what did a boy do/experience in the park*?, on the other hand seems rather implausible as a discourse move. Due to the lack of any hardcoded criteria that define discourse topics, I stick to the rather vague idea that the discourse topic is the referent that the discourse is about – such topicality can be established by various markers such as reference with a proper name, subject position, and repeated mentioning.

(88)   Luna was walking through the park next to her apartment. It was a nice day in April. She loved walking along the old trees watching the baby ducks attempt their first swim. Oh, what a beautiful day it was!

With respect to the previous discussion, it follows naturally to claim that the referent that is the discourse topic is highly available as the perspectival center, since topicality as it is established in (88) is merely a combination of the cues that were presented as activating the referent assumption (Hinterwimmer 2019).

Interestingly, it seems that discourse topicality may override the effect of subjecthood in the sentence preceding the FID that was argued for above, as in (89):

(89)   Carla had just recently moved to Cologne for her new job but she had already made some friends. The people in her office were really nice to her and invited her for a picnic.

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[22] Note that, while I will approach a comparison of different factors (i.e., the impact of (i) referential expression, (ii) a discourse topic and (iii) verb classes on grammatical function) in the empirical part of this thesis, I will not be able to draw a detailed picture of the interaction between all potential prominence-lending cues.

> She sat down next to Brita and Marlon. Brita offered her some potato salad. […]
> Marlon asked Carla for a tissue.
> a. Gosh, his allergies were killing him today!
> b. Poor boy, his allergies must have hit him hard today!

While it is not surprising to find that a referent that is the discourse topic is preferred as the perspectival center, it is noteworthy that a referent that is the discourse topic overrides the activation of a referent that is otherwise highly activated in terms of being referred to with a proper name in subject position in the sentence preceding the sentence in FID mode.

Another factor that may override the presumed subject preference is the type of verb that assigns the referents in subject and object position in the preceding context.

(90)   Nora hit Elias with an umbrella.
        a. Well, that dumb jerk really deserved it.
        b. Ouch, that mean old hag should learn to control her temper.

In (90), a continuation from the perspective of the object seems more intuitive and natural than from the perspective of the subject. Though Nora is highly activated in terms of grammatical function, the reader expects to hear a comment from the perspective of Elias. I want to argue that the difference in perception of (90) a and b is due to the reader's disposition to take on the perspective of the victim (i.e., the referent that is empathically more activated). Though it may seem that the selection of perspectival centers based on empathy is a non-linguistic feature, I want to argue that such assignment is crucially entailed by the verb. That is, verbs that assign physical or emotional affectedness (Dowty 1991; Beavers 2011; Lundquist and Ramchand 2012; Kizilkaya in prep.) as a feature to their argument promote the affected argument as the preferred perspectival center (see section 6.1.2.1 for a definition of the linguistic notion of affectedness and an approach regarding emotional affectedness as a predictor of perspective-taking).

(91)   Referents that are emotionally more affected by an action are more likely to be the anchor for a subsequent utterance in FID mode.

While in the case of (90), affectedness activates the object as the perspectival center, other verbs assign subjects that are affected.

(92)   Jane mistrusted Luke.
        a. Why wasn't he calling her like he said he would?
        b. What could he possibly do to convince her that he was the nicest guy?

The verb *to mistrust* assigns a mental state of emotional involvement to the subject, which activates the subject as the preferred perspectival center in the context of (92).

Another feature that is assigned by the verb and that activates a referent as the anchor for a sentence in FID mode is *sentience* (Dowty 1991). According to Primus, sentience corresponds to "the awareness of the situation denoted by the verb" (2009 p.55).

(93) a. John looked Mary deep in the eye. That guy was just creepy!
      b. John observed Mary from a distance. That guy was just creepy!

Arguably, the continuation in (93) a selects Mary as the perspectival center. Presumably she perceives the action and consequently thinks what is presented in FID mode in the second sentence. Note that while the ascription of the thought in FID mode to Mary is unproblematic in (93) a, in (93) b the same sentence is rather attributed to a narrating instance. Although grammatical function, referential expression, and action performed in the first sentence (i.e., the subject visually perceives the object) are similar in a and b, the interpretation of the second sentences varies. I want to argue that in (93) b, the object is hardly available for the sentence in FID mode as she is barely activated due to a lack of *sentience*. That is, while the object in (93) a must be aware that she is looked at, in (93) b the object is presumably not aware that she is the target of the observation. Presumably, the verb *to observe* takes an argument in object position that is non-sentient. I want to argue that referents that are introduced into a discourse with a verb that indicates that they are unaware are assigned a low degree of activation and, consequently, do not serve well as perspectival centers:

(94) Referents that are (typically) non-sentient (i.e., unaware of an ongoing action)
      are hardly available as an anchor for a sentence in FID mode

A thorough discussion of *sentience* as a crucial feature for the perspectival center will be presented in Chapter 6. At this point, I want to argue that the effect of sentience must be regarded in terms of an activation cue that is assigned as part of the linguistic nature of the verb rather than a matter of coherence. That is, one may argue that a sentence in FID mode may likely address the action that is performed in the preceding sentence. In example (93) b, the act of observing somebody, and consequently a thought about the action, is not possible for the referent that is unaware of the action. This may also account for the example presented in (93), where the thought can be linked to the action (i.e., John is referred to as creepy because he observes Mary from a distance). While a comment about the action appears unlikely, note that the unaware referent is hardy available for any kind of thought in FID mode, as in (95).

(95)   John observed Mary in the park. Brrr, it was freezing, and she had left her
        sweater at her parents' place.

The lack of activation that is assigned by a verb also persists when events are reported subsequently that affect the unaware referent, as in (96).

(96)   Noah shadowed Luna when it started to rain.
        a. Damn it, why didn't he bring an umbrella?
        b. Damn it, why didn't she bring an umbrella?

Here the object is just as affected by the rain and may thus be just as available as an anchor for FID, yet (96) b is odd.

While affectedness and sentience seem to enforce preferences and restrictions, certain verbs seem to allow for both perspectives, particularly verbs that involve the transfer of information.

(97)   Albert listened to Zoe.
        a. Hopefully he'd actually do what she told him to do this time.
        b. Her voice was just so soft and nice.

(98)   Christine informed Jay about the new rules.
        a. Hopefully, he'd take it well.
        b. Pfft, he could never remember all that.

Here the referent that passes on information (i.e., the source of information) seems just as activated as the perspectival center as the referent that receives the information. Presumably, the source that is already activated in terms of being the speaker may continue with a comment. It is, on the other hand, just as plausible that a referent that received new information will be activated as the perspectival center since he or she is expected to react to the newly gained information.

(99)   Referents that perceive information are just as likely to be the anchor for a
        sentence in FID mode as referents that are sources of information – regardless of
        their grammatical function.

Based on the examples discussed in this section, I want to conclude that linguistic cues have an impact on the anchoring of a sentence in FID mode, yet they interact and potentially override each other. It seems that subjecthood is a crucial feature that activates a referent as the anchor for a sentence in FID mode. However, referential expression, activation in a discourse, and features entailed by the verb that is used to introduce the referent may play a role in the assignment of the perspectival center that overrides a potential general subject preference.

3.3.3 Prominence and Perspective-taking

Before I forge ahead to the empirical investigation of perspective-taking, I want to take a closer look at the notion of prominence, as it will be used to depict a high activation of the referent that will serve as the perspectival center.

In his 2019 paper, Hinterwimmer argues that a prominence-based account can explain the anchoring mechanisms of FID. Specifically, he claims that prominence-hierarchies of grammatical function and the number of agentivity features predict the preference of Susan over George as the perspectival center in the following example (Hinterwimmer 2019 p.84):

(100)   a. Susan looked at George hatefully. She quickly turned away when he returned the look.
b. Susan looked at George hatefully. He returned the look, then turned his back on her and walked away.

Susan is more prominent than George because she is the grammatical subject while he is in object position, and because she has more agentivity features (i.e., she is in control of the action, she acts volitionally, and she is sentient) (Dowty 1991).

Hinterwimmer (2019) also applies the notion of prominence to short discourses. He argues that a referent that is prominent in the global context – as opposed to the sentence preceding the FID – gets preferred as the perspectival center, as in (101):

(101)   George entered the room and looked around cautiously. Susan was sitting at a table in the corner with her best friend. Susan looked at George hatefully.
a. The dumb jerk had managed to make her look like an idiot at the meeting yesterday.
b. The mean old hag had managed to make him look like an idiot at the meeting yesterday.

I will discuss the suitability of the individual prominence-hierarchies in the following chapters (see Chapter 4 for a discussion and empirical investigation of the hierarchy of grammatical function, Chapter 5 for a discussion and empirical investigation of the impact of global prominence on local prominence, and Chapter 6 for a discussion of the hierarchy of semantic roles). At this point, however, I will briefly elaborate on the definition of prominence and how the concept can be applied to the investigation of referential activation and perspective-taking.

The notion of prominence is widely used in phonetics and phonology, where it may refer to "variations in length, pitch, stress and inherent sonority" (Crystal 2008 p.391) or syllables with "greater loudness, greater duration, higher or lower pitch, greater syllable

weight, or greater excursion of the vocal tract from its neutral position" (Trask 1996 p.291). Yet, more recently, the concept of prominence has been adapted to account for discourse-level phenomena such as referential activation (Chafe 1976), attention (Grosz and Sidner 1986), accessibility (Ariel 1990), and givenness (Gundel et al. 1993). Himmelmann and Primus (2015) argue that the notion of prominence may be applied to different linguistic levels, as it "reflect[s] a basic underlying organizational principle of linguistic structuring" (p.52). They define prominence in language with respect to three characteristics:

(102) I. A prominent entity serves as a structural attractor,
       II. it stands out amongst other entities, and
       III. its prominence status may shift in time.

In accordance with the definition by Himmelmann and Primus (2015), Jasinskaja et al. (2015) claim that referents in discourse are ranked according to different linguistic devices and their prominence status can be updated in the discourse.

With respect to the definition presented in (102) the perspectival center can be characterized as follows:

(103) I. One referent is the perspectival center to which perspective sensitive
          expressions or sentences are ascribed,
       II. the referent stands out amongst other referents that potentially hold the
          perspectival center, and
       III. the perspectival center may shift to another protagonist as the story unfolds.

As indicated by Jasinskaja et al. (2015), the application of the notion of prominence serves well as a means to depict the activation status of referents in discourse. For the research presented in this thesis, the aspect presented in (102) II and (103) II (i.e., that prominence is relational) is of particular interest (von Heusinger and Schumacher 2019). The concept of prominence only applies when several entities, in my case potential perspectival centers, are competing (see example (104)):

(104) a. The crisis forced the butcher to close. Oh, how would he make his living
          now!?
       b. The public health inspector forced the butcher to close. Oh, how would he
          make his living now!?

In (104) a, the butcher is the only referent available as the perspectival center, so it is unproblematic to anchor the FID to him or her. In (104) b, on the other hand, in the competition between two potential referents, namely the public health inspector and the butcher, the public health inspector outranks the butcher in prominence so that the butcher

is no longer available as the perspectival center. The FID is rather interpreted to be a comment by the narrator – or potentially ascribed to the public health inspector who feels sorry for the butcher.

3.4 Empirical Approaches to Perspective-Taking

Before I get to the series of experiments investigating the anchoring of FID in Chapters 4, 5 and 6, I want to review a number of psycholinguistic studies that investigate perspective-taking in language. The selected works indicate that the issue of perspective-taking in narratives can fruitfully be approached empirically. The literature was selected to support the following claims:

(105)   I. Perspective-taking affects the processing of information presented in a narrative (Pichert and Anderson 1977)
II. Perspective-taking in language is encoded and processed in the mental representation (Millis 1995)
III. Perspective-establishing cues have an effect on the perception of a narrative (Hartung et al. 2016)
IV. The linguistic context has an effect on the interpretation of a perspective-dependent expression or phrase (Harris and Potts 2009; van Krieken 2018; Kaiser 2015; Kaiser 2018)

While I, II, and III are presupposed by any empirical approach investigating the anchoring mechanisms of perspective-dependent phenomena, the claim presented in IV lies at the core of the research presented in this thesis. Harris and Potts (2009), van Krieken (2018), and Kaiser (2015; 2018) found that the ascription of an expression or a sentence to a narrator or a protagonist depends on the linguistic context. Crucially, they give evidence that manipulations of the linguistic context evoke a shift in perspective.

Finally, I will review approaches to psycholinguistic investigation of FID.

3.4.1 Empirical Approaches to Perspective-taking in Narrative Texts

In the following, I review selected works that investigate the effect perspective-taking has on the processing of information (Pichert and Anderson 1977) and on the processing of perspective in language in the mental representation (Millis 1995), as well as the effect of perspective-establishing cues (Harris and Potts 2009; Hartung et al. 2016; van Krieken 2018; Kaiser 2015; Kaiser 2018).

Pichert and Anderson (1977) empirically investigated whether the perspective taken on by a reader affects the processing of short narratives. They presented participants with a

short story about a boy that showed a friend around his house. At the beginning of the experiment, participants were assigned different roles (i.e., *a homebuyer*, *a burglar*, or a neutral role). They found that participants rated individual propositions, here segmented under the notion of *ideas* (e.g., *there was a color TV*, *there was a leak in the ceiling*), with varying importance depending on their role. In the second experiment, a free recall test was conducted (using the same material that had been rated in the previous experiment) in which Pichert and Anderson asked participants to "write down as much of the exact story as [they] can […]" (1977 p.11). They found that participants better remembered ideas that were rated as important with respect to their role. They concluded that "it was an idea's significance in terms of a given perspective that influenced whether it was learned and, independently, whether it was recalled" (Pichert and Anderson 1977 p.16). Hartung et al. (2016) investigated whether a narrative that is overtly marked for a character's perspective, established in terms of first-person focalization, has an effect on the reader's perception of a text. In a rating task, they found that readers are more likely to become immersed in a story that is narrated from a character's perspective rather than from a narrator's perspective. They manipulated short stories with respect to perspective, by the use of first or third person pronouns, and asked participants to reflect on 24 items that were designed to account for their *attention*, *mental imagery*, *emotional engagement*, *transportation*, and *narrative understanding*, such as (106):

(106)   a. My attention was so focused on the story that I forgot about the surroundings.
      b. At times, I had the feeling that I could see right through the eyes of the main character.
      c. I shared the emotions of the main character.
      d. While reading, it seemed as if I was inside the narrative world.
      e. I understood why the events unfolded the way they did.

They found that for the first-person stories, participants reported higher immersion (i.e., they had a higher score with respect to the *immersion items*, such as (106) a and d).

The way perspective information is encoded and stored in the mental representation of a text was investigated by Millis (1995). In a reading task, he asked participants to read and reread the short story *The Demon Lover* by Elisabeth Bowen. Millis found that participants read sentences with perspective shifts from a narrating instance towards the character's perspective 700ms slower than sentences that were attributed to the narrator. Unfortunately, Millis did not elaborate on this, other than that he differentiated external and internal perspective. Though we cannot confirm his classification, it is to be assumed

that, ultimately, the instances of internal perspective are instances of FID – referred to as *narrated monologue* by Millis (see S2 in example (107)).

(107) S1: Annoyed, she picked up the letter, which bore no stamp.
       S2: But it cannot be important, or they would know . . .
       S3: She took the letter rapidly upstairs with her […]

Millis was primarily interested not in the effect of shifts in perspective on the reader or the interpretation of propositions, but rather in how perspective information is encoded in the reader's memory. For that reason, he compared reading times for the first and the second reading and found that the effect only appeared in the first reading. He thus concluded that information about perspective is stored in the mental representation of the text (Millis 1995 p.249). Millis further speculated that "perspective is indirectly represented within the situation model" which is "thought to be non-linguistic", or that it "is stored directly with the propositions from the text" (1995 p.249) so that S1 in example (107) could be stored as (108):

(108) Narrator: (PICK UP MRS DROVER LETTER)
       Mrs. Drover: (IS LETTER IMPORTANT)

Millis does not speak in favor of one or the other account. I want to point out that with respect to the length of the text, the storage of perspective information for each and every proposition seems rather costly – and presumably impossible. With respect to the research presented in this thesis, the question of how perspective information is stored is not an issue. However, Millis' finding that the effect of perspective disappeared in the second reading is interesting with respect to methodological issues observed in the course of the studies presented in this thesis. It is possible that participants easily accommodate shifts in perspective, which would result in higher ratings of stimuli that would be considered as highly awkward when presented in isolation.

Van Krieken (2018) investigated the context that licenses perspective-dependent reports. In a forced choice-task, presenting participants with short stories similar to (77), she wanted to know whether a perception is attributed to a character or a narrator depending on the presence or absence of viewpoint-markers (i.e., verbs of perception and other markers that signal subjective emotion).

(109) a. Peter stood in front of the window.
       b. Peter looked through the window.
       Outside the sun was shining.

She asked participants to answer the question *who, do you think, makes the observation in the second sentence?* and found that sentences that feature a viewpoint-marker, such as (109) b, make the character significantly more available as the anchor for the perception compared to sentences like (109) a. As viewpoint-markers promote a referent's potential to be the anchor for a perspective-dependent report, I refrain from using such markers in the empirical items, as they may interfere with the manipulations investigated in this thesis.

A more fine-grained approach to the impact of perception and perspective taking is presented by Kaiser (2018). Kaiser hypothesized that events that involve a person's internal subjective experience, such as *to eat something* and experience the *taste*, will trigger more shifts in perspective than shared experiences, such as *to see something* and evaluate the *look* of it. In a forced-choice task, she examined whether the reader was more or less likely to take the perspective of a character depending on whether the character saw, smelled, or tasted something. She tested contexts similar to (110): While in condition a, b, and c, she investigated how the different modalities (sight, olfaction, and gustation) affect the anchoring of the second sentence she added (condition d) in order to establish a baseline. Participants were asked to answer whose opinion is expressed in the last sentence, being able to choose between either the narrator or the protagonist.

(110) When I came into the room,
        a. Eliza saw the muffin on the platter. It looked disgusting.
        b. Eliza smelled the muffin on the platter. It smelled disgusting.
        c. Eliza tasted the muffin on the platter. It tasted disgusting.
        d. Eliza put the muffin on the platter. It was disgusting.

As in condition d the proportion of narrator responses were above 75%, she confirmed the assumption that the first-person narrator can be regarded to be the default perspective holder (Harris and Potts 2009, Harris 2012). While condition a yielded above 60%, condition b yielded nearly 80% and condition c more than 80% character responses. She speculated "that these findings are likely attributable to the fact that taste and smell are largely internal experiences and vary across individuals […] whereas seeing something is a perceptual experience often shared by multiple individuals at the same time" (p.?).

One problem with her design (or possibly just the example item), however, is that there is a confound, potentially linked to the shareability of the perception, with respect to physical distance: as the overt narrator just *came into the room*, he or she may well see what Eliza sees, but that person is unlikely to have smelled the muffin – particularly as the singular indicates that the smell is that of one particular muffin rather than *the smell*

of the muffins. Although Kaiser argues that smell spreads across the room, it is a possibility that less spatial distance to the object could have led to different results.

Kaiser's findings are particularly interesting with respect to the empirical investigation presented in Chapter 6. In line with Kaiser, I claim that the referent that experiences something is highly available as the perspectival center. While Kaiser hypothesizes that the level of subjectivity of a sensory experience crucially affects the assignment of a perspectival center, I investigate affectedness in a broader sense (i.e., in terms of an emotional experience).

Harris and Potts (2009) investigated the conditions under which comments that were marked for perspective by the use of an epithet can be anchored to a protagonist rather than the first-person narrator. For that reason, they created stimuli that presented either a negative or a positive context for the character. While in one case the opinion stated in the target sentence matched the view that the character has due to the context, it did not for the competing condition. That is, while in the negative condition, in (111) a, the reader expects that the character has a negative attitude and may thus be likely to be the anchor for the negative comment, but this is not presumed for the positive condition in (111) b. In a forced-choice task, Harris and Potts asked participants whose view is being portrayed in the last sentence: the narrator's, the protagonist's, or both.

(111)   a. negative context: My classmate Sheila said that her history professor gave her a (really) low grade. The jerk always favors long papers.
      b. positive context: My classmate Sheila said that her history professor gave her a (really) high grade. The jerk always favors long papers.

The results suggest that participants interpret the epithet to be mostly speaker-oriented in both conditions, which supports the speaker default (as proposed by Harris 2012, see (55)). However, the number of character responses is significantly higher in the conditions in which the context licenses the attitude of the epithet (17% vs. 7%). They also tested whether the effect could be increased by the use of an intensifier (e.g., *really*) but found no significant effects. They took these results to "support the claim that non-speaker-oriented readings are possible for expressives, if the right contextual factors are present" (Harris and Potts 2009 p.539).

Kaiser (2015) speculated that the speaker bias found in Harris and Potts' (2009) study might have been due to the high prominence status of the speaker in Harris and Potts' test items. In her approach to the issue, Kaiser raised the questions, "What would happen if the speaker were not explicitly introduced into the discourse? Would this result in a higher rate of subject-oriented interpretations, especially for epithets?". She conducted a (near)

replication of Harris and Potts' (2009) experiment, removing any markers that made the first-person narrator prominent (e.g., by removing *my classmate* from the item presented in (111), resulting in (112)).

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

Kaiser's results replicate the findings reported by Harris and Potts, so she concluded that despite the absence of a prominent narrator, the speaker gets to be the default perspectival center. Let me briefly explain why these findings do not challenge the claim made in (9): although the context introduces a referent that is highly activated (i.e., referred to with a proper name in subject position), the comment made in the second sentence is not an utterance in FID mode. Crucially, the second sentence does not match the first with respect to the tense, which indicates that the proposition adds general background information that motivates the context (i.e., *the low grade*), but it is not a thought in FID mode. Though Harris and Potts (2009) investigated perspective-dependent expressions, they neglected the presentation mode, which is important because when presenting a perspective-dependent expression in a mode that suggests that the reader gets a comment from a narrating instance, the comment will likely be attributed to a narrator, while a perspective-dependent utterance in FID mode will trigger more character perspectives.

3.4.2 Empirical Approaches to FID

In the following, I review a number of studies that approach the licensing of FID empirically. They investigate the licensing with respect to temporal structures that precede FID (Egetenmeyer in prep.), anchoring with respect to a narrator or a protagonist (Kaiser 2015; van Krieken 2018) and anchoring with respect to a narrator or two competing protagonists (Bimpikou 2019).

In a forced-choice study, Egetenmeyer (in prep.) empirically investigated temporal structures that license a subsequent utterance in FID mode in French. Based on insights he gained evaluating corpus data (presented in Egetenmeyer 2020) he suggested that sentences in FID mode have a tendency to be anchored to a specific, temporally fixed event in the context. In his study, Egetenmeyer presented participants with two variants of a set of 2 sentences, a context sentence followed by a sentence in FID mode. Items varied with respect to the temporal anchor in the context sentence (i.e., the presence or

absence of a temporal adverbial or a manipulation of the *aktionsart* being telic or atelic). In a randomized presentation order, he asked participants to select the variant that intuitively sounds more natural (see (113) and (114) for an English translation of the stimuli).

(113)   a. In kindergarten, Rachelle had two friends. Now she didn't need her stupid sister to play anymore!
        b. In kindergarten, Rachelle made two friends. Now she didn't need her stupid sister to play anymore!

(114)   a. A child jumped in front of Lucas' car. What a rascal, where was his guardian?!
        b. Suddenly, a child jumped in front of Lucas' car. What a rascal, where was his guardian?!

He found that participants preferred the item with the prominent temporal anchor (i.e., a preference for the telic event or the temporal adverbial expression such as (113) b and (114) b, over the competitor (113) a and (114) a (69%/31%)).

I want to suggest, however, that the results may be explained by the nature of FID: FID is a way of speech and thought representation that renders a proposition that can be uttered or thought in a situation. It may be that being temporally anchored to a fixed utterance context is typical of speech representation, not just of FID. That is, arguably, the preference for an utterance to be temporally fixed may also account for the difference between (115) a and b:

(115)   a. In kindergarten, Rachelle had two friends. "Now I don't need my stupid sister to play anymore!" she said.
        b. In kindergarten, Rachelle made two friends. "Now I don't need my stupid sister to play anymore!" she said.

Potentially, in a forced-choice task, the same preferences that were observed for FID would show for direct speech as well. Thus, although the results add to the understanding of the licensing of FID, these observations may hold for direct and indirect speech as well.

It is up for speculation whether there is a contrast between (113) a and (115) a. Such a contrast could be due to the fact that in direct speech, the verb *to say* sufficiently anchors the utterance to a point in time (i.e., the time of the utterance).

The discussion at hand calls for a quick recap of the importance of the issue investigated in this thesis: the referent that is the anchor for an utterance in FID mode must be sufficiently activated. As argued earlier, no activation is necessary to license direct or indirect speech, as indicated in (116):

(116) Maria arrived at school at 7:30. She was waiting to meet Mrs. Miller in room 405.
a. direct speech: A tall man opened the door and said: "Huh, what are you doing in here?"
b. indirect speech: A tall man opened the door and told her that she was probably in the wrong room.
c. FID: A tall man opened the door. Huh, what was she doing in here?

(116) is a fictional example that is intended to illustrate that regardless of the presence of a maximally prominent character, any new – not yet activated – character may enter the scene and be the anchor for direct or indirect speech, as in (116) a and b. A shift of perspective that is necessary to anchor a sentence in FID to such a newly introduced character results in an odd clash of perspectives, as in (116) c.

With respect to the licensing contexts for FID, in her 2015 paper, Kaiser also investigated how epithets trigger character viewpoint interpretations when they are presented in a sentence in FID mode. While previous studies (Harris and Potts 2009, Kaiser 2015) had suggested that epithets receive a speaker interpretation by default, this effect depends on the presentation mode (i.e., whether the sentence is in FID mode or not). In her study, Kaiser (2015) tested items presented in a context that introduces two referents of the same gender and a target sentence with or without an epithet that triggers an FID interpretation, such as example (117). An ambiguous pronoun in the target sentence was prompted to resolve to the subject, but when the sentence is interpreted as an utterance in FID mode anchored to the perspective of the subject, the pronoun is resolved with respect to the object. Kaiser asked participants to judge on a six-point scale to what extent they ascribed the pronoun to the subject or the object: the question was *Who was sick?*, and the scale was *Mary 1 2 3 4 5 6 Elisabeth*.

(117) a. regular sentence: Mary looked woefully at Elizabeth. She was sick.
b. FID: Mary looked woefully at Elizabeth. Poor girl; she was sick.

In the same experiment Kaiser also tested a condition in which the FID was triggered by the use of epistemic adverbials, such as in (118) b.

(118) a. regular sentence: Luke glanced at Andrew warily. He'd put toothpaste in the shampoo bottle again.
b. FID: Luke glanced at Andrew warily. He'd probably put toothpaste in the shampoo bottle again.

Kaiser reported that participants resolved the pronoun significantly more often to refer to the object in the presence of an FID cue. Further, she observed higher object ratings in the epithet items compared to the epistemic adverbials items – however, this design did

not allow for a comparison between the two groups, as the items were not comparable, so a difference could have been the result of different properties of the sentence. As part of the same experiment, Kaiser asked participants explicitly if the target sentence reflects the point of view of the narrator or a character. In line with the results from the pronoun resolution task, participants chose the character point of view significantly more often whenever the target sentence featured an FID cue. Her results indicate that while epithets showed a speaker bias in neutral contexts, they boosted the character point of view whenever they were interpreted as an utterance in FID mode. Kaiser explained that the speaker bias reported in Harris and Potts (2009), and in her own replication with respect to the items, was due to the style of the items created by Harris and Potts suggesting that they are part of a colloquial conversation in which a speaker – overt or covert – reports an event.

Probably the most insightful empirical work with respect to this thesis comes from Sofia Bimpikou (2019). She investigated the environments in which perspective shifts from speaker to character viewpoint occur. She was mainly interested in the difference between two different kinds of perspective-dependent phenomena: FID and viewpoint-shifting (see Chapter 2). In a series of forced-choice experiments, she investigated whether free thought and perception reports differ with respect to triggering character-oriented readings. With respect to the research presented in this thesis, one of her experiments is particularly interesting, as it presumably provides evidence for an anchoring preference of a locally prominent referent over a globally prominent one. In her experiment, she asked participants by whom the perception or the thought was perceived, allowing for narrator, globally prominent, and secondary (locally prominent) character responses.

(119)   Dina woke up very early that day. She hadn't slept well all night, she had been very stressed during the whole week and couldn't rest. She woke Michael up, as she wanted some company to take her breakfast, and they went down to the kitchen. There was a strong smell.
a. **Both Characters:** They looked at the sink and the floor.
b. **Secondary Character:** Michael looked at the sink and the floor.
1) **Free Perception:** The sight was disgusting. There was a pile of unwashed dishes, glasses and leftovers from the previous night.
2) **Free Thought:** What a disgusting sight. . . Those kids, they had left again a pile of unwashed dishes, glasses and leftovers from the previous night!
On top of that, the tap was running and the water had reached the floor.

As Bimpikou found a preference for the secondary character in condition b 1 and 2, she concluded that "[e]ven though a globally more salient character was present, the locally prominent protagonist was preferred as the anchor of a free report". This may be an

indicator with respect to the anchoring preferences whenever two potential referents are available, but I want to argue that this preference – presumably – says less about the anchoring with respect to globally and locally prominent referents, as it is not ambiguous but strongly biased to the secondary referent. In line with the research presented by van Krieken (2018) and Kaiser (2018), the effect can be explained by the presence of a verb of perception and the subsequent report of said perception (i.e., explicitly mentioning that Michael *looked* at something and subsequently referring to *the sight* boosts *Michael's* availability as the perspectival center). Manipulating this factor would, arguably, result in a different ascription: if it was mentioned in the global context that *Dina was looking at the sink* while the local context, the sentence preceding the report, would be something unrelated to the visual perception, such as *Michael was puzzled*, it seems possible to anchor the reported perception to the globally prominent referent (i.e., *Dina*).

3.5 Conclusion

In the present chapter I have provided the reader with a depiction of the phenomenon under discussion, perspective shifts and the ascription of a perspectival center.

The reader should by now have gained a good idea of the nature of FID, and be able to comprehend decisions regarding experimental design and material presented in the following chapters.

Further, I have outlined the issue of perspective-taking:

(120)   Is the anchoring of a perspective-dependent sentence a matter of linguistics or is perspective assigned in the extra-linguistic context?

Having elaborated on two competing approaches to the issue (i.e., the *configurational* and the *contextual* approach) (outlined in section 3.3.1, (60) and (61)), I suggest the following:

(121)   A referent that is sufficiently activated in a linguistic context may serve as the anchor for a sentence in FID mode.

I motivated the empirical investigation of concrete cues that affect the activation of a referent as an anchor for a sentence by discussing selected examples in section 3.3.2. The following observations will be central to the following chapters:

(122)   I. Referents functioning as subjects are more available as anchors for FID than referents functioning as objects.
II. Referents referred to with a proper name are more available as an anchor for a sentence in FID mode than referents that are referred to with an indefinite NP.

III. Referents that are emotionally more affected by an action are more likely to be the anchor for a subsequent utterance in FID mode than a competing referent – regardless of their grammatical function.

IV. Referents that are (typically) non-sentient (i.e., unaware of an ongoing action) are hardly available as an anchor for a sentence in FID mode – regardless of their grammatical function.

V. Referents that perceive information are just as likely to be the anchor for a sentence in FID mode as referents that are sources of information – regardless of their grammatical function.

To further support my claim that perspective assignment depends on a range of linguistic cues, I reviewed studies that indicate that the processing of perspective as well as the ascription of an anchor is affected by manipulations of the linguistic context.

4 Grammatical Function and Referential Expression as Perspective-establishing Cues

In this chapter, I will present the first attempts to empirically investigate the anchoring mechanisms of FID. Specifically, I will present a series of experiments that provide evidence for the assumption that a referent that is prominent in the context immediately preceding the FID is more likely to be the anchor for the FID than a less prominent competing referent.

In two rating studies, participants were asked to judge the naturalness of a sentence in FID mode that can only be anchored coherently to one of two competing referents. The referents differ with respect to their grammatical function and the referential expression that is used to introduce them in the context preceding the FID.

While the first experiment (n = 75; previously reported in Hinterwimmer and Meuser 2019) supports the rather general claim that the more prominent referent is preferred as the anchor for FID, the second experiment (n = 119) gives further insights on the impact of (i) grammatical function, (ii) (type of) referential expression, and (iii) their interaction. Furthermore, the results of Experiment 2 allow one to make conclusions with respect to the impact of competition (i.e., that the anchoring to a referent is influenced not only by the referent's prominence status but also by the activation of a competing referent).

The following hypotheses will be tested:

(123) H1: A protagonist that is more prominent in the context (i.e., in terms of referential expression and grammatical function) is more available as the anchor for FID than a competing referent.

H2: Protagonists functioning as subjects are more available as anchors for FID than protagonists functioning as objects.

H3: Protagonists referred to with a proper name are more available as anchors for FID than protagonists introduced by an indefinite NP.

The results of the pilot experiment indicate that the prominent referent (i.e., the one in subject position that is referred to with a proper name) is preferred as an anchor for a sentence in FID mode compared to a competing referent that is introduced with an NP in object position. That is, with a difference of 1.01 points, FID anchored to the prominent referent was rated significantly better than FID anchored to the competing referent. Also, the results of the pilot study serve as a baseline in order to justify the design of the following acceptability rating studies. More specifically, in the pilot study, a neutral

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control condition was tested, and the high rating of 5.04 points for the neutral condition indicates that the change of the subject does not affect the low rating of the dispreferred FID condition (3.63 points).

The results of the follow-up experiment allow for more in-depth conclusions:

(124)   (i) The significant main effect for grammatical function indicates that FID is perceived to be more natural when it must be anchored to a referent in subject position rather than in object position;
(ii) the significant main effect for referential expression for the anchor indicates that referents that are introduced with a proper name are preferred as anchors for FID; and
(iii) the significant main effect for the referential expression for the competitor indicates that the potential of a referent to serve as the anchor for the FID depends on the prominence of the competing referent – that is, ratings are higher whenever the competing referent is less activated in terms of being introduced by an indefinite NP.

The results with respect to H2 will also be the subject of the research presented in Chapters 5 and 6, where the impact of a larger context and the impact of the verb on subject preference will be investigated.

Before presenting the empirical investigation, I will briefly discuss potentially related accounts of the impact of grammatical function and referential expression on the activation of a referent, including centering theory (Grosz et al. 1995), empathy hierarchy (Kuno 2006), and givenness hierarchy (Gundel et al. 1993).

4.1 Grammatical Function and Referential Activation

The impact of grammatical function on the anchoring of FID was previously outlined in Chapter 3. Recall example (72), repeated in (125), for which I claimed that – free of any assumptions[23] regarding the protagonists and without any other contextual information – a continuation from the perspective of Emma, as in (125) a, is intuitively preferred over a continuation from the perspective of Tom, as in (125) b.

(125)   Emma met Tom at the gym.
a. Huh, he didn't look like a typical sporty gym person at all.
b. Huh, she didn't look like a typical sporty gym person at all.

Although on the level of content both sentences should be equally acceptable, option b is less expected (i.e., it causes more surprise, and may trigger an ascription of the thought

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[23] Except for a difference in gender that was chosen in order to unambiguously refer to each protagonist with a pronoun.

to the narrating instance rather than to Tom). Based on Hinterwimmer (2019; also Hinterwimmer and Meuser 2019), I want to claim that the preference for *Emma* over *Tom* can be explained in terms of grammatical function: protagonists that are introduced as subjects of the sentence preceding the FID are more available as anchors for FID than protagonists that are introduced as objects.

Such a preference for the subject over the object has been claimed to be an "underlying organizational principle of linguistic structuring" (Himmelmann and Primus 2015 p.52) accounting for related linguistic phenomena that are highly dependent on referential activation, such as anaphora resolution.

An account of anaphora resolution and the role of grammatical function that provides some useful insights on the ranking of referents is *centering theory* (Grosz et al. 1995). According to centering theory, elements are ranked with respect to different factors, such as grammatical function: subjects are higher-ranked than objects, which are higher-ranked than other elements. To outline centering theory in a nutshell, I will briefly discuss an example by Grosz et al. (1995 p.211-212) that illustrates how pronominalization depends on grammatical function:

(126) S1: Susan gave Betsy a pet hamster.
       S2: She reminded her that such hamsters were quite shy.
       a. S3: She asked Betsy whether she liked the gift.
       b. S3: She told Susan that she really liked the gift.

For the sequence in (126), Grosz et al. argue that S1 and S2 establish Susan to be the highest-ranked element so that it is odd to pick up Betsy with a pronoun as in S3 b. While these assumptions have been widely discussed and attested, I will briefly argue that perspective-taking shows a similar preference for the subject, but the anchoring limitations for FID do not seem to be as restricted.

(127) S1: Susan gave Betsy a pet hamster.
       S2: She reminded her that such hamsters were quite shy.
       a. S3: Oh, was Betsy the right person for a hamster?
       b. S3: Was she thinking that she couldn't take care of a tiny little hamster?

In line with the predictions for pronominalization, I want to make the claim that a continuation from Susan's perspective, as in (127) a, is more expected than a continuation from Betsy's perspective, as in (127) b. While the predictions made by centering theory based on grammatical function account for pronoun resolution as well as perspective-taking, it needs to be pointed out that not all approaches on pronoun resolution align with

preference for the perspectival center (e.g., Garvey and Caramazza 1974; Arnold 2001; Fukumura and van Gompel 2010, see Chapter 6 for a discussion of their research).

One approach that ties the activation in terms of grammatical function to the likelihood of a referent to be the perspective center of a discourse is that of Kuno (2006), who lists a number of factors that are driven by the empathy a speaker has with a referent. In his *surface structure empathy hierarchy*, Kuno (2006 p.316) states that:

(128) It is easier for the speaker to empathize with the referent of the subject than with that of any other NP in the sentence:
E (subject) > E (other NPs)

Given that in canonical sentences in German, the subject is mentioned first (i.e., in left-peripheral position), another noteworthy assumption by Kuno (2006 p.316) is the *word order empathy hierarchy*, which states that:

(129) It is easier for the speaker to empathize with the referent of left-hand NP in a coordinate NP structure than with that of a right-hand NP:
E (left-hand NP) > E (right-hand NP)

That is, for canonical sentences, the preference for the subject may be boosted by the preference for a left-hand NP.

Note that Kuno only applies his principles to coordinate structures, for which I argue that neither of the referents serves well as the perspectival center, as in (130), if their prominence status does not differ with respect to any other prominence hierarchy (e.g., referential expression), such as in (131) where option b is not as odd as (130) b.

(130) Molly and Ted looked at each other.
a. Huh, what was she doing here?
b. Huh, what was he doing here?

(131) Molly and her brother looked at each other.
a. Huh, what was she doing here?
b. Huh, what was he doing here?

Kuno (2006) proposes that the word order empathy hierarchy accounts for the unacceptability of sentences like (132).

(132) $John_i$'s brother and he_i went to Paris.

While Kuno (2006 p.323) also notes that conjoined NPs "must be arranged in a fixed order if the descriptor for one NP is dependent on the descriptor for the other", he ascribes this observation to the *word order empathy hierarchy*. I will not judge whether word order restrictions are in fact driven by empathy or if other underlying principles such as mental

states account for the unacceptability of (132). However, his argumentation leads him to conclude a principle that is rather similar to the prominence-based account of the anchoring of FID investigated in this chapter, namely the *syntactic prominence empathy hierarchy* (Kuno 2006 p.323), which states:

(133)   Give syntactic prominence to a person/object that you are empathizing with.

I want to argue that Kuno's syntactic prominence empathy hierarchy implies a promising assumption for the anchoring of FID: the anchor for a sentence in FID mode is typically the protagonist that the reader supposedly empathizes with, who, according to Kuno, is made syntactically prominent.

4.2 Referential Expression and Referential Activation

The second prominence-lending cue that will be investigated in the course of this chapter is the type of referring expression. As elaborated in Chapter 3, not only does the anchoring potential of FID depend on grammatical function, but the way a referent gets introduced into the context also crucially affects its potential to be the perspectival center. Recall example (80), repeated in (134), where the referent that is introduced with a proper name (i.e., *Luna*) is preferred as the anchor for the sentence in FID mode rather than the competing referent (i.e., *a boy*) that is merely introduced with an indefinite NP.

(134)   When Luna was walking through the park on Sunday, a boy was on his knees in the grass.
        a. Hmm, maybe he had lost something.
        b. Hmm, it had to be exactly here where he had lost his keys.

Based on Hinterwimmer's (2019; also investigated in Hinterwimmer and Meuser 2019) work, I want to claim that referents referred to with a proper name are more available as anchors for a sentence in FID mode than referents referred to with an indefinite NP.

One approach that accounts for a referent's activation depending on the referential expression by which he or she is referred to is the givenness hierarchy by Gundel et al. (1993), who propose placing referential expressions in a hierarchy that represents six cognitive statuses. Statuses are aligned hierarchically, such that a higher-ranked status entails all the lower ones – in order for a referent to be *activated*, it is necessary that the referent is *familiar*, *uniquely identifiable*, etc. (see Figure 1). A referent that is referred to with an indefinite NP has the lowest cognitive status according to Gundel et al. (1993). In order for the speaker to refer to an entity with a definite article, it must be *uniquely identifiable*. Highest on the hierarchy are referents that are referred to with a pronoun, as

they need to be sufficiently activated in order for a pronoun to be unambiguously interpretable. The authors claim that the referent *in focus* is also at the current center of attention and the topic.

The Givenness Hierarchy:

in focus	>	activated	>	familiar	>	uniquely identifiable	>	referential	>	type identifiable
{*it*}		{*that, this, this* N}		{*that* N}		{*the* N}		{indefinite *this* N}		{*a* N}
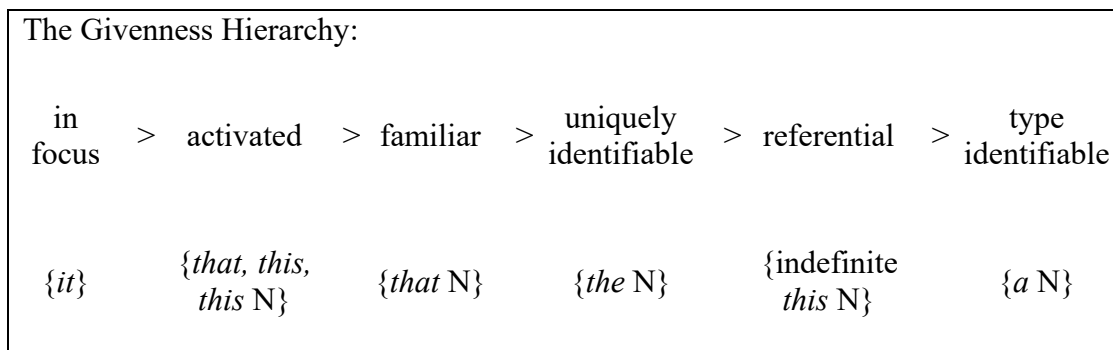
Figure 1: The Givenness Hierarchy
(Gundel et al. 1993 p.275)

With respect to perspective-taking, I want to claim that the referent that has a higher cognitive status is more likely to be the anchor for a sentence in FID mode than a lower-ranked referent. I will approach this claim by comparing referents that are merely *type identifiable* to referents referred to with a proper name. Though Gundel et al. (1993) do not include proper names on their hierarchy of cognitive statuses, it stands to reason that proper names require the referent to be at least *uniquely identifiable* if not *familiar*.

In the context of narratives, the use of proper names triggers a high activation; proper names either indicate that the reader is already familiar with the referent that is denoted by the proper name or that the referent will serve as the discourse topic for the following context (i.e., the following story will be about the referent that was introduced with the name *Luisa*). Garrod and Sanford (1988 p. 522) argue that referents that are referred to with a proper name lend themselves to be what they call the thematic subject:

> "[Proper names] designate the same individual in all possible worlds. From the point of view of narratives this can be readily contrasted with the case of role descriptions. If a character (John say) is depicted as going for lunch somewhere, them going to a concert, and then going to dinner, he will be considered to be the same individual in each of these episodes. Yet the definite role description the waiter could be used in both the lunch and dinner episodes without readers supposing it to refer to the same individual on both occasions. Thus a proper name is an ideal means of introducing a character to whom one will want to keep referring in the future – it effectively fixes the reference."

In this chapter, I empirically approach the impact of proper names compared to indefinite NPs with respect to their potential to serve as the perspectival center. In line with the givenness hierarchy, I assume that a referent that is referred to by a referential expression

that indicates a high cognitive status has a high degree of activation and serves well as a perspectival center.

4.3 Experiment 1

In the following, I report a pilot study (n = 75; previously reported in Hinterwimmer and Meuser 2019) that aimed to give the first evidence for systematic anchoring preferences for sentences in FID mode. The main goal of this study was to investigate whether FID is perceived to be more natural when it is anchored to a referent that is highly activated compared to a competing referent that is less highly activated. Cues that contribute to the referent's activation are grammatical function (i.e., is the referent in subject or in object position), number of references, and the referential expression that is used to refer to the protagonist.

For that purpose, an acceptability rating task was designed. Participants were asked to rate the naturalness of short stimuli, such as (135) and (136), in which target sentences in FID mode or a neutral sentence must be anchored to either the prominent referent or the competing less prominent referent.

(135) Als die Hochzeit von Prinz William und Kate im Fernsehen übertragen wurde, konnte Robert seine eigene Hochzeit kaum erwarten.
Auch er hatte seiner Freundin einen Antrag gemacht.
a. FID$_{preferred}$: Schon morgen würde er mit seiner Liebsten vor den Altar treten.
b. FID$_{dispreferred}$: Schon morgen würde sie mit ihrem Liebsten vor den Altar treten.
c. Neutral: Sie wollte mit ihm vor den Altar treten.

When the wedding of Prince William and Kate was broadcast on TV, Robert could hardly wait for his own wedding.
He, too, had proposed to his girlfriend.
a. FID$_{preferred}$: Tomorrow he would walk down the aisle with his darling.
b. FID$_{dispreferred}$: Tomorrow she would walk down the aisle with her darling.
c. Neutral: She wanted to walk down the aisle with him.

(136) Als der letzte Band von „Harry Potter" erschien, kramte Luisa ihr Taschengeld zusammen. Sofort sagte sie ihrem besten Freund Bescheid.
a. FID$_{preferred}$: Morgen schon würde sie mit diesem Bücherwurm die Buchhandlung stürmen.
b. FID$_{dispreferred}$: Morgen schon würde er mit dieser Leseratte die Buchhandlung stürmen.
c. Neutral: Er wollte mit ihr am nächsten Tag in die Buchhandlung gehen.

When the last Harry Potter book was published, Luisa gathered all her money together.
She told her best friend$_{male}$ right away.

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  a. FID_{preferred}: Tomorrow she would hit the bookstore with that bookworm_{male.}
  b. FID_{dispreferred}: Tomorrow he would hit the bookstore with that bookworm_{female.}
  c. Neutral: He wanted to go to the bookstore with her the next day.

As a first attempt to empirically examine the anchoring of FID, the design aimed to test the following hypothesis (H1).

(137) H1: A protagonist that is more prominent is more available as the anchor for FID than a competing referent.

In order to approach the idea that the anchoring tendencies of FID depend on the activation status of a protagonist, in the pilot experiment the two referents were distinguished by means of maximal and minimal prominence in terms of grammatical function, number of references, and referential expression.

4.3.1 Material

22 three-sentence short stories similar to (13) and (14) were created (see Appendix A for further items[24]). In the first sentence, one referent (R1) gets introduced with a proper name in subject position.

In order to provide a context that is deliberately set in the past, the first sentence makes reference to a specific event in the past (e.g., *when Germany won the World Championship*, *last Valentine's day*). References to the past are indented to emphasize the presumable deviation of the past tense of the narrative and the deictic expressions used in the FID sentences that refer to the present (*now, today*) or the future (*soon, tomorrow*).

The second referent (R2) gets introduced in the second sentence. R2 is always introduced in object position and referred to with a noun phrase that is anchored to the first referent with a possessive pronoun (e.g., *his friend*). In order to be able to unambiguously refer to either one of the referents with an epithet or a pronoun in the target sentence, the referents differ in gender. The gender of R1 and R2 is equally balanced.

The FID in the target sentence features at least three indicators of FID (see section 3.1): a temporal deictic expression, the German subjunctive II (*würde*), and an epithet (e.g., *her/his darling*). In the two FID conditions, the anchoring varies with respect to R1 and R2. The sentence in FID mode in the preferred condition must be attributed to the referent

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[24] All stimuli are available online: https://osf.io/wegtn/

that is introduced in the first sentence, that is, both the pronoun and the epithet indicate that it must be R1 that the thought must be anchored to (see (135) a: *he […] his darling*). Similarly, in the dispreferred FID condition, the proposition must be ascribed to R2 (see (135) b: *she […] her darling*). The items were created carefully to allow for both referents to be the anchor for the target sentence (i.e., in (135)), Robert as well as his fiancée may both be looking forward to their wedding). In the neutral condition (see (135) c/(136) c) the same proposition that is rendered in FID mode in the preferred and dispreferred condition is reported without any perspective markers.

12 fillers were constructed to yield low acceptability. They showed that personal pronouns that refer to antecedents are commonly picked up with demonstrative pronouns in order to disambiguate the reference.

(138) Als Richard in seine erste eigene Wohnung zog, lud er seine Familie zu sich zum Abendessen ein. Sein Onkel brachte ihm einen besonders guten Rotwein mit. Er war aus seiner eigenen Kellerei.

   When Richard moved to his first flat, he invited his family for dinner. His uncle brought a bottle of particularly nice wine. He$_{the\ wine}$ was from his own winery.

In German, reference to the wine is congruent with a male singular pronoun *he*, yet, with two more prominent antecedents that are singular and male (i.e., the *uncle* and *Richard*), the choice of a personal pronoun that refers to the wine is perceived to be rather odd.

4.3.2 Predictions

In line with H1, a sentence in FID mode that is anchored to the more prominent referent (i.e., the protagonist in subject position), introduced by a proper name, and picked up by a personal pronoun (i.e., the preferred condition, see (135) a/(136) a) will be rated as more natural than one that is anchored to the competing referent and mentioned only once in object position (i.e., the dispreferred condition, see (135) b/(136) b). The neutral condition (see (135) c/(136) c) is expected to yield ratings that are at least as high as the preferred condition. The neutral condition was added to the design in order to serve as a control: as the neutral condition shows the same change of the subject from the penultimate sentence to the FID, a high rating of the neutral condition would indicate that a comparably low rating of the dispreferred condition is not the result of the change of the subject but a consequence of the perspective-mismatch.

4.3.3 Procedure

22 experimental items were randomly distributed across three lists[25]. The experimental items were mixed with 44 fillers on a paper-and-pencil questionnaire. The fillers resembled the experimental items in length, syntax, and number of references to the protagonists. Participants were asked to rate the naturalness of the third sentence in the context of the first two on a scale from 1, entirely unnatural, to 7, entirely natural[26].

In April 2017, 89 students from the University of Cologne participated voluntarily in the experiment. Data from 14 participants was excluded as they were not native speakers of German or did not complete the questionnaire.

4.3.4 Bayesian Mixed Effects Models

Before presenting the analyses of the first experiment, I briefly want to elaborate on the choice of statistical modeling that will be used in the course of this thesis. Though psycholinguistic research has a tradition of testing significance using frequentist statistics (Vasishth and Nicenboim 2016), throughout this thesis Bayesian mixed models[27] will be applied.

While the reader may be more familiar with classic ANOVA, an analysis using ANOVA only allows for one random effect at a time. The following experiments, however, present repeated measures, that is, a number of participants is presented with several items in varying conditions – appropriately captured in a model including random intercepts and random slopes for participants and items (Barr et al. 2013). The complexity of such data can be captured in linear mixed models. However, frequentist tools like the lme4 R package (Bates et al. 2015) commonly result in convergence issues when the model is fit to account for a full random-effects structure[28]. The major advantage of Bayesian mixed models is that they allow to include the set of random effects that is appropriate for the data structure at hand. The use of priors, i.e., beliefs about the plausible range of the parameters, regularizes the model and facilitates convergence (Vasishth et al. 2018).

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[25] This led to an unbalanced distribution of the experimental conditions across the lists – each participant gave 7 judgements for two conditions and 8 for the third. This was not an ideal distribution, but the robustness of mixed-effects modelling should compensate for the missing data (Baayen, Davidson and Bates 2008).

[26] The scale was treated as an interval scale (i.e., without any labels, and it is assumed that participants used the scale continuously).

[27] For a comprehensive introduction to Bayesain regression modeling see Franke and Roettger (2019).

[28] Attempts to model the data presented in this thesis caused convergence issues unless the random effects structure was reduced.

Unlike frequentist's hypothesis testing, Bayesian statistics do not directly aim at testing significance. Rather, Bayesian models describe differences along with their uncertainties without assuming an arbitrary clear cut off.

In order to comfort the reader with a familiar measure for interpreting the data I still use the term *significance* when reporting effects, namely whenever the 95%-credible interval as estimated by the model does not include zero. That is, if zero is not included in the 95%-credible interval, it means that the posterior probability of the effect being zero is maximally 5%. In other words, differences that are reported to be significant are with a certainty of 95% not null effects.

The model specifications will be described for each experiment below.

4.3.5 Data Analysis and Results

After exclusion, data from 75 participants was considered in the analysis. Though 22 items were presented, responses were elicited for 21 items; one item was excluded because participants commented on the implausibility of the scenario[29]. The data was modeled using Bayesian mixed effects models with acceptability scores as the outcome and condition as the sole predictor with random intercepts and random slopes for condition, participants, and items[30] estimated in R[31,32] (R Core Team 2015). As elaborated above, effects were considered to be significant if the 95%-credible interval did not include 0. The model estimates were 4.64 points for the $FID_{preferred}$ condition and 3.63 points for the $FID_{dispreferred}$ condition. For the two FID conditions, the model estimated a significant difference of 1.01 points (SE = 0.16, CI: [0.69;1.33]). The model estimate for the neutral condition was 5.04 points. The neutral condition served as a control in order to test if a lower acceptability of the $FID_{dispreferred}$ condition is the result of a change in subject. Comparisons between the neutral and the dispreferred conditions indicate that participants rated the neutral version significantly better than the $FID_{dispreferred}$ condition (estimate = 1.40; SE = 0.18; CI: [1.06;1.75]).

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[29] In one item, it was falsely claimed that the *Rock am Ring* festival takes place in February rather than in early summer.

[30] Treatment contrasts were used with $FID_{dispreferred}$ as the reference category. The model was specified as follows: "acceptability ~ 1 + condition + (1+condition|participant) + (1+condition|item)".

[31] This was done using the brms package (Bürkner 2017). Weakly informative priors were used (e.g., for the condition coefficients a normally distributed prior with mean 0 and sd 5).

[32] The raw data and the script are available online: https://osf.io/wegtn/
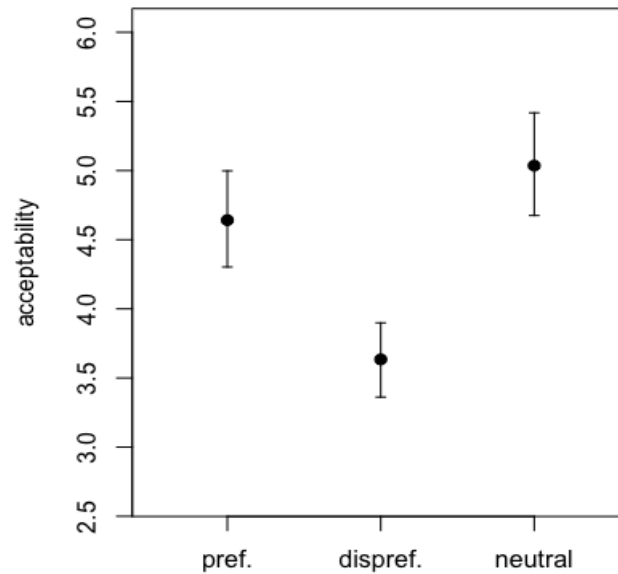
Figure 2: Acceptability ratings (model estimate and 95%-credible interval)

4.3.6 Discussion

This pilot experiment was set up to empirically examine the anchoring mechanisms of FID. For this reason, items were designed to yield strong contrasts between maximally prominent and minimally prominent protagonists that serve as the anchor for FID.

The significant difference between the acceptability ratings for sentences in FID mode that must be anchored to the prominent protagonist compared to FID anchored to the competing referent indicates that a protagonist that is introduced with a proper name in subject position is more available as the anchor for FID than a protagonist referred to with an NP in object position (H1, see (123)).

Though the difference between the neutral and the preferred condition was not tested for significance, a tendency to prefer the neutral condition over the FID$_{preferred}$ indicates that in general FID is perceived to be less natural than a non-perspectivized continuation.

The preference for non-FID items raises two methodological concerns: first, as outlined in Chapter 2, FID is commonly used in narratives and may thus hardy be perceived as natural in such short stimuli; second, if it is true that a referent must be sufficiently activated in order to serve well as a perspectival center, the activation that is necessary may not be established in short stimuli. Concerns regarding the length of the items will be subject to research presented in Chapter 5, where longer stretches of discourse with varying degrees of activation will be presented.

A shortcoming of the pilot study concerns the design of the target sentences. That is, although they were carefully designed to vary only with respect to the pronoun and the epithet, the target sentences potentially varied in acceptability, as not every epithet allows for equally frequent counterparts in the respective male and female versions. While *Liebster* (male darling) and *Liebste* (female darling) work well as minimal pairs the comparison of *Bücherwurm* (*m.*, bookworm) with *Leseratte* (*f.*, bookworm, literally a reading rat), *Schleckermaul* (*n.*, sweet tooth, literally a yummy mouth) with *Naschkatze* (*f.*, again a sweet tooth, literally a nibble cat), and *Tratschtante* (*f.*, gossip aunt) with *Lästermaul* (*n.,* gossip mouth) is rather problematic as there are no predictions regarding their overall acceptability.

Although participants were explicitly instructed to rate the third sentence in the context of the first two sentences, it is possible that participants rated just the acceptability of the target sentence.

Though such differences in the target sentence are rather unlikely to have affected the results significantly, the design of the follow-up experiment was improved so that the target sentences were identical throughout all conditions.

Another potential shortcoming with respect to the target sentences is that the FID may be misinterpreted to be an instance of *objective future-in-the past* (see Eckardt 2017 for an explanation of this terminology).

(139) When the last Harry Potter book was published, Luisa gathered all her money together.
She told her best friend$_{male}$ right away.
a. Tomorrow she would hit the bookstore with that bookworm$_{male}$.
b. [She did not know it yet but] tomorrow she would hit the bookstore with that bookworm$_{male}$.

Though unlikely, most sentences allow a potential reading in which the FID is not anchored to a protagonist but to a narrator that presents information regarding the future that is not available to the referents, as indicated in (139) b. If the sentences were mistakenly interpreted as future-in-the-past sentences, the results would not allow for conclusions with respect to FID. Rather, the results would indicate that future-in-the past is perceived to be more natural when information about the more prominent referent is presented. Though this option is rather unlikely, in the follow-up, the design of the target sentences was deliberately modified in order to prevent such readings.

4.4 Experiment 2

Based on the contrasts found in the pilot study, a follow-up experiment (n = 119) was designed to further investigate the impact of grammatical function and referential expression as prominence-lending cues. While the results found for Experiment 1 indicate that the referent in subject position referred to with a proper name is preferred as the anchor for a sentence in FID mode, this experiment will allow for conclusions regarding the role of subjecthood, proper names, and the prominence status of the competitor.

In the follow-up, the same methodology was used as in Experiment 1 (i.e., in an acceptability rating study, participants were asked to rate the naturalness of a target sentence in FID mode with respect to the context). In order to avoid uncertainties regarding the interpretation of the results due to differing target sentences, the contexts were manipulated; again, the FID had to be anchored to one of the referents in terms of gender, but the gender of the two referents varied in the context. Also, the referents varied with respect to grammatical function and the referential expressions used for both protagonists (see (140) for an item in all experimental conditions).

(140) a. Lynn sprach Pablo auf den nächsten Zug an, als eine Durchsage Verspätungen aller Züge aufgrund starken Schneefalls verkündete.
b. Pablo sprach Lynn auf den nächsten Zug an, als eine Durchsage Verspätungen aller Züge aufgrund starken Schneefalls verkündete.

c. Eine Reisende sprach Pablo auf den nächsten Zug an, als eine Durchsage Verspätungen aller Züge aufgrund starken Schneefalls verkündete.
d. Ein Reisender sprach Lynn auf den nächsten Zug an, als eine Durchsage Verspätungen aller Züge aufgrund starken Schneefalls verkündete.

e. Eine Reisende sprach einen Reisenden auf den nächsten Zug an, als eine Durchsage Verspätungen aller Züge aufgrund starken Schneefalls verkündete.
f. Ein Reisender sprach eine Reisende auf den nächsten Zug an, als eine Durchsage Verspätungen aller Züge aufgrund starken Schneefalls verkündete.

g. Lynn sprach einen Reisenden auf den nächsten Zug an, als eine Durchsage Verspätungen aller Züge aufgrund starken Schneefalls verkündete.
h. Pablo sprach eine Reisende auf den nächsten Zug an, als eine Durchsage Verspätungen aller Züge aufgrund starken Schneefalls verkündete.

FID: Oh Mann, jetzt würde sie bestimmt ihren Anschlusszug verpassen.

a. Lynn asked Pablo about the train when severe delays due to heavy snowfall were
announced.
b. Pablo asked Lynn about the train when severe delays due to heavy snowfall were announced.

c. A traveler$_f$ asked Pablo about the train when severe delays due to heavy snowfall were announced.
d. A traveler$_m$ asked Lynn about the train when severe delays due to heavy snowfall were announced.

e. A traveler$_f$ asked a traveler$_m$ about the train when severe delays due to heavy snowfall were announced.
f. A traveler$_m$ asked a traveler$_f$ about the train when severe delays due to heavy snowfall were announced.

g. Lynn asked a traveler$_m$ about the train when severe delays due to heavy snowfall were announced.
h. Pablo asked a traveler$_f$ about the train when severe delays due to heavy snowfall were announced.

FID: Oh man, now she would miss her connecting train!

In line with the argumentation presented in Chapter 3, the study investigates two main hypotheses:

(141) H2: Protagonists functioning as subjects are more available as anchors for FID than protagonists functioning as objects.

(142) H3: Protagonists referred to with a proper name are more available as anchors for FID than protagonists introduced by an indefinite NP.

4.4.1 Materials

48 experimental items were created in eight conditions (see (140) for an example of an item in all conditions, see Appendix B for further items[33]). Items consisted of a context sentence and a target sentence. In the context sentence, two referents (R1 and R2), one male and one female, were introduced as subjects and objects. Note that the subject referent was also mentioned first. Results for subjecthood may thus have been influenced by a first-mention effect. Although such an effect could in principle have been controlled for by testing OVS sentences, this option was discarded for two reasons. First, OVS syntax is highly marked and only natural in particular contexts (e.g., contrastive focus). Second, proper names are not marked for case in German, so OVS can only be identified as such when lexical NPs are presented. Only testing NPs, however, is highly problematic due to their uneven distribution of other prominence-lending cues. For example, comparing a tennis player to a soccer player may act in favor of the soccer player due to

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[33] All stimuli are available online: https://osf.io/wegtn/

soccer players' popularity in German media, and comparing a female soccer player to a male soccer player could lead to confounds based on frequency.

Varying grammatical function and referential expression for both protagonists resulted in a 2x2x2 factorial design. The eight experimental conditions are illustrated in Table 2.

Condition label	Subject-Object	Ref.-ex R1	Ref.-ex R2
A: $R1_{name} - R2_{name}$	R1-R2	name	name
B: $R2_{name} - R1_{name}$	R2-R1	name	name
C: $R1_{indef.} - R2_{name}$	R1-R2	indef.	name
D: $R2_{indef.} - R1_{name}$	R2-R1	name	indef.
E: $R1_{indef.} - R2_{indef.}$	R1-R2	indef.	indef.
F: $R2_{indef.} - R1_{indef.}$	R2-R1	indef.	indef.
G: $R1_{name} - R2_{indef.}$	R1-R2	name	indef.
H: $R2_{name} - R1_{indef.}$	R2-R1	indef.	name

Table 2: Experimental conditions for Experiment 2

In all items, the target sentence presented a thought in FID mode that must be anchored to R1 in terms of gender[34]. Unlike in the pilot, the same target sentence was shown across all items. In order to ensure that participants interpreted the sentence in FID mode correctly as a subjective thought, each sentence included an interjection, a temporal deictic expression, and a verb in subjunctive II mood (German *würde*). All items deliberately presented a target sentence starting with an interjection in order to avoid potential future-in-the-past readings; the target sentence in FID mode (see (143)) can hardly be misinterpreted as a case of future-in-the-past (Eckardt 2017) as in (143) b.

(143) Lynn asked Pablo about the train when severe delays due to heavy snowfall were announced.
a. Oh man, now she would miss her connecting train!
b. [She did not know it yet, but] oh man, now she would miss her connecting train.

In order to be able to exclude participants that did not take the experiment seriously, 16 filler items were included that were intended to yield low acceptability due to a presupposition violation with respect to the use of *auch* (Engl. *also*). Data from

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[34] It is potentially possible to interpret the sentence as a thought of R2 (i.e., R2 *thinks that poor R1 would miss her connecting train*). Such a recursive reading is, however, rather absurd as all items were carefully designed to prevent such interpretation (e.g., by mentioning a *connecting train* R1 is trying to catch while R2 may hardy know about R1's plans).

participants that rated items similar to (144) better than 16 comparable filler items that did not show any violations will be excluded from the analyses.

(144) Melina und Tom haben beide schöne Haare. Melina hat schwarze Haare und Tom hat auch blonde Haare.

Melina and Tom both have beautiful hair. Melina has black hair and Tom also has blond hair.

4.4.2 Predictions

In order to operationalize the hypotheses, H2 and H3 may be paraphrased as:

(145) H2.1: FID anchored to referents in subject position will receive higher ratings than FID anchored to referents in object position.

H3.1: FID anchored to referents referred to with a proper name will receive higher ratings than FID anchored to referents referred to with an indefinite NP.

Though the investigation is mainly interested in insights on the impact of grammatical function and referential expression as prominence-lending cues, the design allows for conclusions with respect to the interaction of both cues.

One exploratory investigative question is presented in (146).

(146) Q1: Does the type of referential expression play a bigger role than the grammatical function with respect to the anchoring of FID?

A second question that may be raised given the data at hand is that of the effect of the competing referent. While the investigation presented in this thesis is mainly concerned with the characteristics of the referent that is meant to serve as an anchor, one cue that contributes to a referent's prominence status is the status of the competitor. As elaborated in Chapter 3.3.3, prominence is relational, that is, the prominence status of one entity depends on the prominence status of competing entities. Recall Chapter 3.3.2, example (69), repeated in (147).

(147) a. A young girl asked Martin for a tissue.
Hmm, poor girl, she looked really sick.
b. Lilli asked Martin for a tissue.
Hmm, poor girl, she looked really sick.

While in (147) a Martin serves well as the perspectival center, in (147) b Martin's prominence is outranked by Lilli so that the FID anchored to him is unnatural.

A second investigative question may thus be phrased as follows:

(148) Q2: Is it more acceptable to anchor FID to a referent when the competing referent is less prominent in terms of the expression by which she or he is referred to?

4.4.3 Procedure

All eight conditions were equally distributed across eight lists so that each participant saw each item in only one condition. Items and fillers were presented in a randomized order for each participant. 64 fillers resembling the experimental items in terms of style and length were shown. Due to the length of the experiment – 112 items were shown in total – a three-minute break was enforced after participants had completed 56 items.

Participants were instructed to judge the naturalness of each item on a 7-point likert scale, from 1 (entirely unnatural) to 7 (entirely natural). The experiment was presented on the platform PCIbex (Zehr and Schwarz 2018).

The experiment was run in December 2021. Following the argumentation in Brysbaert (2019), a rather large number of participants was chosen in order to avoid drawing conclusions based on an underpowered sample size. 129 participants from the *Introduction to German Grammar* class participated for course credit. Seven participants self-reported to be non-native speakers of German, so their results were excluded from further analysis. Also, another three participants were excluded as they rated the fillers that were designed to trigger low ratings better than a set of fillers that were designed to yield high ratings.

4.4.4 Data Analysis and Results

The remaining 119 questionnaires were considered for further analysis. Acceptability ratings were submitted to a Bayesian mixed effects model with a full set of interactions of the factors grammatical function and referential expression of the two referents and a maximal random effects structure for subjects and items[35,36].

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[35] The model was specified as follows: acceptability ~ 1 + gramfunc * R1reftype * R2reftype + (1 + gramfunc * R1reftype * R2reftype|participant) + (1 + gramfunc * R1reftype * R2reftype|item). In order to interpret the lower order effects as main effects, deviation coding for all 3 factors (0.5/+0.5) was used.
[36] The raw data and the script are available online: https://osf.io/wegtn/

Condition	Model estimate	CI
A: R1$_{name}$ − R2$_{name}$	5.37	[5.15 ; 5.61]
B: R2$_{name}$ − R1$_{name}$	4.68	[4.44 ; 4.91]
C: R1$_{indef.}$ − R2$_{name}$	4.55	[4.31 ; 4.79]
D: R2$_{indef.}$ − R1$_{name}$	5.12	[4.90 ; 5.36]
E: R1$_{indef.}$ − R2$_{indef.}$	5.16	[4.93 ; 5.38]
F: R2$_{indef.}$ − R1$_{indef.}$	4.39	[4.14 ; 4.64]
G: R1$_{name}$ − R2$_{indef.}$	5.48	[5.25 ; 5.72]
H: R2$_{name}$ − R1$_{indef.}$	4.08	[3.81 ; 4.33]

Table 3: Acceptability ratings (model estimate and 95%-credible interval)

The model reveals a significant main effect of grammatical function of 0.57 (SE = 0.07, CI: [0.43;0.72]). That is, the target sentence was rated significantly better when it was anchored to the referent in subject position than when it was anchored to the referent in object position.

Also, the main effect of referential expression of R1 is significant (estimate = -0.62, SE = 0.07, CI: [-0.75; -0.49]). This indicates that FID is preferred when it is anchored to a referent that is referred to with a proper name compared to a referent introduced by an indefinite NP.

The significant main effect of the referential form of R2 (estimate = 0.37, SE = 0.06, CI: [0.26; 0.47], see Figure 3)[37] indicates that the target sentence was perceived to be more natural when the competing referent R2 was referred to with an indefinite NP rather than with a proper name.

The two-way interaction of the referential form of R1 and R2 (estimate = 0.18, SE = 0.08, CI: [0.03; 0.34], see Figure 3) is also significant. This indicates that R2 has a greater impact whenever R1 is referred to with an indefinite NP.

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[37] This effect did not turn out to be significant in the experiment presented in an earlier version of this manuscript, possibly due to the lower statistical power.
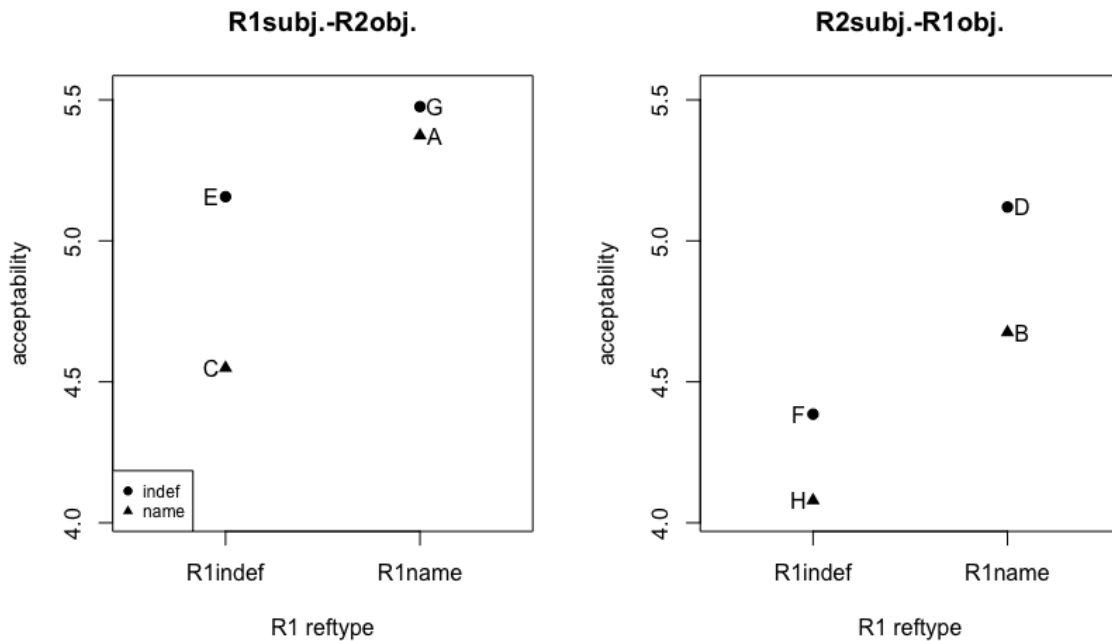
Figure 3: Acceptability ratings for Experiment 2 (model estimates)

4.4.5 Discussion

The results indicate that FID anchored to referents in subject position will receive higher ratings than FID anchored to referents in object position (H2). Grammatical function can be considered as a prominence-lending cue that promotes a referent's availability as the anchor for a sentence in FID mode. Further, the main effect for referential expression of R1 indicates that reference with a proper name makes a protagonist more available than reference with an indefinite NP (H3).

Given that both factors have a significant impact, the role of grammatical function and referential expression may be compared by interpreting the estimates. Similar estimates indicate that *grammatical function affects the anchoring of FID just as much as type of referential expression* (Q1).

While the results indicate that FID is perceived to be more natural when R1 is referred to with a proper name, the ratings are even higher when R2 is referred to with an indefinite NP. That is, R1's prominence status depends on the activation of R2: if the competitor, R2, is less prominent, R1's potential to serve as the perspectival center increases. Regarding Q2, it may be said that *it is more acceptable to anchor FID to a referent when the competing referent is less prominent in terms of the expression by which she or he is referred to.* Results found for conditions B (4.68) and D (5.12) account for the intuitions reported for example (147), repeated in (150).

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(149)   B: Pablo asked Lynn about the train when severe delays due to heavy snowfall were announced.
D: A traveler$_m$ asked Lynn about the train when severe delays due to heavy snowfall were announced.

(150)   a. A young girl asked Martin for a tissue.
Hmm, poor girl, she looked really sick.
b. Lilli asked Martin for a tissue.
Hmm, poor girl, she looked really sick.

That is, although R1 is in object position in condition D (likewise in (150) a), R1 is still acceptable as an anchor for FID, as the referential expression boosts its availability. In condition B (likewise in (150) b), R2 outranks R1 in terms of grammatical function and referential expression. A thought anchored to R1 is thus rather unnatural.

Though there was a significant main effect for the referential expression, the effect of R2 does not show in the case of R1 being in subject position and referred to with a proper name. That is, unlike the oppositional pairs *E and C*, *F and H*, and *D and B*, conditions *A and G* receive similarly high ratings. This indicates the following: a referent that is already maximally prominent in terms of being referred to with a proper name in subject position is the default anchor for a sentence in FID mode regardless of the type of referential expression used to refer to the competing referent. In other words, maximal prominence cannot be boosted any further.

An interesting interpretation from a slightly different perspective goes back to the central research question, namely, which features contribute to a referent's availability as the perspectival center? Based on the results presented above, reference to R1 with a proper name, reference to R2 with an indefinite NP, and R1's subject position may be considered to be *availability-enhancing features*.

An approach based on the number of *availability-enhancing features* paints the following picture: condition H, which has no such enhancing features, is rated worst (4.08). Conditions B, C, and F each have one enhancing feature; they are rated slightly better (from 4.39 to 4.67). Conditions A, D, and E, each with two features, are rated even better (from 5.11 to 5.37) and condition G, where all three features apply, is rated best (5.47), see Figure 4.
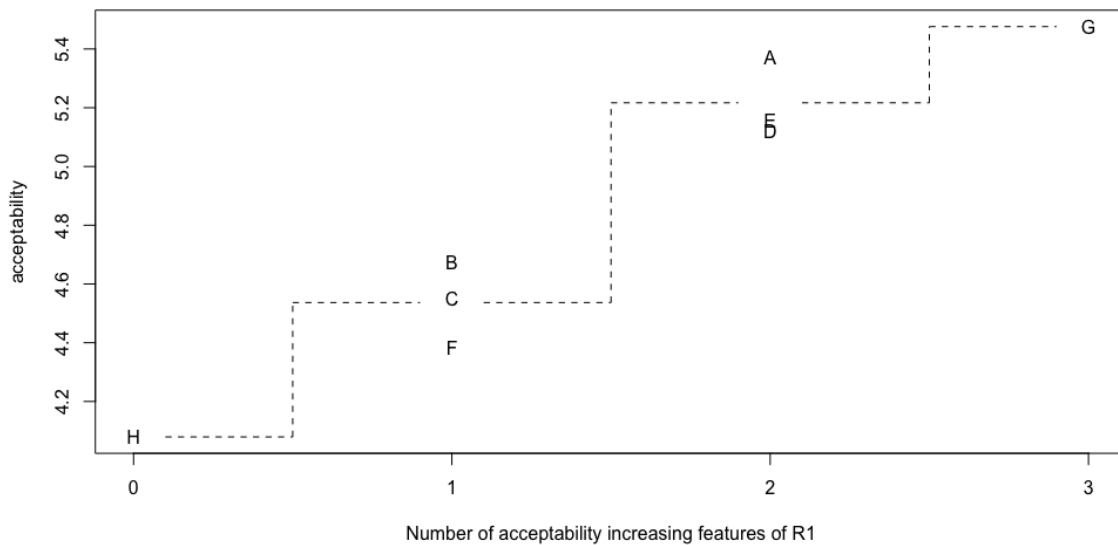
Figure 4: Acceptability ratings depending on the number of availability-enhancing features

Such an interpretation neatly illustrates the nature of the anchoring mechanisms of perspective-taking: prominence-lending cues may not be seen in isolation; they all contribute to a referent's availability as the perspectival center.

4.5 General Discussion

Before closing this chapter, I want to recall the results of the pilot experiment and point out how the main effects found in the follow-up experiment account for the contrast found in the first experiment. Furthermore, I want to argue that the results of the empirical investigation account for what has been outlined at the beginning of this Chapter as well as in Chapter 3.

The pilot was designed to provide the first empirical evidence for the intuitions presented in Chapter 3 (see Hinterwimmer 2019; Hinterwimmer and Meuser 2019), and allows one to conclude that the referent that is more prominent in terms of grammatical function, number of references, referential expression, and first-mention is preferred as the anchor for a sentence in FID mode compared to a less prominent competitor. Stimuli presented in the pilot were mainly designed to yield strong contrasts (i.e., they show two conditions that respectively represent maximal and minimal prominence). A third control condition was included in order to show that low ratings of the minimal prominence FID condition were actually due to the unacceptability of a sentence in FID mode anchored to the less

prominent referent rather than a change of the subject of the last sentence. That is, with a mean rating of 5.04, the neutral condition ((151) b) was rated significantly better than the FID$_{dispreferred}$ condition ((151) a) with a mean of 3.63 points (see Zimmermann et al. 2021 for a replication of these results).

(151) When the wedding of Prince William and Kate was broadcast on TV, Robert could hardly wait for his own wedding.
He, too, had proposed to his girlfriend.
a. FID$_{dispreferred}$: Already tomorrow she would walk down the aisle with her darling.
b. Neutral: She wanted to walk down the aisle with him.

The follow-up study was designed to paint a more detailed picture of the role of grammatical function and referential expression and their interaction. The significant main effects for grammatical function and referential expression indicate that (i) FID is perceived to be more natural when it must be anchored to a referent in subject position rather than in object position, and (ii) that referents that are introduced with a proper name are preferred as anchors for FID. Furthermore, (iii) the significant main effect for the referential expression for the competitor indicates that the potential of a referent to serve as the anchor for FID depends on the prominence of the competing referent – that is, ratings for a referent are higher when the competing referent is less activated in terms of being referred to with an indefinite NP.

The results found in the follow-up neatly account for the results of the pilot. This can particularly be illustrated by a comparison of the FID$_{preferred}$ condition and the FID$_{dispreferred}$ condition and conditions G and H in the second experiment.

(152) Experiment 1:
When the wedding of Prince William and Kate was broadcast on TV, Robert could hardly wait for his own wedding.
He, too, had proposed to his girlfriend.
FID$_{preferred}$: Already tomorrow he would walk down the aisle with her darling.
FID$_{dispreferred}$: Already tomorrow she would walk down the aisle with her darling.

(153) Experiment 2:
G: R1$_{name}$ – R2$_{indef.}$: Lynn asked a traveler$_m$ about the train when severe delays due to heavy snowfall were announced.
H: R2$_{name}$ – R1$_{indef.}$: Pablo asked a traveler$_f$ about the train when severe delays due to heavy snowfall were announced.
Oh man, now she would miss her connecting train!

The contrast between the ratings for conditions G and H (1.39) and the contrast found between the FID$_{preferred}$ and the FID$_{dispreferred}$ conditions (1.02) are in line with the main effects reported above: referents that are in subject position and referred to with a proper

name are more preferred as anchors for FID compared to referents that are referred to with an NP in object position.

To sum up, the empirical results presented in this chapter indicate that grammatical function and referential expression as prominence-lending cues contribute to a protagonist's availability as the perspectival center.

First, referents that are referred to with a proper name have a high cognitive status, which raises such referents' availability as perspectival centers. This is in line with Gundel et al.'s (1993) claim that referents that are referred to with an expression that indicates that they are *familiar* have a higher activation status than referents that are merely *type identifiable* (indicated by the use of an indefinite NP). Though Gundel et al. (1993) do not include proper names in their givenness hierarchy, proper names certainly lend high cognitive status to a referent. A referent that is referred to with a proper name must either be *familiar* (Gundel et al. 1993) already, or be "a character to whom one will want to keep referring in the future – it effectively fixes the reference" (Garrod and Sanford 1988 p. 522).

Second, referents that are introduced as subjects have a higher activation status. Such referents' high activation leads to higher availability as the anchor for a sentence in FID mode - or as stated by Kuno (2006 p. 316), "[i]t is easier […] to empathize with the referent of the subject than with that of any other NP in the sentence".

Note that all results regarding the role of the subject are potentially influenced by the fact that in canonical sentences the subject is also mentioned first. The effect of first-mention on grammatical function could potentially be accounted for empirically by testing sentences with a fronted object (OVS-syntax), but such stimuli bear a number of potential confounds with respect to their marked contexts as well as the problem of truly comparable NPs in terms of frequency. Though all results with respect to the subject also include effects for being mentioned first, based on research findings, such as those of Schumacher et al. (2006), it may be argued that first-mention is presumably not a strong activating cue. Therefore, it stands to reason that the effect of first-mention potentially contributes to the referent's activation, but is unlikely to be the most important factor.

In this chapter, I have presented preferences with respect to anchoring mechanisms in small contexts (i.e., the referents were activated in the linguistic context immediately preceding the FID). However, as discussed in Chapter 2, FID is a method of speech and thought representation that is commonly found in narratives. Typically, a referent that serves as the anchor for FID is activated in a larger context. As argued in Chapter 3 (see

also Hinterwimmer 2019), prominence-lending cues that work on the discourse level (e.g., topicality) crucially contribute to a protagonist's availability as the perspectival center. While I have argued that, in isolation, subjecthood in the local context (potentially supported by first-mention) governs perspective-taking, in the following chapters the impact of grammatical function will be tested in larger contexts.

5 Referential Activation in Discourse

In this chapter, I want to investigate the claim that a referent that is highly activated in a stretch of discourse shows at least equal potential to be the anchor for a sentence in FID mode as a referent that is the subject of the sentence preceding the FID (Hinterwimmer 2019). This assumption is of particular interest whenever several potential protagonists are activated in the context and in the preceding sentence so that they compete for being the perspectival center. The studies presented in this chapter will investigate the interaction of referential activation on the discourse level and in a local context – or, as phrased by Hinterwimmer (2019), the interaction of local and global prominence with respect to the anchoring of FID.

In the previous chapter, I presented evidence that the activation of a referent in the sentence preceding a sentence in FID mode has a significant impact on the referent's availability as an anchor for FID (also presented by Hinterwimmer and Meuser 2019). The results suggest that protagonists functioning as subjects are more available as anchors for FID than protagonists functioning as objects (H2 Chapter 4, repeated in (156)).

In the previous chapter, the impact of the activation of a protagonist in the sentence preceding the FID was investigated in isolation; the experimental items consisted of short texts of two sentences (three in the pilot) without any context. Recall from Chapter 2 that FID is a stylistic device for depicting a protagonist's thought or speech that is commonly used in narratives. As the genre of narratives comprises longer texts rather than a minimal sequence of two to three sentences, the results are as yet in need of replication in longer stretches of text. This raises the following questions:

(154)   I. Does the activation of a protagonist in the preceding sentence hold for longer stretches of discourse? That is, will the hypothesis (H2) presented in the previous chapter be replicated if the two-sentence short items are presented in a longer stretch of discourse?

II. Will subjecthood in the preceding sentence determine the perspectival center if a competing referent is activated in the discourse?

The impact of the context on the interpretation of a sentence in FID mode can be illustrated in the following example:

(155) a. Marcus took Ellen by the hand. Now, this was just the perfect moment for a first kiss.
b. The movie theater closed. It was a warm summer night and the sun had just begun to set. Marcus took Ellen by the hand. Now, this was just the perfect moment for a first kiss.
c. Ellen had just moved to Cologne to start her job as a history teacher for the local Montessori school. Even though she was usually busy preparing the next day's lessons until late at night, this Monday she had other plans. Marcus, who worked in the little flower shop just across the street had asked her to see a movie with him. It was Ellen's first date in Cologne.
After the movie Marcus walked her to her apartment. Marcus took Ellen by the hand. Now, this was just the perfect moment for a first kiss.

The data presented in the previous chapter predicts a preference for Marcus to be the anchor for the thought in FID mode in (155) a, and the same tendencies appear to hold for (155) b. The thought in FID mode is ambiguous in the sense that without any information regarding the desires of either of the two protagonists, both are in an equal position to have the thought expressed the last sentence. Arguably, without any contextual information that makes the ascription to one or the other more coherent and without any previous activation of one of the two protagonists, Marcus will be preferred in both (155) a and b as he is in subject position in the preceding sentence, while Ellen is in object position.

Note that in (155) c the thought expressed in the last sentence is just as ambiguous as it is in (33) a and b. The context does not provide any information that makes it more or less plausible to attribute the desire to kiss to Ellen or Marcus. Yet, I want to argue that Ellen will be preferred as the anchor for the thought. Although, like in (155) a and b, Marcus is the subject of the sentence preceding the FID, Ellen's activation within the discourse seems to override the subject preference in the preceding sentence. Structurally, Ellen is mentioned in the opening sentence and she occurs repeatedly in subject position. Hinterwimmer (2019) argues that the prominence status of Ellen can be captured in terms of discourse topicality (Reinhart 1981; van Dijk 1977). That is, crucially, *Ellen* is part of the answer to the question *what is the story about?* while Marcus plays a subordinate role with respect to the entire discourse.

In this chapter, I present research that aims to investigate the of role referential activation in discourse and how such activation affects a referent's accessibility as the anchor for a sentence in FID mode. I want to propose that a high activation of a referent throughout the entire discourse overrides an activation that is established in a sentence preceding a sentence in FID mode. Before I present the empirical investigation, I will elaborate on the notion of topic. I will follow Hinterwimmer (2019) and argue that the availability of

a referent that is highly activated in a discourse may be captured in terms of discourse topicality.

The research presented in this chapter will also aim to replicate H2 (also investigated in the previous chapter), yet, unlike the previous experiments, the stimuli will be presented as part of a longer stretch of discourse.

(156)   H2: Protagonists functioning as subjects are more available as anchors for FID than protagonists functioning as objects.

Further, the goal of the investigation is to test the following additional hypotheses:

(157)   H4: Protagonists that are highly activated in a discourse in terms of being repeatedly mentioned in subject position are more available as anchors for FID than protagonists that are less often referred to in a discourse but in subject position in the sentence preceding the FID.

H5: Protagonists that are highly activated in a discourse in terms of being established as the discourse topic in a topic-establishing sentence, repeatedly mentioned in subject position, and mentioned in a title are more available as anchors for FID than protagonists that are less often referred to in a discourse but in subject position in the sentence preceding the FID.

H6: The higher the activation of a referent in terms of the number of references in a discourse, the more available such a referent is as the perspectival center.

The hypotheses were tested in two acceptability rating studies. The results of the first experiment (n = 116) indicate that the referent that is prominent in the context is preferred as the perspectival center. That is, the significant two-way interaction of the difference between the conditions with and without a referent that is globally prominent indicates that the subject preference can be overridden in larger contexts. The results of Experiment 3 also show a tendency that a stronger activation (i.e., more activating cues) boosts the referent's availability as the anchor for the FID, though this effect is not significant. The interaction effect, in which the contextually activated referent is preferred over the local subject, is replicated in Experiment 4 (n = 90). Furthermore, it was exploratorily investigated whether reference in a title or reference in a topic-establishing sentence results in higher acceptability as a global anchor, but the data did not allow for conclusions with respect to this question.

5.1 Discourse Topics as Perspectival Centers

When in search of a linguistic approach to understanding the activation status of a referent in discourse, the notion of topic, in particular that of discourse topic, may serve well. In

the following, I will elaborate on Hinterwimmer's (2019) observation that the referent that is globally prominent also serves as the preferred perspectival center and how this observation may relate to discourse topicality.

The linguistic concept of topic suffers from the lack of a consistent definition, and there is no hardcoded diagnostic device for identifying topics. I will briefly render the most common attempts at defining topics in order to provide the reader with a better understanding of how this concept may serve as a means to account for perspective-ascription in larger discourse.

In his 2019 paper, Hinterwimmer argues that in example (158) (taken from Hinterwimmer 2019 p.84), Susan is preferred as the perspectival center as she is locally prominent (i.e., she is in subject position and carries more agentivity features than George), while in (159) (taken from Hinterwimmer 2019 p.85), George is also available as the perspectival center as he is globally prominent.

(158)   Susan looked at George hatefully.
        a. The dumb jerk had managed to make her look like an idiot at the meeting yesterday.
        b. The mean old hag had managed to make him look like an idiot at the meeting yesterday.

(159)   George entered the room and looked around cautiously. Susan was sitting at a table in the corner with her best friend. Susan looked at George hatefully.
        a. The dumb jerk had managed to make her look like an idiot at the meeting yesterday.
        b. The mean old hag had managed to make him look like an idiot at the meeting yesterday.

Hinterwimmer accounts for the effect of global prominence in terms of discourse topicality. That is, in (159) George can be considered to be the discourse topic so that a sentence in FID mode can be anchored to him without causing surprisal.

On the most general level, "a topic indicates what an assertion is about" (van Dijk 1977 p.220). While the notion of topic commonly refers to sentence topics, the observation presented by Hinterwimmer (2019) builds on the concept of discourse topicality. Discourse topics can be distinct from sentence topics, as sentence topics "correspond to an expression in the sentence (the topic expression). Discourse topics are topics of larger units and they can be more abstract, though they do not have to be […]" (Reinhart 1981 p.54). A frequently quoted metaphor for discourse topics is that of a library catalogue by Tanya Reinhart:

> "A useful metaphor for the procedure involved here is the organization of a library catalogue (where each book entry corresponds, in our metaphor, to a proposition). One system of organization is the alphabetical list of all the books in the library, which can be compared to a list of all propositions admitted to the context set, ordered chronologically (i.e., following the order in which they were introduced.). This catalogue, however, is of very little use when the reader is interested in finding out what is known (or has been written) on a given subject. For this topic-oriented search he turns to the subject catalogue. Intuitively, the construction of the context set resembles more that of the subject catalogue. The propositions admitted into the context set are classified into subsets of propositions, which are stored under defining entries. At least some such entries are determined by NP-interpretations. NP sentence-topics, then, will be referential entries under which we classify propositions in the context set and the propositions under such entries in the context set represent what we know about them in this set. Local entries corresponding to sentence-topics can be further organized under more global entries, thus constructing the discourse topics. This means that the two procedures in the construction of the context set – *assess* and *store* are, in fact relativized to topics" (Reinhart 1981 p.79-80)

The importance of discourse topics is illustrated in an example by Asher (2004); if discourse only required local coherence (i.e., coherence from one sentence to the next adjacent sentence), the incoherence of a text such as the one in (160) would not be predicted:

(160) I met someone yesterday. His name is John. He likes Mary. Mary is a professor. A professor came to my house yesterday. Her name is Chris. She teaches chemistry. Chemistry is the science of the future, my Dad always says. (Asher 2004 p.184)

Generally, it is assumed that discourse topics correspond to the proposition that is entailed by the joint set of sentences in the given discourse (van Dijk 1977) – they may be regarded as "the general organizing principle in discourse" (van Kuppevelt 1995 p.109).

An attempt to formally define discourse topics can be found in van Kuppevelt:

> "A discourse topic DTj is defined by the set of all topics Tp that are constituted as the result of one and the same feeder F […]. As such DTS is a set of main, higher order topics usually hierarchically comprising lower topics." (1995 p.137)

The formal aspect aside, the definition by van Kuppevelt is particularly interesting for the empirical investigation presented in this chapter, as he defines the discourse topic as a hierarchical element that entails the lower sentence topics. Though he does not explicitly make any predictions with respect to the importance of sentence and discourse topics, he assumes that the two are ranked, with discourse topic being above sentence topic.

A widely acknowledged test for identifying topics is the *aboutness*-question or -paraphrase. That is, "[a] sentence can be paraphrased [so that] the NP following *about* can be its topic"; likewise, the topic of a sentence is the answer to a question such as *what is the sentence about?* (Reinhart 1981 p.64). With respect to discourse topics, the topic

corresponds to the answer to the question *what is the discourse about?*. Van Dijk postulates that "aboutness should be established in (con-)textual terms, perhaps in such a way that a discourse or a passage of the discourse is about something if this 'something' is referred to by most phrases with topic function." (1977 p.119)

For the sake of completeness, it should be mentioned that topics have also been defined in terms of familiarity. According to Gundel's *Topic-Familiarity Principle*, "an entity, E, can successfully serve as a topic iff both speaker and addressee have previous knowledge of or familiarity with E" (1985 p.87, see Prince 1992 for arguments against an approach based on the distinction of hearer/discourse-new/old-status). Such a definition is problematic with respect to the investigation of referents in short text segments as will be conducted in this chapter: neither the examples presented by Hinterwimmer (2019) nor the items that will be tested in the course of this chapter will include referents that are familiar to the reader – rather, they will be introduced as the topic of the discourse (i.e., discourse-new and hearer-new; terminology taken from Prince 1992).

Another definition of topics that is problematic for the issue at hand is the one presented by Bosch and Umbach (2006). Based on Prince (1992), they propose that discourse topics must be "introduced into the discourse before, not though as new referents in the immediately preceding sentence; they must have been discourse topics in the preceding sentence already" (Bosch and Umbach 2006 p.50). Hinterwimmer illustrates why referents may be the discourse topic and the perspectival center even if the referent is not the topic in all sentences (2019 p.88):

(161)   Susan was sitting at a table in the corner with her best friend. George entered the room and looked around cautiously. Susan looked at George hatefully.
a. The dumb jerk had managed to make her look like an idiot at the meeting yesterday.
b. The mean old hag had managed to make him look like an idiot at the meeting yesterday.

In example (161) the storyline is equivalent to the one presented in (158), yet the order of the two sentences *George entered the room and looked around cautiously* and *Susan was sitting at a table in the corner with her best friend* is reversed. The order of reference is problematic for the definition presented by Bosch and Umbach (2006), as the anaphoric chain is interrupted by reference to George in subject position in the second sentence. It stands to reason that, despite the fact that Susan is not the topic of the second sentence, reference in the opening sentence crucially leads to a different ascription of the discourse topic – and likewise the perspectival center. Though the number and types of references

(referential expression, grammatical function, and semantic roles) are identical in (158) and (161), in the latter Susan is mentioned in the opening sentence, which gives reason to expect a story about Susan. Hinterwimmer (2019) concludes that in (161) the ascription of a thought to Susan is more natural than in (158), as she is the discourse topic.

In the following, the observations of Hinterwimmer will be investigated empirically, but uncertainties with regard to the definition of discourse topics call for caution. I want to approach the effect of referential activation in a discourse in terms of measures I will carefully define. That is, I will hesitate to generally claim that discourse topics are by default the anchor for FID. Rather, I will show that the referent that is highly activated in a discourse (i.e., repeatedly picked up in subject position) is highly acceptable as the anchor for FID compared to a less highly activated referent. With respect to discourse topicality, I will investigate if an opening sentence that functions as a topic-establishing sentence (i.e., the answer to the question *what is the story about?*) has a significant impact on the availability as the perspectival center. Though I refrain from an investigation based on the notion of discourse topic, I will present a possible interpretation of the results with respect to topicality in the general discussion.

5.2 Experiment 3

In the following, I report on an acceptability rating study (n = 116) testing the impact of a referent that is highly activated in a short discourse compared to a referent that is the subject in the sentence preceding the sentence in FID mode.

This experiment furthermore replicates the findings previously reported in Chapter 4 (see also Hinterwimmer and Meuser 2019) supporting a preference for the subject of the preceding sentence as the anchor for the sentence in FID mode – in the absence of a competing referent that is prominent in the context.

That is, based on previous experiments, I expect the referent that is in subject position in the sentence preceding the FID to be preferred as the perspectival center, as indicated by the contrast in (162). Similar to the experiments presented in Chapter 4, participants were asked to rate the naturalness of a target sentence in FID mode with respect to the context.

(162) Kein Feierabend in Sicht
Im Büro gehörten Überstunden zum Alltag. Da musste ein ruhiger Kopf bewahrt werden. Eine gute Arbeitsteilung war notwendig, um alles zu erledigen. Trotz des hohen Zeitdrucks duldete das Management keine Verzögerungen.
a. Fred gab Caroline die Akten. Wehe, wenn die ihn heute hängen lassen würde.
b. Caroline gab Fred die Akten. Wehe, wenn die ihn heute hängen lassenwürde.

More work to do
In the office, working overtime was not unusual. Keeping a clear head was important. Also, a good distribution of tasks was crucial for getting everything done. Despite the tremendous time pressure, the management did not tolerate delays.
a. Fred handed Caroline the papers. She better not let him down today.
b. Caroline handed Fred the papers. She better not let him down today.

Though the action in (162) b (i.e., Fred's receiving papers from Caroline), gives reason for Fred to assume that Caroline might let him down, the continuation in (162) b sounds less natural than the one in (162) a. I expect such items to, again, confirm H2, previously reported in Chapter 4 and repeated in (163):

(163) H2: Protagonists functioning as subjects are more available as anchors for FID than protagonists functioning as objects.

In order to test if the activation of a referent in a larger context affects the anchoring preference that is established in the sentence preceding the sentence in FID mode (henceforth referred to as the local context), the items consist of short narratives.

Thus, the local contexts are embedded in short discourses. While in one condition the anchor for the sentence in FID mode is locally dispreferred but activated in the global context (compare (164) a), in the other one the anchor for the FID is preferred in the local context (i.e., in subject position) but less prominent in the global context (compare (164) b).

(164) a. Kein Feierabend in Sicht
Im Büro gehörten Überstunden zum Alltag. Fred atmete einmal tief durch. In der Frühstückspause hatte er Caroline um Unterstützung gebeten. Er wusste, dass das Management keine weiteren Verzögerungen mehr tolerieren würde.
Caroline gab Fred die Akten. Wehe, wenn die ihn heute hängen lassen würde.

b. Kein Feierabend in Sicht
Im Büro gehörten Überstunden zum Alltag. Caroline atmete einmal tief durch. In der Frühstückspause hatte sie Fred um Unterstützung gebeten. Sie wusste, dass das Management keine weiteren Verzögerungen mehr tolerieren würde.
Fred gab Caroline die Akten. Wehe, wenn die ihn heute hängen lassen würde.

a. More work to do
In the office, working overtime was not unusual. Fred took a deep breath.
During the morning break he had asked Caroline for help. He knew that the
management did not tolerate delays.
Caroline handed Fred the papers. She better not let him down today.

b. More work to do
In the office, working overtime was not unusual. Caroline took a deep breath.
During the morning break she had asked Fred for help. She knew that the
management did not tolerate delays.
Fred handed Caroline the papers. She better not let him down today.

Just as in (162) a and b, in (164) *Fred* must be the anchor for the FID *Wehe, wenn die ihn heute hängen lassen würde*, as a thought about a referent denoted by the pronoun *die* (i.e., Caroline) can only be attributed to him. Unlike in (162) a and b, the referents are already activated in a larger context. Intuitively, in (164) a, Fred, who is prominent in the global context, serves well as an anchor for the sentence in FID mode despite his presumably dispreferred object position in the local context.

That is, though Fred is less activated in the preceding sentence, he receives a high degree of activation in the discourse and thus serves as the anchor for a sentence in FID mode. In (164) b, however, Fred is presumably preferred as the anchor for the FID as he is the local subject, but Caroline's high activation in the discourse makes him less available as the perspectival center. Thus, I expect to find higher acceptability ratings for items similar to (164) a than those similar to (164) b, testing the following hypothesis:

(165) H4: Protagonists that are highly activated in a discourse in terms of being repeatedly mentioned in subject position are more available as anchors for FID than protagonists that are less often referred to in a discourse but in subject position in the sentence preceding the FID.

In other words, a referent that is more prominent in the discourse is more available as the anchor for FID than a referent that is more prominent in the local context.

In order to account for the impact of the activation of a referent, two other conditions were designed that activate the referent that is prominent in the discourse even more by introducing the referent with a topic-establishing sentence as well as a title, as in (15) a and b.

(166) a. Kein Feierabend für Fred
       (S1) Fred hatte einen langen Arbeitstag vor sich. (S2) Er atmete einmal tief durch. (S3) In der Frühstückspause hatte er Caroline um Unterstützung gebeten. (S4) Er wusste, dass das Management keine weiteren Verzögerungen mehr tolerieren würde.
       (S5) Caroline gab Fred die Akten. (S6) Wehe, wenn die ihn heute hängen lassen würde.

       b. Kein Feierabend für Caroline
       (S1) Caroline hatte einen langen Arbeitstag vor sich. (S2) Sie atmete einmal tief durch. (S3) In der Frühstückspause hatte sie Fred um Unterstützung gebeten. (S4) Sie wusste, dass das Management keine weiteren Verzögerungen mehr tolerieren würde.
       (S5) Fred gab Caroline die Akten. (S6) Wehe, wenn die ihn heute hängen lassen würde.

       a. No end of work for Fred
       Fred was facing a long day at work. He took a deep breath. During the morning break he had asked Caroline for help. He knew that the management did not tolerate delays.
       Caroline handed Fred the papers. She better not let him down today.

       b. No end of work for Caroline
       Caroline was facing a long day at work. She took a deep breath. During the morning break she had asked Fred for help. She knew that the management did not tolerate delays.
       Fred handed Caroline the papers. She better not let him down today.

With respect to the increased activation of the referent in (166) a and b, H4 must be adjusted in the following way:

(167) H5: Protagonists that are highly activated in a discourse in terms of being established as the discourse topic in a topic-establishing sentence, repeatedly mentioned in subject position, and mentioned in a title are more available as anchors for FID than protagonists that are less often referred to in a discourse but in subject position in the sentence preceding the FID.

Comparing the effect of the ratings for items similar to (164) a and b to that for items similar to (166) a and b, I expect to find an even stronger contrast with a higher activation, captured in H6:

(168) H6: The higher the activation of a referent in terms of the number of references in a discourse, the more available such a referent is as the perspectival center.

5.2.1 Material

All items consist of six-sentence stories with a short title. The first four sentences (S1-S4) set the scene. They serve as the context where a referent can be activated. The

following two sentences (S5 and S6) should be interpreted as part of a main storyline indicated by an immediate interaction of the two referents. While S1 to S4 provide background information and may allow for a generic reading, the interaction in S5 is locally and temporally anchored to a certain place at a certain point in time in the story world (e.g. the moment in which one referent handed the folders to the other) (see (169) for an example of one item in all conditions). The change from background information to the storyline is visually enforced by a line break.

S6 is the target sentence in FID mode that can only be anchored to one of the referents (i.e., R1) introduced in the context in terms of gender. That is, in order to disambiguate the target sentence, it refers to one of the referents with a pronoun so that the other one gets singled out as the source of the thought. In order to assure comparability of the target sentences across conditions the activation status of the reference is manipulated in the context while the target sentence remains the same.

The experimental design primarily manipulates two factors: the anchor for the sentence in FID mode can either be the subject or the object in the local context, and it can be prominent or not (repeatedly mentioned in subject position or not) in the global context. Conditions in which one referent is activated or not in both the global and the local context are not of interest as they will only confirm the obvious: super higher activation will yield a high availability, whereas super low activation will yield a low availability.

Condition	S1 – S4: global context	S5: local context	S6: FID	
~~R1 – R1~~	~~R1~~	~~R1 (– R2)~~	~~R1~~	→ super high activation
R1 – R2	R1	R2 (– R1)	R1	
R2 – R1	R2	R1 (– R2)	R1	
~~R2 – R2~~	~~R2~~	~~R2 (– R1)~~	~~R1~~	→ super low activation

Table 4: Global and local activation conditions

In order to confirm the subject preference within the design of the experiment, items were designed that do not introduce any referent in the discourse but present only the local interaction of the referent in S5. The neutral context (X) was designed to match the story presented in the other conditions in terms of content.

Condition	S1 – S4: global context	S5: local context	S6: FID
X – R1	X	R1 (– R2)	R1
X – R2	X	R2 (– R1)	R1
R2 – R1	R2	R1 (– R2)	R1
R1 – R2	R1	R2 (– R1)	R1

Table 5: Addition of neutral context conditions

Acceptability ratings of the X – R1 and the X – R2 conditions will (i) allow us to conclude that the items generally yield a subject preference (i.e., H2) so that (ii) the interaction between both factors can be regarded as giving meaningful insights on the effect of a globally activated referent on the locally activated anchor for the sentence in FID mode. In order to account for the impact of the degree of activation (i.e., H5) the conditions where a referent is activated were further differentiated. For two conditions, the referent is first mentioned in the second sentence. In a maximal-activation condition, the referent is also mentioned in the title and introduced in terms of a topic-establishing sentence. The full design thus features the following conditions:

Condition	Title	S1	S2 – S4	S5 Subj (– Obj)	FID S6
A: X – X – R1	X	X	X	R1 (– R2)	R1
B: X – X – R2	X	X	X	R2 (– R1)	R1
C: X – R2 – R1	X	X	R2	R1 (– R2)	R1
D: X – R1 – R2	X	X	R1	R2 (– R1)	R1
E: R2 – R2 – R1	R2	R2	R2	R1 (– R2)	R1
F: R1 – R1 – R2	R1	R1	R1	R2 (– R1)	R1

Table 6: Experimental conditions for Experiment 3

In conditions E and F, the maximal prominence conditions, the first sentence (S1) is designed to introduce the referent as the discourse topic (i.e., the continuation of the sentence *Let me tell you what happened to R1/R2*).

For conditions A, B, C, and D, the title and the first sentence do not contain any reference to the protagonists. S2 to S4 are the same for conditions C, D, E, and F. They have the following structure: one referent is continuously in subject position while the competing referent gets introduced as the object in S3.

Unlike conditions E and F, in conditions C and D the globally prominent referent gets introduced for the first time in S2 so that he or she is referred to with a proper name. The remainder of the item is equivalent to conditions E and F.

The items were carefully designed to tell the story from a neutral perspective in all contexts in order to prevent biases with respect to the choice of the perspective for the FID.

(169)   A: Kein Feierabend in Sicht
(S1) Im Büro gehörten Überstunden zum Alltag. (S2) Da musste ein ruhiger Kopf bewahrt werden. (S3) Eine gute Arbeitsteilung war notwendig, um alles zu erledigen. (S4) Trotz des hohen Zeitdrucks duldete das Management keine Verzögerungen.
(S5) Fred gab Caroline die Akten. (S6) Wehe, wenn die ihn heute hängen lassen würde.

B: Kein Feierabend in Sicht
(S1) Im Büro gehörten Überstunden zum Alltag. (S2) Da musste ein ruhiger Kopf bewahrt werden. (S3) Eine gute Arbeitsteilung war notwendig, um alles zu erledigen. (S4) Trotz des hohen Zeitdrucks duldete das Management keine Verzögerungen.
(S5) Caroline gab Fred die Akten. (S6) Wehe, wenn die ihn heute hängen lassen würde.

C: Kein Feierabend in Sicht
(S1) Im Büro gehörten Überstunden zum Alltag. (S2) Caroline atmete einmal tief durch. (S3) In der Frühstückspause hatte sie Fred um Unterstützung gebeten. (S4) Sie wusste, dass das Management keine weiteren Verzögerungen mehr tolerieren würde.
(S5) Fred gab Caroline die Akten. (S6) Wehe, wenn die ihn heute hängen lassen würde.

D: Kein Feierabend in Sicht
(S1) Im Büro gehörten Überstunden zum Alltag. (S2) Fred atmete einmal tief durch. (S3) In der Frühstückspause hatte er Caroline um Unterstützung gebeten. (S4) Er wusste, dass das Management keine weiteren Verzögerungen mehr tolerieren würde. (S5) Caroline gab Fred die Akten. (S6) Wehe, wenn die ihn heute hängen lassen würde.

E: Kein Feierabend für Caroline
(S1) Caroline hatte einen langen Arbeitstag vor sich. (S2) Sie atmete einmal tief durch. (S3) In der Frühstückspause hatte sie Fred um Unterstützung gebeten. (S4) Sie wusste, dass das Management keine weiteren Verzögerungen mehr tolerieren würde.
(S5) Fred gab Caroline die Akten. (S6) Wehe, wenn die ihn heute hängen lassen würde.

F: Kein Feierabend für Fred
(S1) Fred hatte einen langen Arbeitstag vor sich. (S2) Er atmete einmal tief durch. (S3) In der Frühstückspause hatte er Caroline um Unterstützung gebeten. (S4) Er wusste, dass das Management keine weiteren Verzögerungen mehr tolerieren würde.
(S5) Caroline gab Fred die Akten. (S6) Wehe, wenn die ihn heute hängen lassen würde.

A: More work to do
(S1) In the office, working overtime was not unusual. (S2) Keeping a clear head was important. (S3) Also dividing work was crucial to get everything done. (S4) Despite the tremendous time pressure, the management did not tolerate delays. (S5) Fred handed Caroline the papers. (S6) She better not let him down today.

B: More work to do
(S1) In the office, working overtime was not unusual. (S2) Keeping a clear head was important. (S3) Also dividing work was crucial to get everything done. (S4) Despite the tremendous time pressure, the management did not tolerate delays. (S5) Caroline handed Fred the papers. (S6) She better not let him down today.

C: More work to do
(S1) In the office, working overtime was not unusual. (S2) Caroline took a deep breath. (S3) During the morning break she had asked Fred for help. (S4) She knew that the management did not tolerate delays. (S5) Fred handed Caroline the papers. (S6) She better not let him down today.

D: More work to do
(S1) In the office, working overtime was not unusual. (S2) Fred took a deep breath. (S3) During the morning break he had asked Caroline for help. (S4) He knew that the management did not tolerate delays. (S5) Caroline handed Fred the papers. (S6) She better not let him down today.

E: No end of work for Caroline
(S1) Caroline was facing a long day at work. (S2) She took a deep breath. (S3) During the morning break she had asked Fred for help. (S4) She knew that the management did not tolerate delays. (S5) Fred handed Caroline the papers. (S6) She better not let him down today.

F: No end of work for Fred
(S1) Fred was facing a long day at work. (S2) He took a deep breath. (S3) During the morning break he had asked Caroline for help. (S4) He knew that the management did not tolerate delays. (S5) Caroline handed Fred the papers. (S6) She better not let him down today.

5.2.2 Predictions

With respect to the hypotheses formulated above, the experimental conditions manipulate two factors: (i) in the local context R1 or R2 may be in subject position (respectively the other one is in object position), and (ii) in the global context there is either no reference

to the protagonist (i.e., no competitor) or no reference to the competitor (i.e., the referent that was not the subject in the local context). The competitor may be weakly activated or strongly activated, in terms of the number and kinds of references, so that the global context is manipulated with respect to *no competitor*, a *weakly activated competitor*, or a *strongly activated competitor*. This results in a 3x2 design illustrated in Table 7.

Condition	Competitor (not the local subject)	Local subject
A: X – X – R1	none	R1
B: X – X – R2	none	R2
C: X – R2 – R1	weak activation	R1
D: X – R1 – R2	weak activation	R2
E: R2 – R2 – R1	strong activation	R1
F: R1 – R1 – R2	strong activation	R2

Table 7: Factors for Experiment 3

The acceptability rating scores will be submitted to a Bayesian mixed effects model with the factors *competitor* and *local subject*, in which the interaction of both factors will indicate whether the presence of a competitor (strong or weak) has an effect on the acceptability of the FID that is anchored to R1. I expect to find a preference for FID anchored to sentences where R1 is in subject position in the sentence preceding the FID so that condition A is preferred over condition B (H2). Further, I expect the presence of the competitor to impact this preference (H4). In particular, I expect that a weakly activated R1 in the context raises the acceptability of sentences with R2 in the local subject position, so that C and D do not show the same preference pattern as A and B. For a strongly activated competitor, I expect to find an even stronger effect (H6) so that the tendencies observed in A and B will be reversed for E and F (H5). In other words, without any reference to a protagonist, FID is expected to be significantly more acceptable when the anchor referent (R1) is in subject position in the preceding sentence. If R1 is, however, strongly activated in the entire discourse, FID is expected to be acceptable even if R2 is the subject of the preceding sentence.

5.2.3 Procedure

All six conditions were equally distributed over six lists so that each participant saw each item in only one condition. Due to the length of the items, each participant was presented

with 18 test items randomly mixed with 28 fillers (see Appendix C for further examples of experimental items[38]). The fillers did not feature any perspective-taking but resembled the experimental items in terms of content, style, and length (i.e., two protagonists interact in short narratives).

Comprehension questions were asked in order to increase attention to the items as well as to establish a measure to exclude inattentive participants from the analysis. Comprehension questions were asked following 12 fillers that appeared in a random order. The instructions stressed that participants should pay attention to the entire text as questions would target different parts of the narration. Attention to the entire text further prevents participants from only reading the last part of the narration (i.e., the part that should be rated).

In order to mask the manipulation, eight fillers were designed to be odd, yet not ungrammatical; a demonstrative pronoun was used to refer to the referent that was prominent throughout the stretch of discourse.

(170) Simons großer Abend
Simon ging in einen Club. Er war schon lange Single. An der Bar kam er mit Anja ins Gespräch. Bei der lauten Musik konnte er aber nicht viel verstehen. Simon forderte Anja zum Tanzen auf. Sie wollte gerne mit dem tanzen.

Simons big Night
Simon went to a club. He had been single for a long time. At the bar he started talking to Anja. But the music was too loud so he could barely hear what she said.
Simon asked Anja for a dance. Happily, she agreed to dance with him$_{DPro}$.

Participants were asked to rate the naturalness of the last sentence with regard to the entire text on a scale from one, entirely unnatural, to seven, entirely natural. The questionnaire was presented using Qualtrics[39].

Trial items were presented before the actual experiment to familiarize participants with the complexity of the texts and the comprehension questions.

In May 2020, 122 students at the University of Cologne, all native speakers of German, participated in the experiment for course credit. The experiment was run in the first week of the *Introduction to German Grammar* class.

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[38] All stimuli are available online: https://osf.io/wegtn/
[39] https://www.qualtrics.com

5.2.4 Data Analysis and Results

Data from 122 participants was collected, but six participants had to be excluded from the analysis as they answered 75% or less (i.e., 8 or fewer out of 12) of the comprehension questions correctly (mean accuracy = 11.19).

The numeric ratings from the remaining 116 participants were analyzed using Bayesian mixed effects models estimated in R (R Core Team 2015). The model used acceptability scores as the outcome and the two factors of local and contextual manipulation as predictors with random intercept and random slopes for condition, participants, and items[40,41]. Analogously to frequentist statistics, I considered effects to be significant if the 95%-credible interval did not include 0[42]. Comparisons of individual conditions were calculated using the emmeans package (Lenth 2020). Again, effects were considered to be significant if the 95%-credible interval did not include 0.

Condition	Model estimate	95%-CI
A: X – X – R1	4.76	[4.35; 5.22]
B: X – X – R2	4.16	[3.71; 4.59]
C: X – R2 – R1	4.49	[4.03; 4.95]
D: X – R1 – R2	4.73	[4.27; 5.19]
E: R2 – R2 – R1	4.53	[4.09; 4.98]
F: R1 – R1 – R2	4.87	[4.42; 5.34]

Table 8: Acceptability ratings (model estimates and 95%-credible interval)

With respect to the design, main effects are not informative. That is, the presence of R1 or R2 in the local context does not predict the anchoring preferences of FID, nor does the kind of competitor. Rather the acceptability depends on the interaction of the two factors (H4).

Further, for the investigation of the hypotheses (H2, H4, H5 and H6), individual differences between oppositional pairs are of interest.

In order to replicate H2 (i.e., *protagonists functioning as subjects are more available as anchors for FID than protagonists functioning as objects*), conditions A and B were

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[40] I used treatment contrasts with condition A (no competitor/R1) as the reference category. The model was specified as follows: (acceptability ~ competitor * local + (1 + competitor * local | item) + (1 + competitor * local | participant)

[41] The raw data and the script are available online: https://osf.io/wegtn/

[42] If 0 is not included in the 95%-credible interval, then 0 is not included in the range of 95% of the most plausible values. This means that the posterior probability of the effect being 0 (or less extreme) is maximally 5%.

compared. The model revealed a difference of -0.60 points (SE = 0.13, CI: [-0.86; -0.35]); condition A with R1 in subject position was rated significantly better than condition B with R2 in subject position.

H4 (i.e., *protagonists that are highly activated in a discourse in terms of being repeatedly mentioned in subject position are more available as anchors for FID than protagonists that are less often referred to in a discourse but in subject position in the sentence preceding the FID*) was tested using two measures: (i) the interaction of conditions A & B and C & D, and (ii) the comparison of condition C and D.

First, the estimated difference of A and B compared to the difference of C and D reveals a significant two-way interaction (estimate = 0.83, SE = 0.17, CI: [0.49; 1.17]), indicating that the presence of a competitor overrides the effect observed for A and B (i.e., the condition without a referent in the context).

Nevertheless, the comparison of the model estimates for conditions C and D was not significant (estimate = 0.23, SE = 0.13, CI: [-0.04; 0.48]).

H5 (i.e., *protagonists that are highly activated in a discourse in terms of being established as the discourse topic in a topic-establishing sentence, repeatedly mentioned in subject position, and mentioned in a title are more available as anchors for FID than protagonists that are less often referred to in a discourse but in subject position in the sentence preceding the FID*) was also tested in two ways. Again, the estimated difference of A and B compared to the difference of E and F reveals a significant two-way interaction (estimate = 0.94, SE = 0.17, CI: [0.60; 1.29]), indicating that the presence of a strong competitor overrides the effect observed for A and B.

The pairwise comparison of conditions E and F indicates a significant difference; condition E was rated significantly better than condition F (estimate = 0.34, SE = 0.13, CI: [0.08; 0.60]).

Note that although the comparison of the weak competitor conditions C and D was not significant, F was rated significantly higher than E. While this may be an indicator for H6 (i.e., *the higher the activation of a referent in terms of the number of references in a discourse, the more available such referent is as the perspectival center*), the interaction of C & D and E & F was not significant (estimate = 0.11, SE = 0.17, CI: [-0.22; 0.46]).

5.2.5 Discussion

The significant difference between conditions A and B once again confirms that in the absence of any other reference, a sentence in FID mode is preferred when it is anchored

to the subject rather than the object of the proceeding sentence (see Hinterwimmer and Meuser 2019 or Chapter 4). The observations based on the items presented in this chapter allow one to conclude that the effect reported in the previous chapter also accounts for instances of FID in longer stretches of discourse. Given that FID is a device commonly found in narratives, the current research thus supplies a more natural testing ground for the phenomenon.

Most importantly, the comparison of conditions A & B with conditions C & D shows that by making one referent prominent in the context, the preference for anchoring the FID to the subject of the sentence preceding the FID is canceled when the object of the preceding sentence is prominent in the context. That is, though R1 is in a presumably preferable subject position in the preceding sentence, the increased prominence of the competing referent R2 makes R1 less available as the anchor for the FID. Though the effect of the locally established perspectival center is canceled, the comparison of C and D did not yield a significant preference for the globally activated referent. The results do not allow one to conclude that *protagonists that are highly activated in a discourse in terms of being repeatedly mentioned in subject position are more available as anchors for FID than protagonists that are less often referred to in a discourse but in subject position in the sentence preceding the FID* (H4).
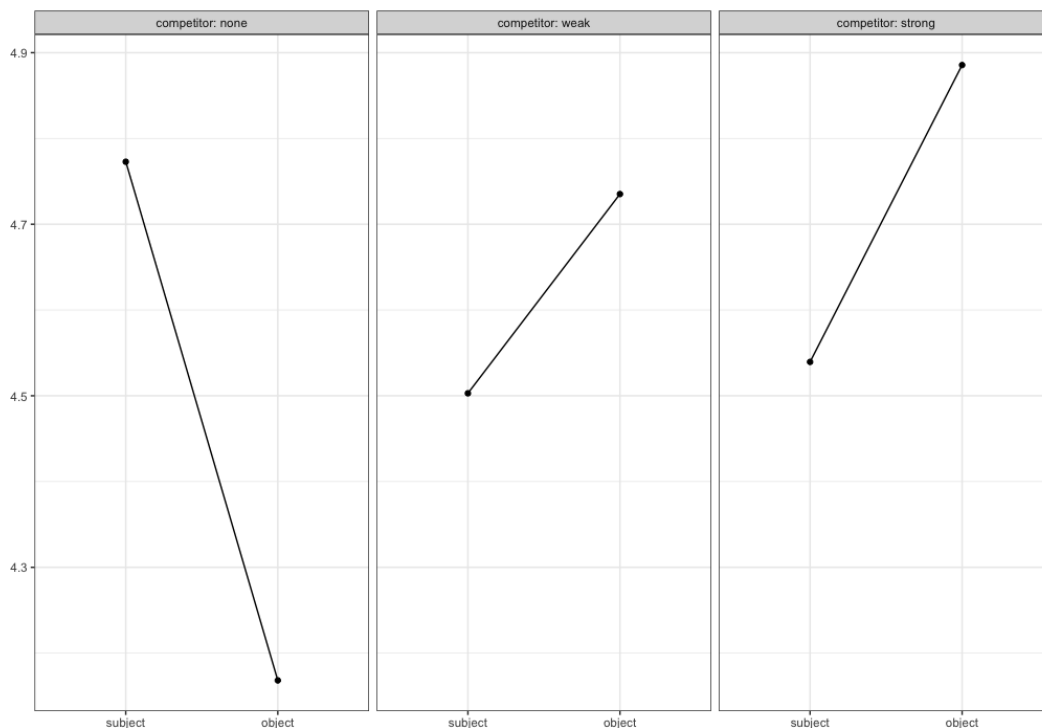

Figure 5: The impact of weak and strong competitors on local prominence

However, the significant difference revealed by the pairwise comparison of condition E and condition F strongly suggests that with a higher activation the globally established prominent referent is preferred as the perspectival center – as phrased in H5: *Protagonists that are highly activated in a discourse in terms of being established as the discourse topic in a topic-establishing sentence, repeatedly mentioned in subject position, and mentioned in a title are more available as anchors for FID than protagonists that are less often referred to in a discourse but in subject position in the sentence preceding the FID.* However, the modification in E and F (i.e., adding a reference in the title and in the first sentence) does not have a significant impact on the effect that is already achieved by adding a competitor. In other words, the presence of R1 being referred to three times in the global context has a significant effect on the preference for the subject in the local context, however, this effect cannot be increased significantly by adding another two references (i.e., in the title and the first sentence). This may lead one to conclude that the mere activation of a referent in the context overrides the subject preference as indicated by the significant interaction of the no competitor and the weak competitor conditions. Crucially, the weak competitor condition did not yield a significant preference for the condition where R1 is activated in the context. The reverse effect was observable for the strong competitor condition, which indicates that the degree of activation – or the number of references or the kinds of reference – does have an impact on the availability of the referent as the perspectival center. With respect to H6, one may thus conclude that a higher activation has a stronger impact on the availability as the perspectival center.

Regarding the impact of the title or the topic-establishing sentence as an activating cue, I refrain from drawing conclusions. Rather, I conclude that the increase of prominence-lending cues leads to a higher acceptability of FID anchored to the contextually activated referent. Whether these results are due to the purely quantitative number of references or if, in particular, the title or the topic-establishing sentence or the interaction of both is responsible for a higher acceptability of condition F compared to condition D will remain open.

A second shortcoming of this study is the low power on the item side. Due to the length of the stimuli, only 18 experimental items were presented in six conditions (i.e., three items per condition) – this is, arguably, too few to be representative. In order to account for the lack of power due to the low number of observations per condition for each participant, a follow-up experiment was designed.

5.3 Experiment 4

In the following, I report on an investigation (n = 90) that aims to replicate the results presented in the previous section. Unlike Experiment 3, the follow-up will show a larger number of experimental items per condition in order to allow for conclusions based on a representative sample size. Again, the results will present evidence for H4 (i.e., protagonists that are highly activated in a discourse are more available as anchors for FID than protagonists that are less often referred to in a discourse but in subject position in the sentence preceding the FID.

Furthermore, the design will allow for a more fine-grained conclusion with respect to H5. That is, (i) half of the items will establish the prominence status of the referent activated in the discourse in terms of reference in a title, and (ii) half of the items will establish prominence in terms of a topic-establishing sentence.

(171) A: Kein Feierabend in Sicht
(S1) Im Büro gehörten Überstunden zum Alltag. (S2) Da musste ein ruhiger Kopf bewahrt werden. (S3) Eine gute Arbeitsteilung war notwendig, um alles zu erledigen. (S4) Trotz des hohen Zeitdrucks duldete das Management keine Verzögerungen.
(S5) Fred gab Caroline die Akten. (S6) Wehe, wenn die ihn heute hängen lassen würde.

B: Kein Feierabend in Sicht
(S1) Im Büro gehörten Überstunden zum Alltag. (S2) Da musste ein ruhiger Kopf bewahrt werden. (S3) Eine gute Arbeitsteilung war notwendig, um alles zu erledigen. (S4) Trotz des hohen Zeitdrucks duldete das Management keine Verzögerungen.
(S5) Caroline gab Fred die Akten. (S6) Wehe, wenn die ihn heute hängen lassen würde.

C1: Kein Feierabend in Sicht
(S1) Caroline hatte einen langen Arbeitstag vor sich. (S2) Sie atmete einmal tief durch. (S3) In der Frühstückspause hatte sie Fred um Unterstützung gebeten. (S4) Sie wusste, dass das Management keine weiteren Verzögerungen mehr tolerieren würde.
(S5) Fred gab Caroline die Akten. (S6) Wehe, wenn die ihn heute hängen lassen würde.

C2: Kein Feierabend für Caroline
(S1) Im Büro gehörten Überstunden zum Alltag. (S2) Caroline atmete einmal tief durch. (S3) In der Frühstückspause hatte sie Fred um Unterstützung gebeten. (S4) Sie wusste, dass das Management keine weiteren Verzögerungen mehr tolerieren würde.
(S5) Fred gab Caroline die Akten. (S6) Wehe, wenn die ihn heute hängen lassen würde.

D1: Kein Feierabend in Sicht
(S1) Fred hatte einen langen Arbeitstag vor sich. (S2) Er atmete einmal tief durch. (S3) In der Frühstückspause hatte er Caroline um Unterstützung gebeten. (S4) Er wusste, dass das Management keine weiteren Verzögerungen mehr tolerieren würde.
(S5) Caroline gab Fred die Akten. (S6) Wehe, wenn die ihn heute hängen lassen würde.

D2: Kein Feierabend für Fred
(S1) Im Büro gehörten Überstunden zum Alltag. (S2) Fred atmete einmal tief durch. (S3) In der Frühstückspause hatte er Caroline um Unterstützung gebeten. (S4) Er wusste, dass das Management keine weiteren Verzögerungen mehr tolerieren würde. (S5) Caroline gab Fred die Akten. (S6) Wehe, wenn die ihn heute hängen lassen würde.

A: More work to do
(S1) In the office, working overtime was not unusual. (S2) Keeping a clear head was important. (S3) Also dividing work was crucial to get everything done. (S4) Despite the tremendous time pressure, the management did not tolerate delays. (S5) Fred handed Caroline the papers. (S6) She better not let him down today.

B: More work to do
(S1) In the office, working overtime was not unusual. (S2) Keeping a clear head was important. (S3) Also dividing work was crucial to get everything done. (S4) Despite the tremendous time pressure, the management did not tolerate delays. (S5) Caroline handed Fred the papers. (S6) She better not let him down today.

C1: More work to do
(S1) Caroline was facing a long day at work. (S2) She took a deep breath. (S3) During the morning break she had asked Fred for help. (S4) She knew that the management did not tolerate delays.
(S5) Fred handed Caroline the papers. (S6) She better not let him down today.

C2: No end of work for Caroline
(S1) In the office, working overtime was not unusual. (S2) Caroline took a deep breath. (S3) During the morning break she had asked Fred for help. (S4) She knew that the management did not tolerate delays.
(S5) Fred handed Caroline the papers. (S6) She better not let him down today.

D1: More work to do
(S1) Fred was facing a long day at work. (S2) He took a deep breath. (S3) During the morning break he had asked Caroline for help. (S4) He knew that the management did not tolerate delays.
(S5) Caroline handed Fred the papers. (S6) She better not let him down today.

D2: No end of work for Fred
(S1) In the office, working overtime was not unusual. (S2) Fred took a deep breath. (S3) During the morning break he had asked Caroline for help. (S4) He knew that the management did not tolerate delays.
(S5) Caroline handed Fred the papers. (S6) She better not let him down today.

H5 may thus be further differentiated, as in (172):

(172)   H5: Protagonists that are highly activated in a discourse in terms of being established as the discourse topic in a topic-establishing sentence, repeatedly mentioned in subject position, and mentioned in a title are more available as anchors for FID than protagonists that are less often referred to in a discourse but in subject position in the sentence preceding the FID.

H5.1: Protagonists that are highly activated in a discourse in terms of being mentioned in a title and repeatedly mentioned in subject position are more available as anchors for FID than protagonists that are less often referred to in a discourse but in subject position in the sentence preceding the FID.

H5.2: Protagonists that are highly activated in a discourse in terms of being established as the discourse topic in a topic-establishing sentence and repeatedly mentioned in subject position are more available as anchors for FID than protagonists that are less often referred to in a discourse but in subject position in the sentence preceding the FID.

Except for the slight modification of the item design, the experiment resembles Experiment 3: participants are asked to rate the naturalness of the last sentence with respect to the context.

5.3.1 Material

As elaborated above, in the experiment only four conditions are shown that distinguish between (i) the presence or absence of a competitor in the global context, and (ii) which referent (R1/R2) is prominent in the sentence preceding the FID, resulting in a 2x2 design. To further investigate the role of the title and the topic-sentence, the competitor conditions were split in half: the globally prominent referent was either presented in the title or in the topic-establishing sentence (S1).

This design allows one to present a sufficiently large number of items to each participant in each condition to confirm what is of most interest: the impact of a globally prominent referent on the locally established perspectival center.

Each participant is presented with 24 experimental items (i.e., six items per condition). The distinction between prominence established in the topic sentence and that established in the title is of secondary interest.

Condition	Title	S1	S2 – S4	S5 Subj (– Obj)	FID S6
A: X – X – R1	X	X	X	R1 (– R2)	R1
B: X – X – R2	X	X	X	R2 (– R1)	R1
C1: X – R2 – R1	X	R2	R2	R1 (– R2)	R1
C2: R2 – X – R1	R2	X	R2	R1 (– R2)	R1
D1: X – R1 – R2	X	R1	R1	R2 (– R1)	R1
D2: R1 – X – R2	R1	X	R1	R2 (– R1)	R1

Table 9: Experimental conditions for Experiment 4

Structurally, the items were identical to the ones presented in Experiment 3. They consisted of a title, a topic-establishing sentence (S1), three context sentences (S2-S4), one sentence establishing local prominence (S5), and the target sentence in FID mode (S6). In the follow-up, the same items that were used in Experiment 3 were adjusted with respect to the new distribution of conditions. Six additional items were created.

5.3.2 Predictions

In line with the previous experiment, two factors were manipulated: (i) the subject of the local context, R1 or R2, and (ii) the presence or absence of a competitor (i.e., the referent that was not the subject in the local context) in the global context. Unlike in Experiment 3, there were only two competitor conditions, without any differentiation regarding the degree of activation. However, the two factors that were manipulated in the strong competitor condition in the previous experiment shall be looked at individually with respect to the following exploratory question:

(173) Q3: Is the impact of reference to a protagonist in a title or in a topic-establishing sentence of greater importance for the activation of a referent as the perspectival center?

As conditions C and D activate the globally prominent referent by repeated mentioning in subject position and either reference in a title or reference in a topic-establishing sentence, H4 must be simplified.

(174) H4: Protagonists that are highly activated in a discourse are more available as anchors for FID than protagonists that are less often referred to in a discourse but in subject position in the sentence preceding the FID.

Likewise, H5 may be further differentiated, as in (175):

(175)   H5: Protagonists that are highly activated in a discourse in terms of being established as the discourse topic in a topic-establishing sentence *or* mentioned in a title and repeatedly mentioned in subject position are more available as anchors for FID than protagonists that are less often referred to in a discourse but in subject position in the sentence preceding the FID.

H5.1: Protagonists that are highly activated in a discourse in terms of being mentioned in a title and repeatedly mentioned in subject position are more available as anchors for FID than protagonists that are less often referred to in a discourse but in subject position in the sentence preceding the FID.

H5.2: Protagonists that are highly activated in a discourse in terms of being established as the discourse topic in a topic-establishing sentence and repeatedly mentioned in subject position are more available as anchors for FID than protagonists that are less often referred to in a discourse but in subject position in the sentence preceding the FID.

Again, acceptability ratings will be submitted to a Bayesian mixed effects model with the factors *competitor* and *local subject* (i.e., is a competing referent present or absent in the context and is R1 or R2 the subject of the preceding sentence?). The interaction of both factors will indicate if the presence of a competitor has an effect on the acceptability of the FID that is anchored to R1.

5.3.3 Procedure

The four experimental conditions were equally distributed across four lists so that each participant saw each item in only one condition. Due to the larger number of experimental items (i.e., 24), the number of fillers was increased to 32 (see Appendix D for further examples of experimental items[43]). Fillers included odd yet not ungrammatical constructions, such as (170). Again, the same 12 fillers with comprehension question were used to control for the participants' attention. Participants that answered less than eight questions correctly were excluded from the analysis. The items and fillers were presented in a random order for each participant.

Again, all stimuli were presented using Qualtrics.

In April 2022, 93 monolingual speakers of German participated in the experiment. Participants were recruited from the *Introduction to German Grammar* class at the University of Cologne for course credit.

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[43] All stimuli are available online: https://osf.io/wegtn/

5.3.4 Data Analysis and Results

Ratings from 93 participants were collected. Again, comprehension questions were asked to ensure that participants read all texts carefully. Three participants were excluded from the analysis as they answered 8 or fewer out of 12 (75% or less) comprehension questions correctly (mean accuracy = 11.31).

Rating scores from the remaining 90 participants were submitted to a Bayesian mixed effects model estimated in R (R Core Team 2015)[44,45].

Condition	Model estimate	95%-CI
A: X – R1	4.61	[4.26; 4.98]
B: X – R2	4.16	[3.74; 4.56]
C: R2 – R1	4.27	[3.91; 4.62]
D: R1 – R2	4.59	[4.20; 5.00]

Table 10: Acceptability ratings for Experiment 4
(model estimates and 95%-credible interval)

Similar to the results presented for conditions A and B in Experiment 3, the estimated difference of 0.45 (CI: [0.18; 0.72]) between the two conditions that only introduce the referents in the local sentence preceding the FID is significant. Once again, higher ratings for FID anchored to R1 in subject position indicate that *protagonists functioning as subjects are more available as anchors for FID than protagonists functioning as objects* (H2).

In line with the analysis in the previous section, the hypothesis regarding the effect of the global activation was tested using two measures: (i) the interaction of conditions A & B and C & D, and (ii) the comparison of conditions C and D.

First, the presence of a competitor in the context significantly interacts with the effect of the locally activated referent. That is, the difference of conditions A and B compared to the difference of C and D reveals a significant two-way interaction (estimate = 0.77, CI: [0.50; 1.06]).

Also, the comparison of the model estimates for conditions C and D was significant (estimate = -0.32, CI: [-0.59; -0.05]). That is, *protagonists that are highly activated in a*

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[44] Again, I used treatment contrasts with condition A (no competitor/R1) as the reference category. Again, the model was specified as follows: (acceptability ~ competitor * local + (1 + competitor * local | item) + (1 + competitor * local | participant)
[45] The raw data and the script are available online: https://osf.io/wegtn/

discourse in terms of being established as the discourse topic in a topic-establishing sentence or mentioned in a title and repeatedly mentioned in subject position (i.e., conditions A and B)*, are more available as anchors for FID than protagonists that are less often referred to in a discourse but in subject position in the sentence preceding the FID* (i.e., conditions C and D) (H5).

In order to account for the effect of the title and the topic-establishing sentence, half of the items established global prominence by introducing the globally prominent referent in the title while the other half mentioned the referent in S1 (see Table 9).

Condition	Means	SD
C1: topic	4.53	1.78
C2: title	3.99	1.81
D1: topic	4.78	1.70
D2: title	4.49	1.91

Table 11: Mean acceptability ratings for the title/topic distinction

With regard to Q3 (i.e., *is the impact of reference to a protagonist in a title or in a topic-establishing sentence of greater importance for the activation of a referent as the perspectival center?*), the means of conditions D1 and D2 were compared. While items were rated 0.29 points higher when the globally prominent referent was introduced in the topic-establishing sentence, this numeric difference does not truthfully indicate a preference for D1 over D2, as a preference for items with the topic manipulation were also preferred in condition C, where C1 was rated 0.54 points higher than C2. That is, items 1 to 12 (C1 & D1) were overall rated higher than items 13 to 24 (C2 & D2), indicating that, irrespective of the manipulation of the globally prominent referent, items 1 to 12 were perceived to be more natural.

5.3.5 Discussion

In line with the research presented in Chapter 4 and the results for conditions A and B in Experiment 3, the results for conditions A and B in this experiment once again confirm that FID is perceived to be more natural when it is anchored to the subject of the preceding sentence and there is no competing referent in the context.

Most importantly, the results of this experiment replicate the effect for the presence of a globally prominent referent. That is, the two-way interaction for the difference between

the conditions with and without a referent that is activated in the context indicates that the subject preference can be overridden in larger contexts. While this tendency could be observed in Experiment 3, the effect was here replicated with a larger number of stimuli per condition.
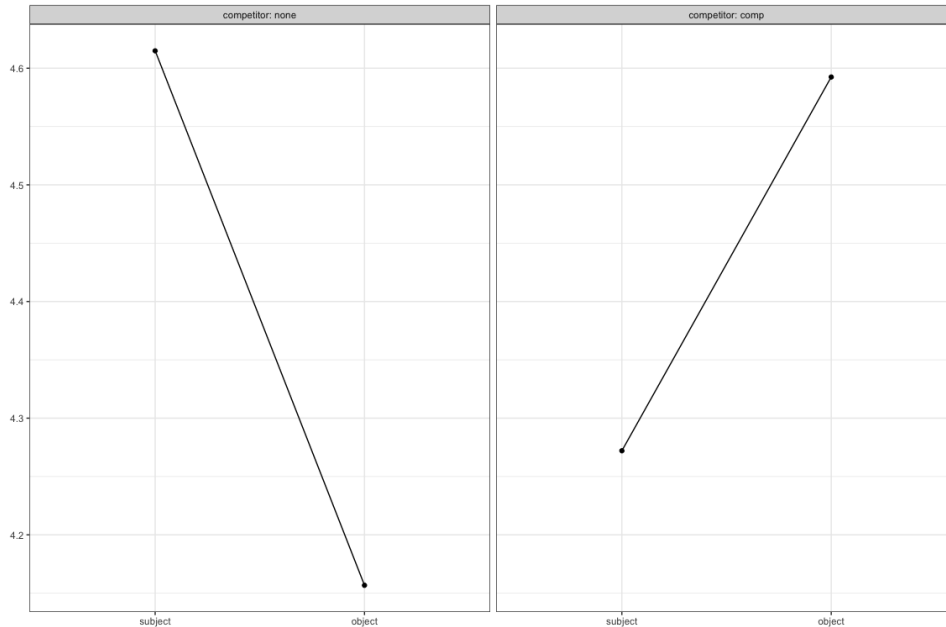
Figure 6: The impact of a competitor on local prominence

Unlike in Experiment 3, there was no distinction between weak and strong activation. Rather, protagonists are highly activated by being repeatedly mentioned in subject position in the context as well as being the discourse topic in a topic-establishing sentence or being mentioned in a title (see (171), repeated in (176)).

(176) C1: More work to do
(S1) Caroline was facing a long day at work. (S2) She took a deep breath. (S3) During the morning break she had asked Fred for help. (S4) She knew that the management did not tolerate delays.
(S5) Fred handed Caroline the papers. (S6) She better not let him down today.

C2: No end of work for Caroline
(S1) In the office, working overtime was not unusual. (S2) Caroline took a deep breath. (S3) During the morning break she had asked Fred for help. (S4) She knew that the management did not tolerate delays.
(S5) Fred handed Caroline the papers. (S6) She better not let him down today.

D1: More work to do
(S1) Fred was facing a long day at work. (S2) He took a deep breath. (S3) During the morning break he had asked Caroline for help. (S4) He knew that the management did not tolerate delays.
(S5) Caroline handed Fred the papers. (S6) She better not let him down today.

D2: No end of work for Fred
(S1) In the office, working overtime was not unusual. (S2) Fred took a deep breath. (S3) During the morning break he had asked Caroline for help. (S4) He knew that the management did not tolerate delays.
(S5) Caroline handed Fred the papers. (S6) She better not let him down today.

In order to approach the exploratory question of whether reference to a protagonist in a title or in a topic-establishing sentence has a greater impact on the activation of a referent as the perspectival center, half of the items introduced the globally prominent referent in the title while the other half introduced the referent in a topic-establishing sentence. Unlike with the previous experiment, this design potentially allows for conclusions regarding the two individual activating cues. That is, if one or the other has greater potential to activate the perspectival center, condition D will receive higher ratings for half of the items. A comparison of the means of conditions D1 and D2 indicates that items that introduced the referent in a topic-establishing sentence were rated better than items that introduced the referent in a title (0.29 points). However, this comparison in isolation presumably leads to the wrong conclusion; a comparison of the mean ratings for conditions C1 and C2 (0.54 points difference) indicates that items 1 to 12 received higher ratings throughout the experiment (i.e., the items were generally perceived to be more natural). While a preference for one of the variants of condition D may indicate that one or the other activating cue makes the FID more or less acceptable, such an effect is not expected to show in condition C. As a matter of fact, any activating cue that boosts a referent's availability as the global anchor for FID in condition D should lead to greater irritation in condition C, where global prominence interferes with local prominence.

I will thus refrain from interpreting any differences with respect to the title/topic manipulation.

5.4 General Discussion

In Chapter 4, I presented evidence suggesting that the referent that is in subject position in the sentence preceding a sentence in FID mode is the default anchor for the FID. In this Chapter, I investigated the impact of a competing referent that is activated globally (i.e., in a larger discourse), on the preference for the local subject. Based on observations presented by Hinterwimmer (2019), I expected that a globally prominent referent would be just as available as the perspectival center as a locally prominent referent. In particular,

I investigated if the globally activated referent has the potential to cancel or override the subject preference.

The preference for a globally prominent referent may be explained in terms of discourse topichood (Hinterwimmer 2019). As indicated in section 5.1, however, the precise definition of discourse topics remains a matter of discussion. Due to such uncertainty, I deliberately refrained from phrasing hypotheses based on the notion discourse topic. However, at this point, I want to return to the discussion presented in section 5.1 and suggest an interpretation of the results with respect to topics. Following the widely approved notion expounded by Reinhart (1981) that the topic corresponds to the answer to the question *what is the discourse about?*, the protagonist that is activated in the discourse (i.e., the globally prominent referent) may well be the discourse topic. Rephrasing the results thus allows one to conclude that *protagonists that are the discourse topic are more available as anchors for FID than protagonists that are in subject position in the sentence preceding the FID.*

An approach that predicts the preference for the topic to serve as the perspective-holder can be found in the work of Kuno (2006), who ties the concept of perspective to *empathy*. He defines empathy as "the speaker's identification, which may vary in degree, with a person/thing that participates in the event or state […]" (2006 p.316). In his empathy hierarchy, he claims that it is more likely to empathize with a topic than with a nontopic:

(177) "Given an event or state that involves A and B such that A is coreferential with the topic of the given discourse and B is not, it is easier for the speaker to empathize with A than with B:
E(topic) ≥ E(nontopic)" (Kuno 2006 p.316)

Thus, a reader is more likely to take on the perspective of the referent that corresponds to the topic so that a sentence in FID mode will more likely be ascribed to the topic rather than the nontopic.

The research presented in this chapter, furthermore, contributes to the debate about the impact of global and local prominence-lending cues in discourse (Schumacher et al. in prep?). Though limited to the issue of perspective-taking, the results presented in this chapter indicate that global activation in a context plays a more important role than local activation.

If activation in terms of grammatical function crucially promotes a referent to be available as the perspectival center, it does not come as a surprise that a referent that is repeatedly referred to in subject position is highly available as the perspectival center. The observation that the perspective does not easily shift from the globally activated referent

to the local subject is in line with Harris' "no shift principle (NSP)" (i.e., "[d]on't change the perspectival center") (2012 p.161). Higher ratings of FID anchored to a globally activated referent and lower ratings for the local subject (when competing with a globally activated referent) may thus be explained in terms of the NSP: the perspectival center is already successfully established in the context and local subjecthood does not suffice to trigger a shift.

The impact of the context as a perspective-establishing cue is also discussed by van Krieken (2018). She finds evidence that the shifting potential is influenced by the absence or presence of viewpoint markers within the discourse and concludes "that perspective is a discourse phenomenon. Although linguistic viewpoint markers manifest at a very local level (i.e., the word level), their impact stretches to the discourse level: once a character's viewpoint is established by a linguistic marker, readers continue to interpret the narrative information from this character's viewpoint" (van Krieken 2018 p.783, see Chapter 3.4.2 for a review of her study). The research presented in this chapter supports the idea that perspective-taking is dependent on discourse, but the results do not allow for conclusions regarding the effect size of the impact of the discourse. That is, this research investigated the interaction of global and local factors and showed that activation in the discourse overrides the anchoring in the preceding sentence. It does not, however, allow the conclusion that perspective is a discourse phenomenon, since it does not investigate the anchoring in discourse in isolation but investigates specifically the interaction of local and global activating cues.

6 The Impact of Verb Semantics on the Anchoring of FID

In this chapter, I present a series of sentence continuation experiments to test the hypothesis that the availability of a referent as the anchor for a sentence in FID mode is influenced by semantic features assigned to a referent by the verb in the preceding sentence. The experiments build on the research presented in Chapter 4 (see also Hinterwimmer and Meuser 2019) where a general preference for the subject of the sentence preceding a sentence in FID mode to be the anchor for the FID was reported.

In what follows, I will discuss how semantic features assigned to a referent by different verbs may – or may not – influence the anchoring preferences of a sentence in FID mode to the subject or the object.

Also, I will elaborate on verb semantics and again draw conclusions from pronoun resolution on perspective-taking (Garvey and Caramazza 1974). In line with the research on anaphoric choices (Arnold 2001; Fukumura and van Gompel 2010), I will argue that semantic features assigned by the verb contribute to or restrict the referent's activation as a potential perspectival center. Yet, I will argue that predictions for perspective-taking on the basis of the classic inventory of semantic roles do not suffice and that a more fine-grained depiction of verbal features is needed.

The issue at hand can be illustrated by the contrast shown in examples (178) a and b. In (178) a, the second sentence may be interpreted as a thought in FID mode that is anchored to Mary who expresses her discomfort. In (178) b, on the other hand, the second sentence has a strong tendency to be ascribed to a narrating instance.

(178)   a. John looked Mary deep in the eye. That guy was just creepy!
        b. John observed Mary for a while. That guy was just creepy!

Though in example (178) grammatical function, referential expression, and the kind of action that is performed in the first sentence (i.e., the subject visually perceiving the object), are similar in a and b, the ascription of the second sentence varies. Note that both verbs, *to look* and *to observe,* assign the same semantic roles, AGENT and THEME, but they attribute a differing degree of *sentience* (Dowty 1991) to the object. That is, the object in (178) a must be aware of the ongoing action. In (178) b, on the other hand, the object is presumably not aware that he or she is the target of the observation and not activated enough to serve as the perspectival center. In the following, I primarily want to argue that different verbs have different impacts on the anchoring of FID (i.e., they systematically activate the subject or the object as the perspectival center).

In what follows, I will empirically test the impact of verbs that are transitive and take arguments in subject or object position that vary with respect to their semantic features. That is, I will manipulate the emotional affectedness of the referents in subject or object position (Dowty 1991; Beavers 2011; Lundquist and Ramchand 2012; Kizilkaya in prep.). Furthermore, I will investigate arguments that are non-sentient (Dowty 1991) (i.e., unaware of the ongoing action and the role of the source of information).

I want to claim that:

(179) (I) referents that are emotionally more affected by an action are more likely to be the anchor for a subsequent sentence in FID mode,
(II) referents that are (typically) non-sentient (i.e., unaware of an ongoing action), are hardly available as an anchor for a sentence in FID mode, and
(III) referents that perceive information are just as likely to be the anchor for a sentence in FID mode as referents that are sources of information
– regardless of their grammatical function.

Ultimately, I do not want to propose a systematic classification of verbs that predicts licensing restrictions for the anchoring of FID, since an exhaustive investigation of verb semantics and perspective-taking would go beyond the scope of this thesis.

Similar to the experiments presented in Chapter 4, the impact of verbs on the availability of a referent as the perspectival center is investigated in isolation (i.e., in minimally short contexts). As elaborated in Chapter 2, FID is a stylistic device commonly found in narrative fiction – a genre that consists of texts that are far longer than two sentences – thus the insights gained in this investigation are intended to add to a bigger picture: the anchoring of FID is not arbitrary, but depends on numerous cues such as grammatical function, referential expression, and semantic role – established both in narrow contexts (i.e., the sentences immediately preceding the sentence in FID mode), or in broader contexts – that potentially interact, override, or cancel each other out (see Schumacher et al. 2006 who propose that it is particularly the interaction of prominence-lending cues that governs pronoun resolution).

In order to test the impact of verb semantics, a sentence continuation task was set up to trigger participants to continue a sentence where two referents are introduced with a sentence in FID mode that picks up the perspective of one or the other. Participants were presented with a short prompt introducing referents that interact in a particular way (i.e., a transitive verb assigns the respective features to either the referent in subject position or the one in object position). The goal of the study was to investigate if participants are more likely to continue the prompt with a sentence in FID mode from the perspective of the subject or the object of the preceding sentence, depending on the verb. Participants

were deliberately triggered to continue with a second sentence in FID mode by the use of an interjection.

The sentence continuations were annotated in two rounds: first, to identify continuations that were in FID mode and, second, to determine if the FID was anchored to the subject or the object.

The verbs used in the prompts in the pilot study can be classified with respect to four groups that share particular semantic features (i.e., they assign a subject-experiencer or an object-experiencer, they suggest that the object is unaware of the ongoing action, or they indicate that a message is transferred from one referent to the other). A fifth category consists of a random mix of transitive verbs that were used in Experiment 1 (see Chapter 4.3), which yielded a preference for FID to be anchored to the subject. The results of the pilot experiment suggested that participants produced more or fewer sentences in FID mode anchored to the subject or the object depending on the verb class. Yet, due to the very small number of data points, the observations could not be statistically validated – 200 continuations were produced; 65 of these were considered grammatical[46] and clearly in FID mode; of these 65, 40 could clearly be ascribed to either the subject or the object. Based on the observations gained from the pilot study, a second experiment was conducted with an improved design and a higher number of experimental items and participants.

In the main experiment, six verb classes were tested that represented oppositional pairs (i.e., they took arguments in either subject or object position that were (i) emotionally affected, (ii) non-sentient, or (iii) the source of information). Unlike in the pilot, in the follow up a large amount of data was collected in order to conduct statistical analyses – 1350 continuations were produced for six groups of verbs, out of which 528 were grammatical and clearly in FID mode. 431 of these could clearly be ascribed to either the subject or the object.

The results show that the number of subject and object continuations differs across different verb classes. That is, the likelihood of a referent serving as the anchor for a subsequent sentence in FID mode varies depending on the verbs used in the sentence preceding the FID. Despite the presumed subject preference (see Chapters 4 and 5), particular verb classes triggered significantly more object continuations than subject

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[46] Recall that sentences in FID mode may be ungrammatical (e.g., they may lack a finite verb), but sentences were excluded from the analyses as *ungrammatical* when, for example, the interjection that was presented in the prompt was used as an adverbial, as in *Nun, wollte er nach Hause*.

continuations: (i) verbs that took an emotionally affected object triggered 87% object continuations, (ii) verbs that took a non-sentient subject triggered 90% object continuations, and (iii) verbs that assigned a subject that was the source of information triggered 78% object continuations.

Also, the minimal pair design allows one to conclude that (i) referents that are emotionally more affected by an action are preferred as the anchor for a subsequent sentence in FID mode, (ii) referents that are (typically) non-sentient are hardly chosen as the anchor for a sentence in FID mode, and (iii) referents that perceive information are more often chosen as the anchor for a sentence in FID mode compared to referents that are sources of information – regardless of their grammatical function.

6.1 Verbs Assigning Perspectival Centers

While I argued in Chapter 4 (see also Hinterwimmer and Meuser 2019) that the prominence status in terms of grammatical function governs perspective-taking, in this chapter, I will elaborate on the impact of semantic features ascribed to a referent by the verb as a potential constraint on the impact of grammatical function.

In Chapter 4, I presented a series of sentence continuation experiments that indicate that a referent in subject position is preferred over a referent in object position and that a referent referred to with a proper name is preferred over a referent introduced by an indefinite noun phrase as the anchor for a sentence in FID mode. Though the research presented in Chapter 4 comprises a large number of experimental items[47], to yield a representative sample of transitive verbs the effect of different verbs was not accounted for. In fact, the effect of verbs was systematically ruled out, as the only constraints for verbs were to be transitive and to allow both perspectives to the same extent, as in (180).

(180) a. Kathleen half Patrick während einer Mission bei einem Onlinespiel, als plötzlich die Verbindung unterbrochen wurde. Na toll, jetzt würde sie/er nochmal von vorne anfangen müssen.
b. Mario machte Larissa in der U-Bahn Platz, als der Wagen abrupt zum Stehen kam. Ohje, jetzt würde sie/er sicher wieder ewig hier festsitzen. [48]

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[47] Experiment 2 shows 48 experimental items similar to (180)
[48] The experimental items varied with respect to the type of referential expression and the order of mentioning in the first sentence – not the pronoun in the FID sentence – in order for the target sentence to remain equal across conditions. The presentation here was chosen for reasons of readability.

> *a. Kathleen helped Patrick with a mission in an online game when the internet connection broke down. Great, now she/he had to start all over again.*
> *b. Mario moved out of the way for Larissa on the subway when the train came to an abrupt halt. Oh no, now she/he would surely be stuck here forever again.*

For the verbs used in the acceptability rating experiments presented in the previous chapters, I want to argue that they do allow for both perspectives – or rather they do not show any strong bias towards one or the other with respect to the verbal features they assign[49]. Consequently, an ascription of the perspectival center may thus be the result of prominence features such as grammatical function and referential expression.

However, in the following, I will discuss examples that do not confirm the subject preference (i.e., verbs that failed to be considered for the acceptability rating tasks). I want to suggest that the ascription of the perspectival center is crucially influenced by the verb used to activate the referents in the sentence preceding the sentence in FID mode.

When in search of the effect of different verbs on perspective-taking, it appears promising to derive a theory based on the activation of referents that is necessary for subsequent pronoun resolution. Garvey and Caramazza base their theory on an assumption similar to the one presented in this chapter: "semantic information inherent in verb roots" licenses anaphoric pronoun resolution (1974 p.460). Based on a sentence continuation experiment, they suggest three classes, depending on the direction of pronoun interpretation: NP1-bias (e.g., *to confess, to join, to telephone*; p.462), NP2-bias (e.g., *to kill, to praise, to fear, to criticize, to admire*; p.461), or NP-neutral (e.g., *to help, to recognize, to give*; p.462).

(181) NP1-bias:
  Elena$_i$ confessed to Natalie$_j$.
  a. She$_i$ felt relieved now.
  b. $^?$She$_j$ was shocked.[50]
  c. *Oh, now she felt relieved!*
  d. *Wow, how could she have done something like that!*

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[49] This can also be concluded with respect to the results presented in Chapter 4. Given that the object was referred to with a proper name and the subject was referred to with an indefinite NP (condition D: R2$_{indef.}$ – R1$_{name}$), the FID anchored to the object received considerably good ratings compared to the condition where the FID had to be anchored to the subject and the subject was referred to with an indefinite (condition C: R1$_{indef.}$ – R2$_{name}$). Though dispreferred, anchoring to the object did not yield bad ratings throughout all conditions.

[50] The index $^?$ indicates that this option is dispreferred according to Garvey and Caramazza.

(182) NP2-bias:
    Elena$_i$ admires Natalie$_j$.
    a. $^?$She$_i$ had looked up to Natalie for years.
    b. She$_j$ must have been the smartest student in Cologne.
    c. Oh, how she would love to be a little more like Natalie!
    d. Oh, it was just the best feeling to be looked up to!

While the biases for pronoun resolution presented in (181) and (182) are convincing, these biases do not apply – or possibly apply to a lesser degree – to the anchoring of FID. As presented in (181), the NP1-bias verb allows for both perspectives, as (181) c and d sound rather natural. While pronominal reference to Natalie in (181) a is less expected, it seems perfectly possible to pick up her perspective in (181) c.

For the NP2-bias, the deviance is even stronger: while Natalie serves as a perfect antecedent for the pronoun in (182) b, it seems more appropriate to take the perspective of Elena in (182) c. That the classification by Garvey and Caramazza does not provide homogeneous classes for perspective-taking becomes clear in the case of *to kill*. They argue that verbs that belong to "[t]he group […] which appears to impute the underlying cause of the event or situation to some factor (quality, previous action, intent) associated with the person referred to by the nonsubject NP antecedent" (Garvey and Caramazza 1974 p.461) yield an NP2 bias. It will, however, hardly be possible to anchor a thought to an antecedent that was killed in the subsequent sentence after he or she was killed, regardless of the underlaying causality that led to the murder. This case serves well as an indicator for the nature of the anchoring of FID; though the activation processes may appear to be similar to other types of activation (e.g., that of anaphora), the anchoring of FID may not be licensed exclusively by linguistic cues but may be more closely connected to world knowledge. That is, a referent that is dead may well be picked up with an anaphoric expression but he or she may not speak or think after being killed[51].

Though example (181) arguably enforces a tendency for the object to be the perspectival center, none of the examples discussed so far yield a true object preference. I will start the discussion of the impact of verbs with Hinterwimmer's (2019) argument. Hinterwimmer argues that the referent that is more prominent in terms of grammatical function (subj.>obj.; see Chafe 1976; Crawley and Stevenson 1990) and with respect to the number of agentivity features (Dowty 1991) is more likely to be the anchor for a

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[51] This may also be explained by the lack of sentience. The person that was murdered is unexceptionally non-sentient at the time the event is successfully completed.

subsequent sentence in FID mode. He argues that these two features account for the preference of (183) a over (183) b (taken from Hinterwimmer 2019 p.84):

(183) Susan looked at George hatefully.
a. That dumb jerk had managed to make her look like an idiot at the meeting yesterday.
b. That mean old hag had managed to make him look like an idiot at the meeting yesterday.

Intuitively, a thought anchored to George, as in (183) b, is a less expected continuation and causes more surprise than a thought anchored to Susan, as in (183) a. This preference is in line with Hinterwimmer's (2019) argument and the results presented in Chapter 4 (see also Hinterwimmer and Meuser 2019), as George is the object of the sentence preceding the FID and thus less available than the competing referent in subject position (i.e., Susan). Likewise, Susan is sentient and acts volitionally while George does not carry any agentivity features.

The preference to pick up the perspective of the subject, however, becomes less evident in (184) (also taken from Hinterwimmer 2019 p.87).

(184) George bored Mary to death.
a. Tomorrow she would definitely avoid sitting at a table with the bloated idiot again.
b. How sleepy she looked today!

Hinterwimmer argues that the subject preference is canceled in the case of (184), as in the case of *to bore* the referent in object position outranks the subject with respect to the number of agentivity features. Based on Dowty (1991) and Primus (2009), Hinterwimmer speculates that the presumable subject preference is an artifact of the fact that the argument with the highest number of agentivity features is commonly realized as the grammatical subject – as claimed by Dowty that in some cases "[e]xperiencer objects are like underlaying subjects" (1991 p.580). The FID therefore does not prefer the subject, but the argument with the highest number of agentivity features (i.e., the object in the case of object experiencer verbs). While this argument accounts for the object preference in (184), where Mary is sentient whereas George does not have any agentivity features, I want to argue that this does not account for the preferences of other types of verbs. The verb *to hit*, for example, assigns at least two agentivity features to the subject: volition and causation.

(185) Nora hit Linus with an umbrella.
a. Well, that dumb jerk really deserved it.
b. Ouch, that mean old hag should learn to control her temper.

However, in the case of (185), again, a continuation from the object's perspective, as in (185) b, seems more acceptable and expected than a continuation from the subject's perspective, as in (185) a.

The rather trivial explanation I want to propose for the difference in perception of (183) b and (185) b is the reader's disposition to take on the perspective of the object when he is the victim of an action performed on him. Based on this observation, I want to suggest an explanation with respect to the properties of the preceding sentence: George is more affected[52] by the action denoted by the verb that is used in the sentence that introduces both referents in the preceding sentence in (184) and (185) than in (183).

The effect of affectedness becomes more evident the more affected the referent is. To see this, consider the continuation of (186) in a and b.

(186) Susan pushed George into the stinging nettles.
     a. The dumb jerk really deserved it.
     b. Ow, how bad that itched!

Though Susan is the grammatical subject, acts volitionally, and causes a change of state in the object, in (186) the action performed on George leaves George intensely affected physically as well as emotionally. This enforces his status as the preferred perspectival center. This observation is in line with experimental findings presented by Kaiser (2018) and Van Krieken (2018). They are concerned with the anchoring of presented perception and show that readers will attribute an ambiguous perception to the character that has previously been mentioned as the perceiver – compared to the narrator, they do not investigate competing referents.

At this point, I want to suggest that *affectedness* assigned to an argument by the verb outweighs the subject preference (as argued for in Hinterwimmer 2019; Hinterwimmer and Meuser 2019) and the prominence in terms of the number of agentivity features (as argued for in Hinterwimmer 2019).

Another feature that seems to have a strong influence on the availability of a referent as the perspectival center is *sentience* regarding the ongoing action (Dowty 1991; Primus 2009). In other words: if a referent is presumably not aware of an action, it is unlikely that he or she will serve as the anchor for a sentence in FID mode, as in (187):

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[52] See section 6.1.2 for a discussion of linguistic approaches on the notion of affectedness, such as those of Dowty (1991), Beavers (2011), Lundquist and Ramchand (2012), and Kizilkaya (in prep.).

(187)   a. John looked Mary deep in the eye. That guy was just creepy!
        b. John stared at Mary. That guy was just creepy!
        c. John observed Mary from a distance. That guy was just creepy!

While in all three examples in (187), Mary is the object of John's gaze, the action performed on her entails varying degrees of awareness. *To look someone deep in the eye*, as in (187) a, usually[53] entails that the object of the gaze is standing rather close to the subject with his or her eyes open and perceives and returns the look. Mary is thus aware that she is being looked at. A sentence in FID mode taking up her perspective is therefore perfectly acceptable. *To be stared at*, as in (187) b, on the other hand, does not necessarily entail that Mary is aware of John's gaze. Compared to (187) a, the FID in (187) b has a stronger tendency to receive a reading from a narrator's perspective, though Mary's perspective is not excluded. The narrator's perspective is enforced in example (187) c. Here it is to be assumed that Mary is not aware of John's gaze, so a sentence in FID mode anchored to her is distinctly odd.

Though it may seem that sentience is a crucial feature for similar operations, I want to point out that awareness of the ongoing action is crucial for the anchoring of FID, while other types of subsequent quotation as well as pronominalization do not show this restriction. That is, in direct and indirect speech it is less problematic to quote a non-sentient protagonist. In (188) Lisa is presumably not aware of the action that is performed on her and thus not activated enough to license a continuation in FID mode such as (188) a, yet, she may get activated by the use of formal markers that make a shift explicit, as in (188) b and c. Also, it is unproblematic to pronominalize Lisa, as in (188) d.

(188)   Jess was eavesdropping on Lisa from behind the door.
        a. FID: Huh, was there somebody in the hallway? [54]
        b. IS: Lisa whispered to Tobi that there must be somebody in the hallway.
        c. DS: "Wait, is there somebody in the hallway?", Lisa said to Tobi.
        d. PPro: She was talking to Tobi.

In (188) a, the reader will presumably try to anchor the thought to Jess and only reinterpret the sentence with respect to a scenario in which Lisa is in some room and Jess is in the hallway. The example, again, highlights that for anchoring FID a certain activation or

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[53] I take this to be the default and exclude cases of looking into the eyes of a blind person, a dead body, or any kind of picture.
[54] I want to point out that FID may potentially be licensed in retrospect, as in
Jess eavesdropped on Lisa from behind the door. Huh, was there somebody in the hallway? Lisa anxiously hung up the phone. I will not present any empirical data or a discussion on this option, as this would go beyond the scope of this thesis.

prominence of the referent that serves as the anchor is crucial. Recall the discussion in Chapter 2: direct and indirect speech do not depend on referential activation because the narrator who functions as the covert or overt center is already activated in the narrative mode and thus there is no shift in perspective required.

Note that this *effect of non-sentience* is not canceled if a second event follows that the unaware referent is aware of. That is, a referent that is not sufficiently activated by the verb of the sentence that introduces him or her remains deactivated at least within the course of the sentence, as in example (189).

(189)   Tim was shadowing Luna when it started to rain.
        a. Damn it, why hadn't he brought an umbrella?
        b. Damn it, why hadn't she brought an umbrella?

Although Tim and Luna are both exposed to the rain, a thought anchored to Luna is rather odd.

This observation suggests that linguistic cues that influence the activation of a referent persist and may not be overridden by a subsequent proposition[55]. This is particularly crucial with respect to the effect of non-sentience, as it indicates that it is in fact referential activation that is triggered by the verb rather than the fact that a referent that is unaware of an event cannot comment on the event.

Another group of verbs that potentially prefer the object as the perspectival center – or show at least equal potential to be continued from the subject's or the object's perspective – are verbs that entail transfer of information. While in (190) and (191) the perspective of the subject is not entirely odd, intuitively, the perspective of the object appears to be more natural.

(190)   Lilly told Carl a joke.
        a. Huh, didn't he get it?
        b. Ha, that was so funny!

(191)   Jamie informed Leslie about the budget.
        a. Why did he always get to do that job?
        b. Oh, that was really not a lot of money.

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[55] Based on example (189) and the results presented in Chapter 4, this may be concluded to be valid within the sentence boundaries. It may be argued that the activation remains even across several sentences as in:
Tim shadowed Luna. It was a cloudy day. Suddenly it started pouring.
a. Damn it, why didn't he bring an umbrella?
b. Damn it, why didn't she bring an umbrella?
These intuitions will not be tested empirically in the course of this thesis.

While for the majority of verbs the subject may be regarded as the default when it comes to assigning a perspectival center, I want to argue that, at least for the respective subclasses of verbs, preferences based on the referent's grammatical function cannot be assumed. Building on the discussion above, I want to claim that verbs that limit awareness of the action and verbs that assign an affected argument have a crucial impact on the availability of referents as perspective holders. Further, I will investigate the availability of referents that pass on or receive information as subsequent anchors for thoughts in FID mode. As these features are to some extent entailed in semantic roles assigned to referents, in what follows I will discuss the potential impact of semantic roles on the availability as the perspectival center.

6.1.1 Semantic Roles and Perspectival Centers

Following the line of argument that certain aspects of verb semantics play a role with respect to a referent's availability as the perspectival center, a closer look at semantic roles and their impact on perspective-taking seems worthwhile.

One pressing argument for assuming an impact of semantic roles on perspective-taking is that – similar to grammatical function and referential expressions – semantic roles lend different prominence statuses (Himmelmann and Primus 2015; Jasinskaja et al. 2015; von Heusinger and Schumacher 2019) as well as different degrees of activation (Arnold 2001; Fukumura and van Gompel 2010).

In order to attempt an explanation of the different anchoring preferences outlined in the previous section, two approaches will be considered with respect to verb semantics and prominence or referent activation, namely, the hierarchy of the traditional inventory of semantic roles (e.g., Lehman et al. 2000; Himmelmann and Primus 2015) and prominence with respect to proto-AGENT and proto-PATIENT features (Dowty 1991).

Though there is general disagreement regarding which roles to include in a comprehensive inventory, semantic roles – and their hierarchical nature – as a means to account for numerous linguistic phenomena are widely accepted amongst linguists (see Dowty 1991 for a discussion of thematic roles and Primus 2009 for a discussion of the hierarchical nature of semantic roles). According to the hierarchy of semantic roles, an AGENT is more prominent than an EXPERIENCER which is more prominent than a THEME/PATIENT (see Himmelmann and Primus 2015 for an overview of prominence hierarchies; von Heusinger and Schumacher 2019; also Dowty 1991 p.578 for the AGENT > EXPERIENCER/INSTRUMENT > PATIENT > SOURCE/GOAL

hierarchy). Lehman et al. (2000) propose to place semantic roles on a two-dimensional scale with *control* and *affectedness* as poles. They place the AGENT at the pole of highest control and least affectedness and the PATIENT at the pole of least control and highest affectedness – FORCE, INSTRUMENT, SOURCE, EXPERIENCER, LOCUS, RECIPIENT, GOAL, THEME, and BENEFICIARY follow in respective order from most control to least. The hierarchical nature of semantic roles has also been tested empirically with respect to the choice of anaphoric expressions and potential pronominalization by comparisons of oppositional pairs such as GOAL and SOURCE or EXPERIENCER and STIMULUS.

I want to start the discussion on semantic roles and their impact on perspective-taking by taking a closer look at referents that carry the AGENT role. In line with the hierarchy of semantic roles, a referent that is the AGENT[56] of a sentence preceding a sentence in FID mode shows a tendency to be preferred as the perspectival center, as in (192) and (193).

(192) Tim had known Jane ever since they went to kindergarten.
        a. Oh, she was just the best!
        b. Oh, he was just the best!

(193) Tim saw Jane.
        a. What was she doing?
        b. Huh, what did he want from her?

While one may come up with a long list of verbs that assign AGENTS that are perspective holders similar to (192) and (193), it is not hard to find counterexamples of transitive verbs that do not assign the AGENT as the preferred perspectival center, as in (194).

(194) Tim punched/hit/pushed Jane.
        a. Ha, that's what she deserved!
        b. Ouch, why did he do that?

Unlike those in (192) and (193), verbs like those in (194) assign EXPERIENCERS instead of PATIENTS in object position. I want to argue that while in AGENT-PATIENT interactions the AGENT is preferred as the perspectival center, in AGENT-EXPRIENCER interactions the EXPRIENCER is preferred.

The role of the EXPERIENCER as a perspective-holder also shows in STIMULUS-EXPERIENCER interactions, as in (195) and (196). Again, a thought anchored to Jane

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[56] Note that, again, the observations only hold in cases where two referents compete. If the AGENT is not available as a perspective holder, a referent that carries a different semantic role gets to be the perspectival center, as in *The audience watched Jane present the weather every morning. Oh, how she hated that job!*

appears more natural than a thought anchored to Tim. Verbs that show a similar distribution of preferred perspectival centers are *to motivate, to fascinate*, and so on.

(195) Tim encouraged Jane.
    a. Why didn't she believe in herself?
    b. Yeah, this time she wouldn't cave!

(196) Tim surprised Jane.
    a. And there was much more to come!
    b. Oh, that was such a nice gesture!

While the role of the EXPERIENCER seems to override the AGENT and STIMULUS roles, perspective-taking research on anaphoric choices indicates a different behavior. Fukumura and van Gompel (2010) test the activation status of EXPERIENCER arguments in a sentence continuation task where they contrast STIMULUS-EXPERIENCER and EXPERIENCER-STIMULUS verbs. While the results of their main study indicate that "the preference for pronouns over names during comprehension is unaffected by semantic biases" (Fukumura and van Gompel 2010 p.63), the results of their pretest are particularly interesting with respect to semantic roles and referent activation. Their results indicate that, regardless of the grammatical function, the STIMULUS rather than the EXPERIENCER is picked up in a continuation task. Accordingly, if semantic roles activate referents for anaphoric references, the activation of a referent may license the anchoring of a subsequent sentence in FID mode. However, an example taken from the experimental items for their pretest (Fukumura and van Gompel 2010 p.63) indicates the opposite prediction for the anchoring of FID:

(197) a. Colin inspired Helen when preparations were under way for the special event. That was because he_____
    b. Colin idolized Helen when preparations were under way for the special event. That was because she_____

(198) Colin inspired Helen when preparations were under way for the special event.
    a. Oh, how she wished to be just a little more like Colin!
    b. Well, at least she noticed how hard he had worked for his success.

(199) Colin idolized Helen when preparations were under way for the special event.
    a. Oh, how he wished to be a little more like Helen!
    b. Well, at least he noticed how hard she had worked for her success.

Fukumura and van Gompel predict a next mention bias for Colin in (197) a and for Helen in (197) b. Yet, intuitively it feels more natural to pick up the perspective of Helen in (198) a and that of Colin in (199) b. Preferences for the EXPERIENCER over the

STIMULUS with respect to perspective-taking are in line with the observation outlined for examples (195) and (196).

That the biases responsible for other phenomena that are related to referent activation do not apply to perspective-taking can also be seen with respect to the presumable hierarchy of GOAL and SOURCE referents.

Based on continuation data presented by Arnold (2001), Jasinskaja et al. (2015) argue that prominence of semantic roles accounts for the pronominalization of antecedents in adjacent sentences. While pronominalization for the most part shows subject preference, participants preferably pronominalize a referent that has been introduced as a GOAL over a competing referent that has been introduced as a SOURCE, regardless of their grammatical function (see example (200), taken from Jasinskaja et al. 2015).

(200) a. Sarah took the cat from Rebecca. She$_{SARAH}$ _____
       b. Sarah passed the salt to Rebecca. She$_{REBECCA}$ _____

Again, this preference does not hold for perspective-taking, as illustrated in (201) and (202).

(201) Nina took the car keys from Jil.
       a. No way she'd let Jil drive tonight!
       b. Why would she do that to her!?

(202) Nina passed the car keys to Jil.
       a. How exiting, she finally got to drive!
       b. Jil really deserved to drive this time!

Intuitively, in (201) and (202) both referents seem to be available as perspective holders. Nevertheless, in the example of *to take something from somebody* in (201) there seems to be a bias for the SOURCE to be the perspectival center, as the SOURCE may also be affected by the action. This bias seems even stronger in the case of *to steal something from somebody*, where the SOURCE that is bereft of his or her possession is usually highly affected by the action.

Another observation with respect to SOURCE and GOAL interactions regards information that is passed on from a SOURCE to a GOAL. As discussed in the previous section, it seems more likely that the referent who just received presumably new information will react to it in the following sentence, such as in (203) and (204).

(203) Nina told Jil the bad news.
       a. Hmm, hopefully Jil wouldn't be too sad.
       b. Oh, not bad news again!

(204) Nina heard the bad news from Jil.
      a. Oh, not bad news again!
      b. Hmm, hopefully Nina wouldn't be too sad.

Though in (203) and (204) both continuations appear reasonable, intuitively, the perspective of the referent that heard the information is sightly preferred, as in (203) b and (204) a.

Ultimately, not all verbs that assign SOURCE and GOAL referents conform to the same pattern with respect to perspective-taking as, again, they vary with respect to affectedness – as in *to steal from somebody.* Verbs that entail a SOURCE that passes on information to a GOAL, on the other hand, make the GOAL more accessible as the perspective holder. To sum up, semantic roles assigned by the verb show tendencies regarding the preferred perspectival center. As argued above, AGENTS are preferred over PATIENTS or THEMES, EXPERIENCERS over AGENTS or STIMULI, and so forth. Yet, none of the proposed hierarchies of sematic roles (Dowty 1991; Lehmann et al. 2000; Himmelmann and Primus 2015) appears to be applicable. The impact of semantic roles on perspective-taking may rather be illustrated as follows:

(205) EXPERIENCER > AGENT/STIMULUS
      AGENT > PATIENT/THEME
      SOURCE ≥ GOAL
      GOAL ≥ SOURCE (if information is passed on)

Common hierarchies suggested for the classical semantic roles do not apply, as predictions are reversed in the case of EXPERIENCER-STIMULUS verbs, or full of exceptions in the case of GOAL-SOURCE verbs. An alternative approach to semantic roles may be promising: as suggested by Hinterwimmer (2019), the classification of proto-AGENT and proto-PATIENT roles (Dowty 1991) accounts for preferences with respect to the choice of the perspectival center. Dowty thus proposes to cluster all role types into only two proto roles (i.e., proto-AGENT and proto-PATIENT).

According to Dowty, arguments may carry features with respect to their agentivity as follows:

(206) Agent proto-role:
      a. volitional involvement in the event or state
      b. sentience (and/or perception)
      c. causing an event or change of state in another participant
      d. movement (relative to the position of another participant)
      (e. exists independently of the event named by the verb)

As argued by Hinterwimmer (2019), the referent with the highest number of agentivity features is the most likely to be chosen as the perspectival center. This assumption holds for many verbs where one argument outranks the other in terms of agentivity features, such as the ones in (192) and (193), *to know* and *to see*. According to Hinterwimmer, this line of argumentation also accounts for cases such as (195) and (196), with the verbs *to encourage* and *to surprise*, where the object is sentient while the subject does not carry any agentivity features. In (194), with the verb *to punch*, however, the subject acts volitionally and causes the change of state in the other participant and thus outranks the object with respect to the number of agentivity features. Still, I want to argue that in the case of (194) and with other verbs, such as *to hit*, *to kick*, and the like, the object is the default perspectival center. With respect to the traditional roles, this difference may be seen as similar to the difference between AGENT-EXPERIENCER and STIMULUS-EXPERIENCER verbs. That is, while the EXPERIENCER outranks the STIMULUS in terms of the number of agentivity features, it does not outrank the AGENT (see Primus 2009 p.55 for a typical distribution of agentivity features for traditional roles). Though this observation serves to account for the shortcomings of the approach suggested by Hinterwimmer (2019), it does not add to the discussion at hand – recall that regardless of the agentivity of the subject, whether it is an AGENT or a STIMULUS, the object is preferred as the perspectival center whenever it is an EXPERIENCER.

Though the activation of referents with respect to the number of agentivity features as well as hierarchies of the classic inventory of semantic roles show tendencies that are in line with the predictions I have made, I will refrain from an investigation of the impact of semantic roles on the anchoring of FID for at least two reasons.

First, it is conceivable that a hierarchy of semantic roles, similar to (205), may account for perspective-taking. However, the discussion of examples already indicates that such a hierarchy is beset with exceptions (e.g., SOURCE > GOAL / GOAL > SOURCE). Likewise, the account based on the number of agentivity features does not make consistent predictions either. At the same time, such an approach would go beyond the research goals of this thesis. Nevertheless, the results presented in this chapter may provide first insights on a hierarchy that may capture the impact of semantic roles on perspectival centers. That is, preference for the affected referent may indicate a preference for the EXPERIENCER over the AGENT/STIMULUS, and preference for the referent that receives information over the source of information may indicate a preference for the

GOAL over the SOURCE. However, such a claim requires further investigation that includes a larger sample of verbs that assign SOURCE and GOAL referents.

Second, though semantic roles and their effect on referent activation are often discussed in theoretical papers, empirical investigations often fail to give evidence for the impact of semantic roles on the choice of anaphoric expressions (Stevenson et al. 1994; Fukumura and van Gompel 2010). Rather, empirical investigations have indicated that anaphoric choices are not exclusively driven by semantic roles but interact with other structural factors such as animacy (Fukumura and van Gompel 2011), grammatical role (Schumacher et al. 2016; Arnold 2001), first-mention bias (Stevenson et al. 1994), etc. I propose a similar approach for perspective-taking. That is, perspective-taking is not governed by semantic roles but by a range of linguistic cues that interact with verbal features.

Though I argue for a more fine-grained approach to verbal features that affect perspective-taking, a discussion of semantic roles with respect to the research proposed in this chapter is not far-fetched. That is, the features that are characteristic of the semantic roles at hand are in line with the verbal features that arguably account for anchoring preferences: an AGENT that is volitionally involved in an event, senses/perceives, or moves is certainly *sentient* and *affected* by the action and thus serves well as a perspectival center. Yet, if the AGENT interacts with an EXPERIENCER, the EXPERIENCER is more *affected* than the agent and presumably *aware* of the action and will thus be preferred as the perspectival center. Though one crucial characteristic of EXPERIENCERS is to be affected, EXPERIENCERS may not always be aware of their affectedness, as in *to infect* or *to nominate*. As I argued before, a referent that is not aware of an action performed on him or her is hardly available as the perspectival center.

In the following, I will investigate verbs that assign the EXPERIENCER role. These verbs are carefully selected to assign experiencers[57] that are highly affected and aware of their affectedness. Thus, the results do not allow a conclusion with respect to all members that belong to the group of EXPERIENCERS. Likewise, results with respect to the source[58]

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[57] I will refrain from capitalizing the notion *experiencer* whenever I refer to the argument that is affected by an action and aware of his or her affectedness as it shall be investigated in this chapter, in order to differentiate the term from the semantic role EXPERIENCER.

[58] I will refrain from capitalizing the notion *source* whenever I refer to the argument that is the source of information as it shall be investigated in this chapter, in order to differentiate the term from the semantic role SOURCE.

of information and the counterpart that receives the information do not account for all members that carry the sematic roles SOURCE and GOAL.

6.1.2 In Search of a Classification

Rather than investigating a hierarchy that is beset with exceptions, a more fine-grained classification will be set up that suits the purpose of this research: I will investigate how *sentience* and *affectedness* as features assigned by the verb impact the anchoring of FID. Further, the anchoring preferences with respect to verbs that imply transfer of information will be investigated. In order to empirically test whether the anchoring of FID is driven by verbal features rather than by grammatical function, verbs to be tested were chosen to yield comparable minimal pairs with respect to subject and object arguments. That is, verb classes were chosen that act oppositionally (i.e., they take an emotionally affected referent as either subject or object, they take a referent that is non-sentient as either subject or object, or they take a referent that is the source of information as either subject or object).

Verbs that will be investigated can be classified according to Levin's (1993) classification. Levin proposes a rather comprehensive list of verb classes and their sub-classes characterized by their semantic features. She classifies more than 3,000 English verbs with respect to their meaning and licensing properties[59]. To the best of my knowledge, no similarly comprehensive classification has been done for German, but Frense and Bennet (1996) attempt to apply some of the classifications by Levin to German. While their main interest is to check if the predicted alternations that verbs of a certain class undergo in English behave the same way in German, they conclude that the semantic classes differ within certain, nonarbitrary limits. However, they do not propose a comprehensive classification of German verbs that could be used for the purpose of this research.

It is not the goal of this thesis to test Levin's classification with respect to the licensing potential of perspective-taking mechanisms. Rather, the list by Levin has proven helpful as a source for verbs that share particular features and have the same licensing properties that will be investigated in this chapter.

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[59] While Levin aims to draw conclusions from verbs' semantics regarding syntactic alternations, syntactic features shall not be the subject of my investigation. I will limit my investigation to transitive verbs in canonical word order sentences. The impact of alternations on the availability of a referent as the perspectival center could be a subject for further research.

It was thus neither an obstacle nor a methodological problem that not all verbs grouped by Levin show equal characteristics when they are translated to German. Rather, German verbs were selected with respect to their fit to the classification done by Levin.

In order to better account for the choice of verbs that will be investigated in the course of this chapter, I want to elaborate on the terms *affectedness* and *sentience* as they will be used in this chapter in order to avoid confusion regarding these and similar concepts.

6.1.2.1 Affectedness

The notion of *affectedness* is famously discussed with respect to syntactic properties and argument selection (Dowty 1991; Beavers 2011; Lundquist and Ramchand 2012; Kizilkaya in prep.). According to Lehman et al., "[a]ffectedness is the degree to which a participant is subject to the situation. This means that the situation happens to him; the participant is disposed or even acted upon in the situation" (2000 p.9). A more technical definition is given by Lundquist and Ramchand, who propose that an argument is affected if it "holds a property that is continuously changing, or [it] is the holder of a property that is a result of a change [...]. The property in question can be in the domain of 'quality' or 'location' depending on the particular lexical encyclopedic properties of the verb" (2012 p.9). Presumably, the most acknowledged semantic approach to affectedness in linguistics terms is that of Beavers (2011). Beavers provides a definition for the semantic notion of affectedness as "a relational notion, involving both a patient and a property scale defining the progress of its change, itself a full-fledged argument of the verb. [That is:] An argument x is affected iff there is an event e and a property scale s such that x reaches a new state on s through incremental, abstract motion along s" (Beavers 2011 p.3). What these three definitions have in common – phrased more or less explicitly – is the continuity of a change that the argument undergoes. Diagnostics to identify affected arguments include the paraphrase *What happened to X is Y* as well as a continuation with a *resultative predication*. Note that the referents that will be investigated in this chapter do not consistently fit these diagnostics.

While I have argued in the previous sections that referents that are highly affected, in terms of being impinged upon physically, serve as the perspectival center, verbs that will be investigated in the following belong to the group of psych verbs, which take a referent as argument that is emotionally affected (such as *to admire*, Levin 1993 p.191; or *to amuse*, Levin 1993 p.189).

I want to argue that *emotional affectedness* has the same effect on perspective-taking as physical affectedness. In semantic terms, following Beavers (2011) and Lundquist and Ramchand (2013), emotional affectedness can be represented by some property scale *s* measuring psychological change. Note that the works of Lundquist and Ramchand (2013) and Kizilkaya (in prep.) show comparable behavior of physically and emotionally affected object referents.

Assuming that physical and emotional affectedness behave similarly regarding availability as anchors for FID (see (207)), psych verbs were chosen with respect to the design of the study: unlike verbs of surface contact, psych verbs come in subclasses that either take an emotionally affected subject or an emotionally affected object.

(207)   Emma hit/kicked Sebastian. Huh, why did she do that?
        Emma surprised/encouraged Sebastian. Oh, that was so nice of her!

However, in particular the class that takes emotionally affected subjects does not meet the criteria of affectedness. That is, referents do not "change in some observable property", "transform into something else", "move to and stay at some location", or "come into" or "go out of existence", and "are [not] impinged upon", (Beavers 2011 p.5). Rather they "experience an emotion or a new mental state" (Dowty 1991 p.580). Nevertheless, for reasons of readability I will refer to the *emotionally affected* subject or object as the *affected* referent.

Psych verbs as classified by Levin "typically take two arguments. Although there is some controversy over how best to characterize the 'semantic roles' of these two arguments, most frequently these arguments are characterized as the experiencer and the stimulus" (1993 p.189). She further sub-categorizes transitive psych verbs with respect to "whether the experiencer is the subject (the admire verbs) or the object (the amuse verbs)" (Levin 1993 p.189). Dowty refers to these verbs as psychological predicates that entail a STIMULUS and an EXPERIENCER in either subject or object position and further specifies that "the Experiencer is entailed to be sentient/perceiving, though the Stimulus is not" and that "the Stimulus causes some emotional reaction or cognitive judgement in the Experiencer" (1991 p.579).

Verbs that belong to the class that assigns an emotionally affected argument may be continued with a phrase that targets the referent's emotional involvement such as *he/she could barely control his/her emotions*.

(208)   a. Fiona loved Dustin. She could barely hide her affection.
        b. Fiona provoked Dustin. He could barely hold back his anger.

(209) a. Fiona looked at Dustin. He/She could barely hide his/her emotions.
       b. Fiona knew Dustin from the gym. He/She could barely hide his/her emotions.

While the continuations in (208) a and b appear natural, (209) a and b require additional context that indicates why Fiona or Dustin are emotionally moved.

6.1.2.2 Sentience

The second feature that will be investigated as a predictor for perspective-taking will be referred to with the term *sentience*.

The notion of sentience goes back to Dowty, who states that "[s]entience means more than a presupposition that an argument is a sentient being; it is rather sentience with respect to the event or state denoted by the verb" (1991 p.573). According to Primus "[s]entience comprises an emotion, a sensation, a specific mental attitude or the awareness of the situation denoted by the verb" (2009 p.55). Note, that, as pointed out by Dowty, *sentience* may be misunderstood as a feature that is inherent in the argument. Since all arguments investigated in this thesis are animate and human, they are inherently sentient. The feature is meant to refer only to the state that is assigned to the argument by the verb, however. This is illustrated in example (210).

(210) a. A lamp pole blocked Zoe's view.
       b. A tall man blocked Zoe's view.

Unlike the lamp pole, in non-linguistic terms the man is sentient per se and yet, he is non-sentient in terms of Dowty's definition (i.e., he is not aware that he is blocking Zoe's view).

In order to test for sentience as a necessary feature with respect to the availability as perspectival center, verbs will be tested that license arguments that are non-sentient. Regardless of the grammatical function, an unaware argument should not be available as the anchor for a sentence in FID mode.

Verbs that license arguments that are unaware of an ongoing action are not strictly classified in the literature. However, many verbs that share that particular feature belong to the class of sight-verbs (Levin 1993 p.186-187). Sight verbs as classified by Levin characteristically assign "a perceiver as the subject and what is perceived as the object" (Levin 1993 p.187). Levin refrains from a sub-classification with respect to the sentience of the complements. For the purpose of this investigation, verbs were carefully selected

to license a referent that is animate – a sentient and conscious human being – and unaware of the action that is performed on him or her, such as the object of *to spy on somebody*. Verbs that will be investigated with respect to the non-sentience criteria may be identified by adding the phrase *but obviously he/she didn't notice*. For all verbs that commonly take an argument that is non-sentient, a continuation that targets the reference's ignorance, as in (211), should be natural. This test allows us to distinguish verbs that take arguments that are by default non-sentient from verbs that denote actions that may occur without the agent's awareness such as hitting somebody accidentally and without being aware of it.

(211) a. Jim blocked Zoe's view. But obviously he didn't notice.
       b. Jim eavesdropped on Zoe. But obviously she didn't notice.

(212) a. Jim hit Zoe. But obviously he didn't notice.
       b. Jim starred at Zoe. But obviously she didn't notice.

In (211) the second sentence sounds natural as a continuation of the first – unless it is explicitly expressed in the context that Jim acted on purpose or Zoe noticed that she was targeted. By default, to block someone's view does not entail an argument that is sentient. Likewise, the referent that is eavesdropped on is not aware of the action. In (212), on the other hand, the second sentence only follows naturally when the context provides a reason to believe that the argument is non-sentient (i.e., in (212) a, the hitting event was carried out without the hitter's awareness, and in (212) b, the referent that is starred at is facing a different direction.

6.1.2.3 Source of Information

In order to test a third uniform class of verbs that presumably allow for the object to be the perspective holder – and that allow for a minimal pair comparison – *transfer-a-message-verbs* (Levin 1993 p.202) will be investigated. Although these verbs entail features similar to other SOURCE-GOAL verbs, they do not represent the entirety of SOURCE-GOAL verbs. As argued in the previous section, the arguments taken by presumably comparable SOURCE-GOAL verbs such as *to give*, *to donate*, *to take*, or *to steal* differ with respect to the affectedness that is assigned to one referent by the event. That is, while in the example of *to steal* (see verbs of possessional deprivation, Levin 1993 p.128 ff) one referent benefits while the other loses possession of something – the transfer of information does not cause possessional deprivation that affects one referent more than the other.

Verbs that belong to the transfer-a-message class are rather straightforwardly distinguished from other verbs on the level of content. Still, a possible diagnostic can be the continuation with a sentence similar to *he/she was glad he/she got this information*.

(213) a. Pepe told Lara the latest news. She was glad she got this information.
   b. Pepe heard the news from Lara. He was glad he got this information.

(214) a. Pepe gave Lara a book. She was glad she got this information.
   b. Pepe got a funny look from Lara. He was glad he got this information.

While such a continuation sounds natural in cases such as (213) a and b, the second sentence in (214) a and b does not coherently match the first.

6.2 Experiment 5

The experiments presented in Chapter 4 support the claim that, in general, a sentence in FID mode is more likely to be anchored to the subject of the preceding sentence than to the object (H2, see also Hinterwimmer 2019; Hinterwimmer and Meuser 2019). In this chapter, I want to argue that the anchoring preference crucially depends on the verb that is used to introduce the referents in the sentence preceding the FID.

(215) a. Johan pinched Elli. Huh, why did he do that?
   b. Emma kicked Sebastian. Ouch, that hurt!
   c. Kira surprised Leo. Oh, that was so nice of her!
   d. Lars insulted Kirsten. That was just hurtful!
   e. Simon informed Jenna about the new regulations. No problem for her!

Despite a presumable subject preference, for all sentences in example (215), a continuation from the perspective of the object appears natural.

In order to investigate if participants are more likely to pick up the perspective of the subject or the object of a sentence as the anchor for a subsequent sentence in FID mode, a sentence continuation experiment was designed. In this pilot experiment, I presented participants with one-sentence short prompts containing a transitive verb taking two referents as arguments – one as subject and one as object. In order to trigger participants to write a continuation in FID mode, participants were asked to continue the second sentence starting with an interjection – a characteristic feature of FID – such as *well, okay, hmmm*.

Sentence continuations were then annotated in two rounds. First, only FID continuations were extracted (i.e., all data was cleaned from sentence continuations that were ungrammatical or did not indicate one of the protagonist's perspective, such as first-

person continuations or narrator comments). In the second round, sentence continuations that were labeled as FID were annotated with respect to subject or object perspective[60].

In line with the results presented in Chapter 4, I expected to find a general preference for subject continuations rather than object continuations. Yet, I expected the subject-object distribution to vary depending on the verb used to introduce the two referents in the prompt. That is, I particularly wanted to test if verbs that are categorized with respect to certain features have an impact on the likelihood of choosing the subject's or the object's perspective. Verbs presented in the prompts were classified according to particular semantic features they assign to their arguments, and one mixed class was also created. The latter class did not consist of verbs that share particular features, but was rather a selection of verbs that were used in previous studies (Experiment 1 described in Chapter 4).

The first two verb classes to be investigated comprised verbs belonging to the class of psych verbs (Levin 1993 p.189 & p.191), one where the subject is emotionally affected (e.g., *to miss s.o.*), and one where the object is emotionally affected by the action (e.g., *to annoy s.o.*) (see Section 6.1.2.1).

The third verb class to be investigated comprised verbs that license a protagonist in object position that is typically non-sentient, such as *to spy on s.o.*, *to observe s.o.*, or *to follow s.o.* (see Section 6.1.2.2).

The fourth verb class to be investigated consisted of verbs that assign a source of information (see *transfer-a-message verbs* in Levin 1993 p.202; also section 6.1.2.1).

The last verb class was intended to function as a baseline consisting of transitive verbs that were used in the acceptability rating study presented in Chapter 4. They cannot be classified with respect to one specific verb class; they do not share semantic features, nor do they show a consistent licensing behavior. As these verbs yielded a subject preference in the acceptability ratings, I expected participants to pick up the subject as the anchor for a subsequent sentence in FID mode.

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[60] Annotations had to be done in two rounds because trained annotators familiar with the characteristics of FID may be biased with respect to the anchoring tendencies of FID (see section 6.2.4 for details on the annotation process).

6.2.1 Predictions

As elaborated above, the motivation to choose these particular five verb classes is based on the observations discussed in section 6.1. The selected verb classes are by no means exhaustive, nor do they form a hierarchy or ranking regarding their likelihood to assign a subject or an object as the anchor for a sentence in FID mode.

The main goal of the research presented in this chapter is to investigate if the claim made in Chapter 4 (H2) (i.e., that protagonists functioning as subjects are more available as anchors for FID than protagonists functioning as objects) needs further restrictions with respect to the verb that is used to assign the subject and the object:

(216) H7: The referent that is chosen as the perspectival center of the FID depends on the verb that is used to introduce the referent in the preceding sentence regardless of the grammatical function.

Further, it shall be investigated if emotional affectedness has an impact on the anchoring potential of FID. For that purpose, the two classes of psych verbs that assign either an affected subject or object shall be regarded with respect to the following hypothesis:

(217) H8: Referents that are emotionally more affected by an action are more likely to be the anchor for a subsequent sentence in FID mode regardless of their grammatical function.

This prediction is supported by the following examples in which a sentence in FID mode anchored to a referent that experiences the emotion is highly acceptable as the perspectival center for a subsequent sentence.

(218) Sophie admired John.
       a. He was just the best!
       b. She was such a sweet girl!

(219) Nina astonished Tim.
       a. Well, she had many talents he didn't know of, yet!
       b. Wow, she was just marvelous!

In example (218) a it seems easy to pick up Sophie's perspective as she is emotionally moved and comments about John who is rather passively the object of her admiration. A sentence in FID mode attributed to John as in (218) b, on the other hand, is rather unexpected. The comment in (218) b is by no means unacceptable, yet it seems more likely to ascribe the sentence to a narrator that comments on Sophie rather than to interpret it as a thought in FID mode anchored to John. This observation is expected to be true for members of the class of psych verbs that assign an experiencer in subject position (see *admire verbs*, Levin 1993, p.189) such as *to enjoy*, *to miss*, or *to fear*.

In example (219), on the other hand, the object is more affected by the action than the subject. Here a continuation from Nina's perspective, as in (219) a, is less expected than taking on Tom's perspective, as in (219) b – despite Nina functioning as the grammatical subject.

For psych verbs that assign an object experiencer (see *amuse verbs*, Levin 1993 p.189) such as *to frighten*, *to annoy*, or *to hurt*, I expect to find more continuations that pick up the perspective of the object. Yet, I do not expect the object experiencer verbs to exclusively yield object continuations, as the tendency to pick up the object possibly interacts with the – presumed – general subject preference.

In this pilot study, the subclass of verbs that assign a non-sentient argument in object position shall be looked at individually with respect to the following prediction:

(220) H9: Referents that are (typically) unaware of an ongoing action are hardly available as an anchor for a sentence in FID mode.

For verbs that entail a presumably unaware object, I expect that the subject is highly preferred as the perspectival center.

(221) Lilly followed Ben.
    a. Where would he go?
    b. Why would she follow him all the way out here?

Again, (221) b is neither unacceptable nor uninterpretable, but is less expected, as it imposes more processing costs on the reader. In the case of the production task at hand, participants are forced to come up with a rather marked context that allows for an object continuation. I thus expect to find almost exclusively subject continuations rather than object continuations.

The next prediction is based on the observations discussed in section 6.1.2.3 with respect to verbs that assign a source of information:

(222) H10: Referents that perceive information are just as likely to be the anchor for a sentence in FID mode as the source of information.

Verbs that belong to the group of *transfer-a-message* verbs (Levin 1993 p.202) do not allow for clear predictions with respect to subsequent perspective-taking. They do not indicate a preference for subjects or objects, nor do they do so for the source of information or the perceiver of information.

For the mixed class, I aim to replicate the findings reported in Chapter 4:

(223) H2: Referents in subject position show a general tendency to be preferred as the perspectival center.

As this hypothesis seemingly contradicts the research presented in this chapter (see H7), the following restriction must be added:

(224)   H2a: Referents in subject position show a general tendency to be preferred as the perspectival center – if the verb that is used to introduce the referents in subject and object position does not assign particular features to its arguments such as the ones postulated in H8, H9, and H10

That is, verbs that were chosen in the previous experiments cannot be classified with respect to one class. However, they avoid assigning object experiencers as well as non-sentient arguments[61].

The attempt to create a baseline that represents a random choice of transitive verbs in order to represent German verbs was abandoned, since a baseline with such a low number of stimuli (four verbs in the pilot) is unlikely to result in a representative random sample. A baseline consisting of the most frequent transitive verbs was dismissed, as the verbs chosen for the other classes are not particularly common and thus frequency may yield an effect. Furthermore, the replication of the effect observed in previous experiments serves to evaluate the methodology chosen; the verbs that yielded a significant subject preference in the perception task presented in Chapter 4 are expected to yield significantly more continuations from the subject's perspective than from the object's perspective.

6.2.2 Material

For this pilot study, participants were asked to continue 20 one-sentence short prompts with a second sentence. The prompts consisted of a canonical sentence with a transitive verb introducing two protagonists. Both protagonists were referred to with a proper name and differed in gender. Different genders were used in order to be able to disambiguate any pronouns used by the participants in their sentence continuations. In order to control for a potential effect of gender stereotypes, half of the items of each verb class had a female, the other half a male referent in subject position.

As the proper names used to refer to the two protagonists were not marked for case, the prompts potentially allowed for an OVS reading, exemplarily shown in (225). Despite a

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[61] These restrictions naturally occurred when designing the experiments that were supposed to create stimuli in which subject and objects were just as likely to be the perspectival center on the level of context.

potential OVS reading, proper names were deliberately chosen over NPs marked for case, as NPs bear a number of confounds with respect to frequency and gender stereotypes[62].

(225) Dennis   belauschte   Sophia.   Hmm, …

  Dennis$_{ACC}$ eavesdropped   Sophia$_{NOM}$.   Hmm, …

  "It was Dennis whom Sophia eavesdropped on. Hmm, …"

In German, OVS readings are highly marked (see Gorrell 2000 for an overview of subject-before-object preference in German) and for the most part only plausible if licensed by a particular context (Weskott et al. 2011). Yet, the continuation data will be checked for indicators that participants interpreted the first sentence as having an OVS syntax.

As elaborated above, five different verb classes were tested. Each verb class was represented in four experimental items, resulting in a total of 20 prompts (see Appendix E). The verbs can be classified as follows:

(226) Affected Objects
    Transitive verbs that assign a referent in object position that undergoes a change of an emotional state, such as *beschimpfen, beruhigen (to insult, to calm)*

    Affected Subjects
    Transitive verbs that assign a referent in subject position that is emotionally affected while the object is the target of the emotion, such as *lieben, vertrauen* (*to love, to trust*)

    Non-Sentient Objects
    Transitive verbs that suggest that the referent in object position is most likely not aware of the action that is performed, such as *beobachten, verfolgen (to observe, to follow)*

    Source of Information
    Transitive verbs that assign an argument in subject position that is the source of information, such as *erzählen, informieren (to tell, to inform)*

    Mixed Class
    Transitive verbs used in Experiment 1 not further classified such as *einladen, anrufen (to invite, to call on the phone)*

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[62] In order to test for the preference to pick up the subject or the object, it is crucial to rule out other potential differences that contribute to a referent's prominence status. NPs would have to be minimal pairs (the soccer player$_f$ and the soccer player$_m$ rather than the soccer player and the tennis player), yet even in the case of minimal pairs, frequency varies with respect to gender stereotypes (e.g., a male soccer player is more frequent than a female soccer player).

In order to trigger participants to write a continuation taking on one of the referents' perspectives, the sentence to continue started with an interjection followed by a comma.

(227) Na ja, ...   (Engl. *Well*, …)
       Hmm, ...
       Also, ...   (Engl. *Well*, …)
       Nun, ...   (Engl. *Well*, …)
       Sicherlich, ...   (Engl. *Surely*, …)
       Ganz ehrlich, ...   (Engl. *Honestly*, …)
       Komisch, ...   (Engl. *Strange*, …)
       Okay, ...
       Immerhin, ...   (Engl. *At least*, …)
       Mensch, ...   (Engl. *Man*, …)

As there were no predictions regarding the interjections' tendencies to license a subsequent subject or object perspective, I chose a wide range of 10 different interjections for the pilot experiment. The interjections were chosen carefully to intuitively allow for both subject and object perspectives.

Each prompt was presented with each interjection. All 10 interjections were distributed over 20 items so that every participant saw each interjection twice, resulting in 10 lists.

6.2.3 Procedure of Data Collection

Sentence continuation data was collected using Qualtrics in July 2020. Four participants participated voluntarily while another six participants were recruited via Prolific[63] and participated for monetary compensation.
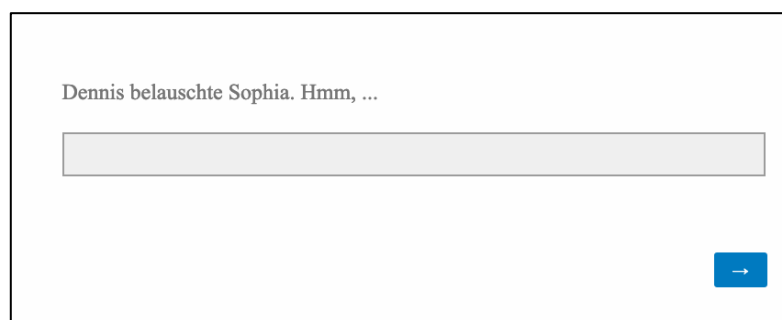

Dennis belauschte Sophia. Hmm, ...

Figure 7: Presentation of prompts in Qualtrics
"Dennis eavesdropped on Sophia. Hmm, ..."

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[63] https://www.prolific.co

The instructions stressed that there were no *right* or *wrong* answers so that participants were encouraged to continue the sentences according to their intuition. It was explicitly permitted to write rhetorical questions or exclamations.

At the beginning of the experiment, participants were provided with one example. In order to trigger more FID continuations, the example provided was in FID mode, but the verb was intransitive so that only one protagonist was available as the anchor for the FID. All 20 prompts were randomized for each participant.

6.2.4 Annotation

Each of the 10 lists was presented to one participant so that 10 continuations were collected for each individual item, while each item was presented with all 10 different interjections. The annotation of these 200 sentence continuations was done in two annotation rounds.

The goal of the first round was to identify all sentences in FID mode that could be analyzed with respect to the research question (i.e., they could be anchored to either the subject or the object of the preceding sentence). The correct identification of FID was not trivial and needed to be done by annotators experienced with FID. Because participants frequently produced ungrammatical continuations or other non-FID continuations, I decided to conduct a preselection so that second-round annotators were only presented with continuations that were labeled as FID by all three first-round annotators. As trained annotators may be biased with respect to the anchoring of FID to the subject or the object, the second round of annotations was done by naïve annotators that were asked to judge whether the utterance or thought expressed in the second sentence could be anchored to one or the other protagonist. While the first round of annotations was done by trained student assistants that were provided with an excel sheet, the second round of annotations was presented as a multiple-choice experiment on Qualtrics to annotators recruited via Prolific.

6.2.4.1 Procedure of Annotation Round One

As elaborated in Chapter 3, FID lacks obligatory markers but rather is associated with a number of common markers. Also, FID does not have to include any markers, as in (228), where the second sentence is most likely attributed to Marc, yet no overt markers may be found – despite the interjection that was presented as part of the prompt. If the annotation

of FID was tied to markers, the annotation would have been prone to type II errors (i.e., cases of FID might not have been identified due to the lack of markers).

(228) Marc opened the fridge. Puh, it smelled like old cheese.

Another possibly even more misleading problem in setting annotation guidelines for FID is that markers of FID are also commonly found in narrator comments – frequently produced by the participants in this study. While narrator comments in some cases can be distinguished from FID by the use of a first-person pronoun referring to the narrator, in some cases a comment can only be identified as a narrator comment on the level of content (i.e., the proposition contains information that is beyond the character's knowledge), such as in example (229).

(229) Marc looked at the presents. Well, it was truly amazing how his parents managed to keep his faith in Santa Claus up for all these years!

Also, literature that reports corpus annotation for FID addresses similar issues. For example, Brunner (2015) lists typical markers that may indicate FID, such as no embedding, temporal and spatial deictic is ascribed to the protagonist while the finite verb and pronouns are ascribed to the narrator, syntax and idiolect of the protagonist, but she emphasizes that manual annotation needs to be context-dependent (p.61).

Though the main goal of the first round of annotation with respect to the research question was the distinction between sentences in FID mode and all other sentence continuations, a more fine-grained classification was used in this pilot. Instead of a binary FID/non-FID classification, a classification of five labels was set up: one for all ungrammatical cases (N), two for continuations that make correct use of the interjection but are not FID (S & NC), one for all clear cases of FID, and one for ambiguous FID (AFID) that can be ascribed to either protagonist (see (230) for a summary of the annotation guidelines). Cases marked as AFID qualify as FID by definition, but had to be excluded from annotation round two as the intention to write a sentence in FID mode anchored to either the subject or the object was not obvious to the trained annotators.

(230) N: all cases that are either ungrammatical or that consist of more than one sentence. However, only use N for entirely odd sentences; typos are not a reason to exclude the item.

S: direct or indirect speech or thought, defined as:
A comment that is embedded in a matrix clause that indicates a speech act or thought or an utterance that can only be interpreted to be explicitly uttered by one protagonist, possibly by the use of the second person pronoun (e.g., Also, du bist doch…).

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NC: narrator comment, defined as:
A subjective comment that must be attributed to a narrator as the content suggests omniscient knowledge that goes beyond the protagonist's knowledge (or indicated by the use of a first-person pronoun).

FID: a sentence in FID mode that is anchored to only one of the two protagonists, defined as:
A subjective comment that must be anchored to only one of the protagonists (and you have a clear understanding of which one of the two protagonists is the anchor).

AFID: an ambiguous sentence in FID mode that is anchored to one or the other protagonist, defined as:
A subjective comment that must be anchored to one of the protagonists but that can plausibly be anchored to either one.

It was pointed out to the annotators that in many continuations the participants ignored the comma that separated the interjection from the sentence they were supposed to write, which resulted in ungrammatical continuations. For example, participants frequently used the interjections *nun* as a temporal adverb, as in *Nun, würde er sie küssen*. While this continuation could be classified as a sentence in FID mode, continuations similar to this were labeled N, as a comma between an adverb and a verb is ungrammatical.

Besides preselecting sentence continuations that would subject to further analyses, a secondary goal of this pilot was to exploratorily investigate which of the interjections intended to trigger FID worked well as triggers (i.e., they were frequently continued with a sentence in FID mode (FID or AFID)) as opposed to the interjections that were frequently continued in another way, such as a narrator comment (NC) and direct or indirect speech (S), or that frequently resulted in ungrammatical continuations (N).

6.2.4.2 Results of Annotation Round One

The 200 sentence continuations were annotated by three student assistants that had worked on the topic of FID. They had all done corpus annotations spotting FID in literature and could have been considered to be experienced in annotating FID. The items were presented to the annotators in a random order with a different randomization for each annotator.

The annotators were instructed to annotate the second sentence in the context of the first sentence with respect to the content. They were provided with annotation guidelines (similar to (230), see Appendix G).

The annotations yielded a Fleiss kappa value[64] of 0.808, indicating a high inter-rater agreement. All three annotators chose the same label in 162 of 200 sentences[65]. They agreed on the label *FID* in 65 cases, on *ungrammatical sentences* in 60 cases, on *narrator comments* in 21 cases, and on *direct* or *indirect speech* in 16 cases. In 38 cases they did not agree (see Figure 8).
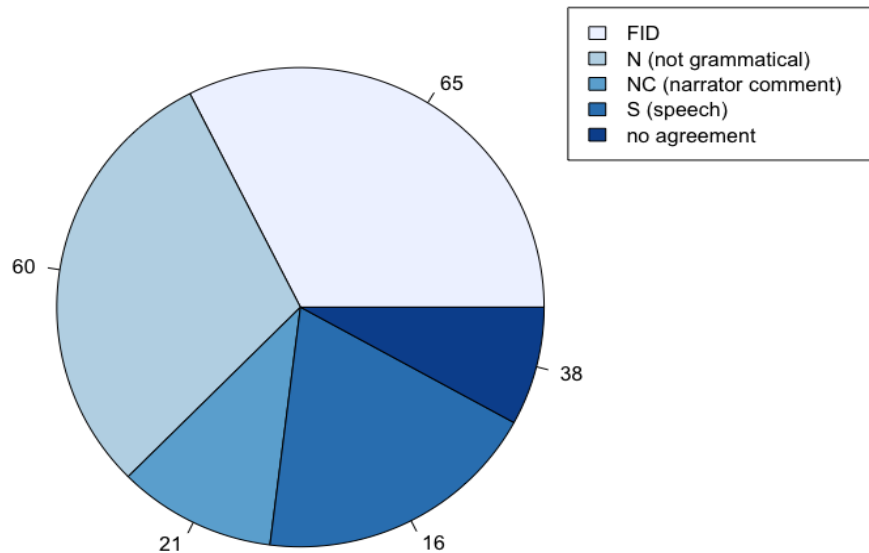

Figure 8: Agreement of all three annotators in annotation round one

While the verb classes were equally distributed across the prompts (four verbs of each of the five verb classes that were presented to 10 participants) the sentence continuations resulted in an unbalanced number of FID continuations for each verb class (see Table 12).

	affected (O)	affected (S)	non-sentient	source	mixed
N	11	13	11	12	13
NC	4	7	3	2	5
S	5	3	3	3	2
FID	**14**	**9**	**16**	**15**	**11**
no agreement	6	8	7	8	9

Table 12: Agreement cases by verb class

As discussed in section 6.2.2, the prompts allowed for an OVS reading, as German proper names are not marked for case. For that reason, all continuations were individually

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[64] Using the irr-package in R (R core team) with the function *kappam.fleiss*

[65] The conntinuation data and the scripts are available online: https://osf.io/wegtn/

checked for indicators that the participant had interpreted the sentence with an OVS syntax. As this did not seem to be the case, no data had to be excluded.

All agreement cases of FID were considered for further investigation in annotation round two.

A second goal of the first round of annotations was to investigate which interjections worked well as triggers for FID. As indicated in Figure 9, *also*, *nun*, *sicherlich*, and *immerhin*[66] yielded a particularly high number of ungrammatical continuations.
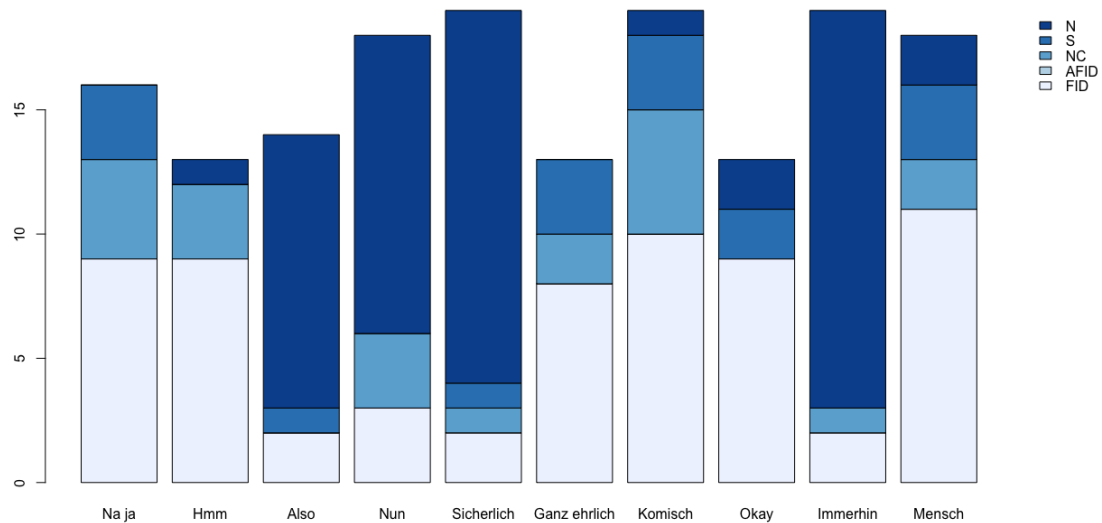
Figure 9: The total number of agreements for each interjection

This was presumably due to their frequent use as adverbials. In the item design, the adverbial use was intentionally prohibited by presenting a comma following the interjection, but a surprisingly large number of participants still chose to ignore the comma.

6.2.4.3 Procedure of Annotation Round Two

For the second round of annotation, all 65 cases of agreement on the FID label from the first-round annotations were considered. The goal of the second round of annotations was to identify whether the participants chose to write a sentence in FID mode that picked up the perspective of the subject or the object – a narrator's perspective should in theory not

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[66] See (227) for a translation

have been an option, as the data shown in the second round was already preselected to be FID that could clearly be ascribed to one protagonist.

Annotation was done by naïve annotators, as the trained annotators from round one might have been biased with respect to the anchoring preferences of FID. The prompts and continuations were presented as one stretch of text in Qualtrics. Participants were instructed to interpret the second sentence based on its content and decide if it took up the perspective of *the subject*, *more likely the subject*, *the object*, *more likely the object*, *both of them*, or *an uninvolved narrator*, presented in a multiple-choice design (see Figure 10).

Figure 10: Presentation of sentence continuations for the second round of annotations in Qualtrics

The last option was given because discussing examples of FID with a naïve audience has shown that readers may be more hesitant to ascribe a sentence to a protagonist and rather prefer the narrator's perspective, which appears to be an option that is possible for all sentences. This preference is in line with observations presented by Harris (2012 p.186) where participants showed a great preference for the speaker of a stretch of discourse as the anchor for an expressive term over a protagonist despite manipulations that deliberately triggered a character's perspective. However, only allowing for a choice between subject and object potentially causes participants to feel uncomfortable with the task. As the narrator's perspective seems to be the option that is correct for almost all sentences in FID mode, the instructions and examples stressed that the narrator's

perspective should only be chosen if there was evidence that a sentence had to be ascribed to an external source (i.e., if a first-person pronoun was used (such as in (231)) or if both protagonists were picked up with a pronoun (such as in (232)).

(231) […] Also, eigentlich sollten die schon zuhause sein.
       […] *Well, they were supposed to be home by now.*

(232) […] Na ja, ich hätte das nicht gemacht.
       […] *Well, I wouldn't have done that.*

Furthermore, the instructions stressed that the participants should base their decision on the content of the second sentence. Also, it was pointed out that the sentences were the result of a previous experiment and therefore might sound odd or include typos[67].

In order to illustrate a clear difference between FID and narrator comments, fillers were included that could exclusively be ascribed to the narrator. That is, obvious instances of narrator comments should have led participants to attribute actual FID to a protagonist rather than the narrator. In order to match the style of the items, fillers were taken from the original data (i.e., continuations that were labeled as narrator comments)[68].

The 65 FID items were randomly distributed over two lists and combined with 19 fillers, resulting in one list with 52 items and one list with 51 items due to the uneven number of FID continuations.

Each of the two lists was presented to three naïve annotators in Qualtrics in August 2020. All six participants were recruited via Prolific and participated for monetary compensation. All participants were monolingual speakers of German and preselected to have at least a Bachelor's degree to ensure a high degree of literacy.

6.2.4.4 Results of Annotation Round Two

Annotations were collected for all 65 FID continuations, which were presented in two lists, from six annotators (i.e., three judgments for each item), resulting in 195 judgments for FID continuations. Judgments for filler sentences were not considered further. In the analyses, *definitely the subject/object* and *more likely the subject/object* were simply counted as subject or object responses, as a differentiation between tendencies was not

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[67] So as not to manipulate the sentence continuations, the original data was not edited.
[68] Two NC continuations were excluded as they suggested that the narrator was biased towards a certain perspective.

important with respect to the research question but was a matter of comforting the annotators in their decisions.

The annotators assigned the subject perspective for 114 items, the object perspective for 35 items, and equally both perspectives for 20 cases. Despite the instruction to rather decide for a protagonist's perspective and the use of fillers that were designated for the narrator's perspective, the narrator's perspective was chosen 26 times for actual FID continuations.

more likely the subject/ definitely the subject	more likely the object/ definitely the object	equally both of them	narrator's perspective
114	35	20	26

Table 13: Second-round annotation responses for FID items

While the verb classes were equally distributed across the prompts (four verbs for each of the five verb classes (see (226) for a classification, summarized in (233))) the sentence continuations resulted in an unbalanced representation of the verb classes in the second round of annotations.

(233) Affected Objects
Transitive verbs that assign a referent in object position that undergoes a change of emotional state

Affected Subjects
Transitive verbs that assign a referent in subject position that experiences an emotion while the object is the target of the emotion

Non-Sentient Objects
Transitive verbs that suggest that the referent in object position is most likely not aware of the action that is performed

Source of Information
Transitive verbs that assign a referent in subject position that is the source of information

Mixed Class
Transitive verbs from pervious experiment

FID continuations were produced for 15 prompts in the *non-sentient* condition, for 16 in the *source* condition, for 14 in the *affected objects* condition, for nine in the *affected subjects* condition, and for 11 in the *mixed class* (compare Table 12).

Though all items were judged by three participants, the judgments were not treated individually, but – in line with the first-round annotations – the three judgments for each

item were compared. Since the goal of the annotation was to identify which perspective the author of the continuation intended to pick up, the annotation process should result in one answer per item – rather than three judgments. For that reason, only those cases where all three annotators agreed on the same label were taken into consideration.

	affected (O)	affected (S)	non-sentient	source	mixed
subject Perspective	4	7	14	1	5
object Perspective	2	0	0	3	1
both	0	0	0	2	0
narrator	1	0	0	0	0

Table 14: Agreement of all three annotators by verb class
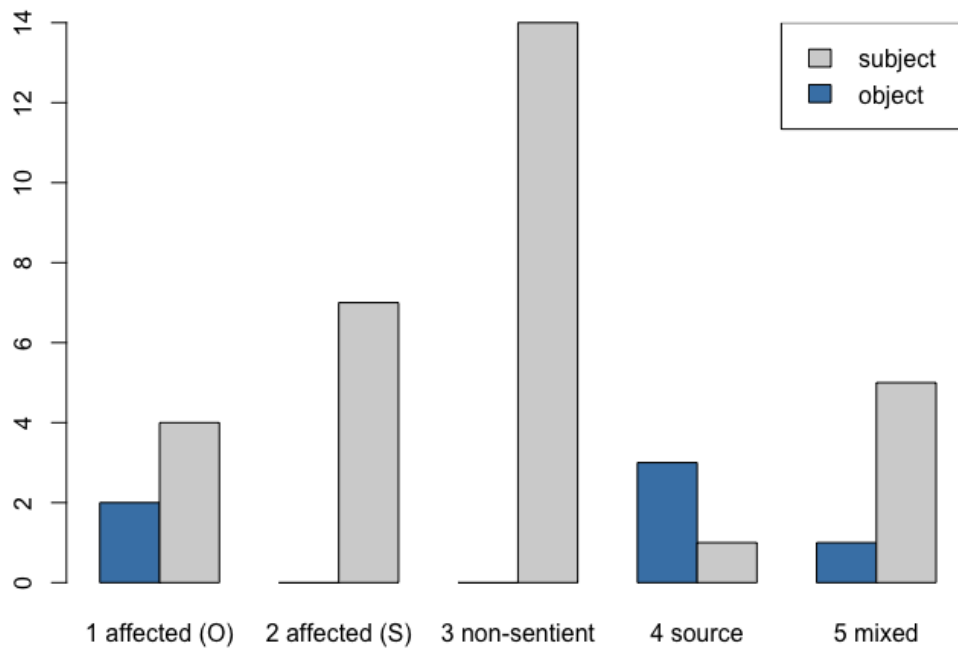
Figure 11: Agreement on subject and object responses by verb class

Due to the low number of datapoints, no statistical analysis was conducted.

6.2.5 Discussion

At this point I want to recall the data collection process briefly, in order to account for the unbalanced data set and the low number of observations. I will start with a discussion of methodological issues to summarize the rather complex process of data collection before I get to the discussion of the results.

6.2.5.1 Discussion of Methodological Issues

I presented 10 participants with 20 items (representing five verb classes). The participants produced FID continuations in 65 cases. While 65 seems to be a rather low number of observations, especially with respect to five verb classes, I want to point out that – despite the presumably low frequency of FID – the design chosen served well as a trigger for FID, as participants produced more sentences in FID mode (65 cases) than any other possible continuation (see Table 15). The high number of sentences rated N (not grammatical) was for the most part the result of the use of the interjections *also*, *nun*, *sicherlich*, and *immerhin*, which were frequently mistaken for adverbials and thus yielded ungrammatical continuations such as *Nun, würde er* […]. The other interjections, namely *Na ja (Engl. Well), Hmm, Ganz ehrlich (Engl. Honestly), Komisch (Engl. Strange), Okay, Mensch (Engl. Man),* worked considerably well as triggers for FID continuations.

	affected (O)	affected (S)	non-sentient	source	mixed	**total**
N	11	13	11	12	13	60
NC	4	7	3	2	5	21
S	5	3	3	3	2	16
FID	**14**	**9**	**16**	**15**	**11**	**65**
no agreement	6	8	7	8	9	38

Table 15: Agreement cases by verb class

The 65 continuations that were annotated with the FID label by all three annotators were shown to three naïve annotators who were asked to judge whether the FID must be anchored to the subject or the object (or potentially both or a narrator) (i.e., 195 instances of FID continuations were annotated). However, in only 149 cases the annotators decided for the perspective of a protagonist (i.e., in 76% of the cases). For an analysis, only cases in which the annotators decided to choose exactly the same protagonist should be considered. Agreement on a label could be interpreted as the most valid indicator that the continuation was intended to pick up the subject's or the object's perspective. Annotators agreed on a subject or object response in 40 out of the 65 FID items presented (i.e., for 61% of the items).

In other words, because much continuation data had to be excluded out of 200 prompts presented, only 65 continuations were suitable for further investigation. Though the 65 continuations were annotated as FID that could be anchored to either the subject or the

object, the naïve annotators in the second-round annotations only agreed on subject or object anchoring in 40 cases. That is, only 20% of all continuations could be analyzed with respect to the research question.

Another observation to point out is that already in the production of continuations, an uneven number of FID may be produced for the different verb classes. While, for example, participants produced 16 FID continuations following prompts with verbs that assign an unaware object, they only produced nine sentences in FID mode following prompts with verbs that assign a subject experiencer. That different verbs or verb classes have differing potential to trigger FID is an artefact of the design that can hardly be controlled for. The unbalanced data may be less of a problem with a large dataset. In this particular pilot study, however, such small numbers of observations per class may hardly be regarded as representative of different verb classes.

The low number of observations per class does not allow for an empirical investigation of the hypothesis. The issues of an overall low number of FID continuations as well as the uncontrollable distribution of FID continuations with respect to the different classes indicates that in order to conduct an empirical investigation a larger sample of items must be presented to a much larger number of participants.

Though this dataset shall not be subject to a statistical analysis, the results presented above shall not be left uncommented on.

6.2.5.2 Discussion of the Data

While a total of 200 different items were presented to participants in order to write a sentence continuation in FID mode picking up the perspective of the subject or the object of the preceding sentence, only a small number of datapoints were left for an analysis. As discussed above, only 32.5% of the prompts were continued with sentences in FID mode. With respect to the hypothesis postulated above, the results presented in Figure 11 merely indicate that a referent that is chosen as the perspectival center of the FID depends on features assigned by the verb to either the subject or the object of the sentence preceding the FID (H1). While verbs that assign an object that is non-sentient and verbs that assign an affected subject resulted in (almost) exclusively subject perspective continuations, for the remaining three classes the ratio of subject and object continuations differed.

	affected (O)	affected (S)	non-sentient	source	mixed
subject's perspective	4	7	14	1	5
object's perspective	2	0	0	3	1

Table 16: Agreement cases on subject and object responses by verb class

H8 postulated that referents that are emotionally more affected by an action are more likely to be the anchor for a subsequent sentence in FID mode regardless of their grammatical function. Observations made on the basis of the data allow us to argue neither in favor nor clearly against this hypothesis. While for the verbs that assign an affected subject, exclusively subject continuations were produced (seven out of seven observations), for the verbs that assign an affected object, subject continuations prevailed over object continuations (four out of six observations). It is up for speculation whether this was due to the unreliability as a result of the low number of observations or the hypothesis must be rejected. A possible explanation for the unexpected distribution of subject and object continuations within the affected object class may have to do with H2 (i.e., referents in subject position show a general tendency to be preferred as the perspectival center).

Though again the number of observations is fairly low (14 observations), the results for verbs that assign a non-sentient object may be interpreted as an indicator for H9 *(i.e., referents that are (typically) unaware of an ongoing action are hardly available as an anchor for a sentence in FID mode*. While the data provide preliminary support for the hypothesis, the design does not allow for definitive conclusions, since again the results may be due to the general subject preference that was postulated in H2 (based on the findings reported in Chapter 4). A comparison of the mixed class with the verbs that assign non-sentient objects, however, leaves room for discussion; while verbs may in general yield a subject preference, non-sentience enforces this preference. Whether non-sentience is the crucial feature that restricts the availability of verbs that assign non-sentient subjects will be tested in the follow-up study.

With respect to H10 *(i.e., referents that perceive information are just as likely to be the anchor for a sentence in FID mode as the source of information)*, the low number of observations hardly allows us to draw conclusions. The question of whether the object preference (3 out of 4) is reliable has to be left as a subject to further research. A possible explanation on the level of content is that a sentence in FID mode may likely be interpreted as the object's reaction to newly gained information. If the reaction to new

information is crucial, further research should investigate if this tendency is also true for subjects that receive information, as in *Sue erfährt von Jim, dass* (Engl. *Sue learns from Jim that)*. Unlike English, German offers a handful of transitive verbs where the subject is the recipient (similar to *to learn from*). Again, a comparison with the verbs of the mixed class may indicate that verbs that assign a subject that is the source of information result in a substantially higher number of object continuations.

Comparisons between the first four verb classes and the mixed class are, however, deceptive. The mixed class of verbs does not offer a representative baseline of verbs. It is merely a selection of verbs that happened to be chosen in previous experiments with no further limitation but to allow for subject as well as object continuations. Note that the mixed class does not account for H5 – *Referents in subject position show a general tendency to be preferred as the perspectival center.* It is questionable whether any conclusions with respect to H5 can be drawn, given the data. Unlike the other predictions, this is not just because of the low number of data points or the lack of comparable groups of verbs, but is also due to the design of the experiment. Unlike the four other verb classes that comprise verbs with certain features, these verbs do not allow for generalization. In order to come to a general conclusion, a verb class of a representative number of transitive verbs would have to be investigated – although, as suggested by the name, the members of the *mixed class* do not serve this purpose.

The results for the mixed class rather leave room for a conclusion with respect to the methodology: these verbs yielded subject preferences for a following sentence in FID mode when presented in a perception task as discussed in Chapters 4 and 5 as well as in a production task. This may indicate that the anchoring restrictions that could be found in the acceptability rating tasks reported in Chapters 4 and 5 are reflected in the production of FID.

Despite the low number of observations, which rules out an empirical investigation, the pilot study gives valuable insights with respect to the methodology as well as with respect to some of the hypotheses.

Methodologically, this experiment must be regarded as a first attempt to investigate perspective-taking by triggering participants to produce sentences in FID mode.

While four interjections frequently triggered ungrammatical continuations, the other six served the purpose and may be used for a follow-up study.

In addition to the use of triggers that yielded ungrammatical continuations, much data was lost in the process of annotation. In a follow-up study, the number of items as well as the number of participants have to be increased tremendously. Further, it is questionable whether the use of entirely naïve annotators for the second-round annotations was fruitful, as their hesitation to decide for a protagonist enforced the loss of data. In other words, continuation data in FID mode that clearly indicates a certain perspective may not be attributed to a referent because of the annotators' hesitation to decide for a protagonist when a neutral – presumably never-failing – narrator response is an option.

In order to approach the hypotheses properly, in a follow-up study the design of the experimental conditions has to be adjusted. That is, the verb classes have to be expanded in order to test the hypotheses. As discussed above, the lack of comparable conditions (i.e., verbs that assign non-sentient subjects and verbs that take objects that are the source of information) does not allow for conclusions with respect to H3 and H4.

Assuming that the pilot data is not entirely arbitrary, the data indicates that different verbs do have an effect on the anchoring of FID in a following sentence. In order to gain a better understanding of the anchoring preferences and limitations of FID, an investigation of the effect of different verbs will be presented in the following section.

6.3 Experiment 6

Based on the first sentence continuation experiment presented in section 6.2.1, I will present a follow-up study primarily aiming to investigate the same question: will sentence continuations in FID mode be influenced by the verb used to introduce the subject and the object in the story prompt?

Furthermore, in the follow-up, I will test predictions with respect to three verb classes. Unlike in the pilot experiment, I will test a full design that allows for minimal pair comparisons within the verb classes. Also, I present the items (n = 36, spread over two lists) to a larger number of participants (n = 75) in order to collect enough data to conduct statistical analyses. As discussed in section 6.2.3.1, in the pilot, 20% of the continuations were annotated as sentences in FID mode that could be anchored to either the subject or the object. In order to increase the number of sentences that would serve for an empirical analysis, item design in terms of the triggers used as well as annotation round two was improved so that data loss was expected to be less severe than in the pilot.

The three verb classes represent pairs that take either a subject or an object argument that is affected emotionally, a subject or an object that is aware of the action, and a subject or an object that is the source of information that is passed on. The verb classes were chosen based on observations from the pilot study reported in the previous section and are based on the intuitions reported in 6.1: (i) a referent that is emotionally affected is more likely to be the perspectival center, (ii) referents that are non-sentient are hardly available as the perspectival center in a subsequent sentence, and (iii) the source of information is just as likely to be perspectival center as the recipient of the information.

Again, participants were presented with a short prompt that introduced two protagonists and asked to continue a sentence that started with an interjection followed by a comma to trigger continuations in FID mode.

In my first sentence continuation experiment, I tested individual verb classes to get a first impression of whether these verbs yield different continuation data and if at all they trigger object continuations despite a presumable subject preference (H2). In this experiment, verb classes were chosen as oppositional pairs (i.e., they assign certain features to either the subject or the object).

Testing verb classes that assign certain features to either the subject or the object allows for a statistical comparison of two verb classes so that I may draw conclusions with respect to how certain features assigned by the verb impact the availability of a referent in subject or object position to be picked up as the perspectival center in a subsequent sentence.

In this experiment, I will again investigate hypotheses postulated in section 6.2.1, repeated in (234).

(234)   H7: The referent that is chosen as the perspectival center of the FID depends on features assigned by the verb to either the subject or the object of the sentence preceding the FID

H8: Referents that are emotionally more affected by an action are more likely to be the anchor for a subsequent sentence in FID mode regardless of their grammatical function.

H9: Referents that are (typically) non-sentient (i.e., they are unaware of an ongoing action), are hardly available as an anchor for a sentence in FID mode.

H10: Referents that perceive information are just as likely to be the anchor for a sentence in FID mode as the source of information.

H2: Referents in subject position show a general tendency to be preferred as the perspectival center.

6.3.1 Predictions

While the first experiment hardly allowed us to draw conclusions with respect to the hypotheses due to a small number of observations and limitations of the experimental design, in this experiment the hypotheses shall be investigated empirically. The hypotheses in (234) are rephrased for the purpose of the empirical investigation.

(235) H7: The number of subject and object continuations will differ with respect to different verb classes that are used to introduce the referents in the story prompt.

H8: Referents that are emotionally more affected by an action are more likely to be chosen as the anchor for a subsequent sentence in FID mode regardless of their grammatical function.

H8.1: Verbs that assign a subject that is emotionally more affected than the object will yield more subject than object continuations.

H8.2: Verbs that assign an object that is emotionally more affected than the subject will yield more object continuations than subject continuations.

H9: Referents that are (typically) non-sentient (i.e., they are unaware of an ongoing action) will less likely be chosen as an anchor for a sentence in FID mode than a competing referent regardless of their grammatical function.

H9.1: Verbs that assign a subject that is (typically) non-sentient will yield fewer subject than object continuations.

H9.2: Verbs that assign an object that is (typically) non-sentient will yield fewer object than subject continuations.

H10: Referents that perceive information are just as likely to be chosen as the anchor for a sentence in FID mode as the source of information regardless of their grammatical function.

H2: Across all items, participants will produce more subject continuations than object continuations.

In this experiment, again, I will test H2. As argued in section 6.2.3.2, a general subject preference could not be accounted for satisfactorily in the pilot, as the verbs selected were not representative of the entirety of verbs. However, in this design, all verbs represent clusters of minimal pairs where one will result in a certain distribution of subject and object continuations while the other – in theory – will show exactly the opposite distribution. That is, theoretically, this minimal pair design should result in an equal number of subject and object continuations. I predict that this will not entirely be the case. Rather, across all items a significantly higher number of subject continuations will be produced. I will refrain from conclusions with respect to the entirety of verbs based on

the data collected in this experiment as all verbs were carefully chosen[69] with respect to certain features and are thus certainly not representative of the majority of verbs.

With respect to the methodological concern that different interjections may bias participants to continue with a subject or an object perspective, the effect of the interjections on the continuations will be tested empirically.

6.3.2 Material

In order to increase the number of observations, each verb class was represented by six experimental items. The minimal pair design increased the number of classes to six so that the number of stimuli increased to a total of 36 (see Appendix F). The design outlined in the previous section for the pilot experiment remained unchanged: prompts consisted of one sentence with a transitive verb introducing two protagonists that interact. Protagonists were referred to with proper names of different genders in order to disambiguate any pronouns the participants might use in their sentence continuations. Half of the items of each verb class had a female and half had a male referent in subject position. The use of proper names allowed for an OVS reading (see section 6.2.2 on this issue). Still, proper names were used as they serve best to assign equal status to the referents and thus prevent confounds (e.g., due to differences in frequency of NPs).

As sentence continuation is a rather laborious task, the items were distributed across two lists of 18 items each. Each participant saw three verbs of each class. Prompts featured the following verbs:

(236) Affected Objects
       transitive verbs that assign an object that undergoes a change in emotional state
       (see amuse verbs in Levin 1993 p.189),
       i.e., anschreien, verunsichern, provozieren, langweilen, ermutigen, überraschen
       to yell at, to irritate, to provoke, to bore, to encourage, to surprise

       Affected Subjects
       transitive verbs that assign a subject experiencer while the object is the target of
       the emotion (admire verbs, Levin 1993 p.191),
       i.e., bewundern, vermissen, misstrauen, hassen, vergöttern, bemitleiden
       to admire, to miss, to mistrust, to hate, to adore, to pity

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[69] The conclusion drawn in Chapter 4 that subjects are more available as anchors for FID than objects is based on data that builds on a randomly chosen set of transitive verbs.

Non-Sentient Objects
transitive verbs that suggest that the object is most likely not aware of the action performed (partially found in Levin 1993 p.186),
i.e., hinterherschauen, verfolgen, beobachten, beschatten, vermuten, belauschen
to gaze back at s.o., to follow, to observe, to shadow, to expect, to eavesdrop

Non-Sentient Subjects
transitive verbs that suggest that the subject is most likely not aware of the action performed,
i.e., jdm. auffallen, auf die Nerven gehen, inspirieren, auf eine Idee bringen, im Weg stehen, die Sicht nehmen
to get s.b.'s attention, to annoy, to inspire, to give s.b. an idea, to be in s.o.'s way, to block s.o.'s view

Source of Information (O)
transitive verbs that assign an object that is the source of information (verbs of perception, partially found in Levin 1993 p.185),
i.e., erfahren, hören, eine Nachricht erhalten, sich informieren, einen Rat annehmen
to learn, to listen, to get news, to inform oneself, to take advice

Source of Information (S)
transitive verbs that assign a subject that is the source of information (see *transfer-a-message* verbs in Levin 1993 p.202),
i.e., auf etw. hinweisen, erzählen, informieren, zeigen, sagen
to allude, to tell, to inform, to show, to say

Based on the first-round annotation results presented in section 6.2.4.1, only six of the 10 interjections presented in the pilot were used as triggers for FID, since four of the interjections had frequently resulted in ungrammatical continuations. Again, the sentence to continue started with one of the following interjections followed by a comma.

(237)   Na ja, ...   (Engl. *Well*, …)
         Hmm, ...
         Ganz ehrlich, ...   (Engl. *Honestly*, …)
         Komisch, ...   (Engl. *Strange*, …)
         Okay, ...
         Mensch, ...   (Engl. *Man*, …)

Since each participant had to write 18 items, every participant saw each interjection three times. Again, the interjections were distributed across items resulting in 12 lists – six lists with respect to the distribution of interjection, 12 due to the division of all stimuli.

6.3.3 Procedure of Data Collection

Again, Qualtrics was used to collect the sentence continuation data. In November 2020, 75 native speakers participated for course credit. The class was an introductory class, so

it can be assumed that participants were naïve with respect to the hypotheses. The visual layout remained the same as in the pilot experiment (see Figure 7). Also, the instructions were taken from the pilot experiment. The instructions encouraged participants to continue the sentences according to their intuition. Again, it was explicitly permitted to write rhetorical questions or exclamations. Before the experiment, participants were provided with one example. All 18 prompts were randomized for each participant.

6.3.4 Annotation

The 12 lists were presented to 75 participants. As each participant saw 18 prompts, 1350 continuations were collected – 225 per verb class. Again, the annotation of these 1350 sentence continuations was done in two annotation rounds.

In the first round, sentences in FID mode were preselected by trained annotators experienced with FID. Unlike the pilot, the second round of annotations was done by annotators that were not familiar with the research on FID, but were experienced in linguistic annotation. Their task was to judge whether the content of the sentences in FID mode could be anchored to one or the other protagonist.

6.3.4.1 Procedure of Annotation Round One

Again, it was the goal of the preselection of the continuation data to single out sentences in FID mode that could be anchored to one and only one protagonist from all other sentence continuations. For this purpose, the same classification as in the pilot was used. The five labels distinguish: ungrammatical cases (N), continuations indicating direct speech or narrator comments (S & NC), all clear cases of FID (FID) and ambiguous FID (AFID) that can be ascribed to both protagonists (see (230), repeated in (238)).

(238) **N**: all cases that are either ungrammatical or that consist of more than one sentence. However, only use N for entirely odd sentences; typos are not a reason to exclude the item.

S: direct or indirect speech or thought
A comment that is embedded in a matrix clause that indicates a speech act or thought or an utterance that can only be interpreted to be explicitly uttered by one protagonist, possibly by the use of the second person pronoun (e.g., *Also, du bist doch…*).

NC: narrator comment
A subjective comment that must be attributed to a narrator as the content suggests omniscient knowledge that goes beyond the protagonist's knowledge (or indicated by the use of a first-person pronoun).

FID: a sentence in FID mode that is anchored to only one of the two protagonists
A subjective comment that can only be anchored to one of the protagonists (and you have a clear understanding which one of the two protagonists is the anchor).

AFID: an ambiguous sentence in FID mode that can be anchored to either protagonist.
A subjective comment that must be anchored to one of the protagonists but that can plausibly be anchored to either one.

The annotators were provided with annotation guidelines (see Appendix G, similar to (238)). As discussed in section 6.2.2 the prompts potentially allow for an OVS reading. Annotators were thus instructed to mark if the continuation suggested that the participant interpreted the prompt as having an object-first syntax.

6.3.4.2 Results of Annotation Round One

The 1350 sentence continuations were annotated by three student assistants that are experienced in working with FID. The data was presented in random order for each annotator.

The annotations yielded a Fleiss kappa value[70] of 0.614, indicating substantial agreement. The annotators picked the same label in 895 of 1350 sentences. They agreed on the label of *FID* in 548 cases, on *AFID* in two cases, on *ungrammatical sentences* in 12 cases, on *narrator comments* in 139 cases, and on *direct* or *indirect speech* in 194 cases. In 455 cases they did not agree (see Figure 12).

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[70] Using the irr-package in R (R core team) with the function *kappam.fleiss*
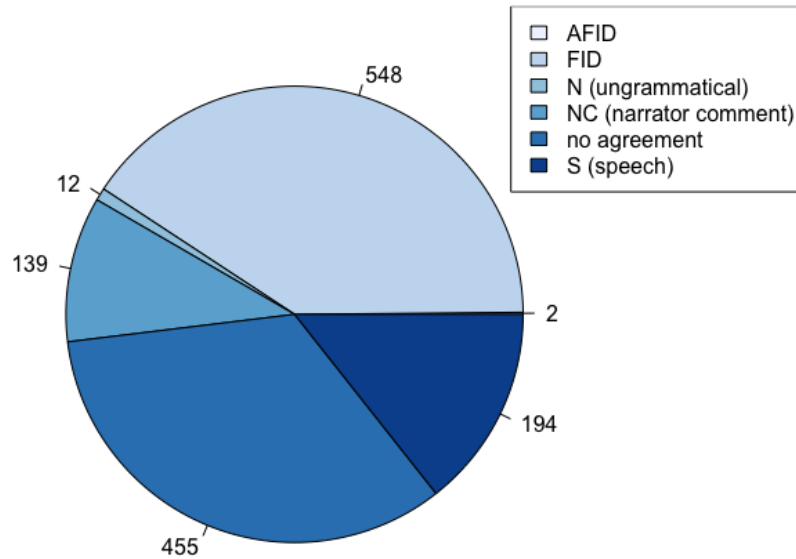
Figure 12: Agreement of all three annotators in annotation round one

Agreement cases varied with respect to their distribution across the verb classes.

	affected (S)	affected (O)	non-sentient (S)	non-sentient (O)	source (S)	source (O)
AFID	0	0	0	1	1	0
N	1	5	3	1	1	1
NC	50	25	24	22	14	4
S	37	44	31	34	27	20
FID	**80**	**88**	**102**	**97**	**90**	**91**
no agreement	57	63	65	69	92	109

Table 17: Agreement cases by verb class

For 548 continuations, the annotators agreed on the label of FID, but 20 cases had to be excluded as the continuation suggested that participants interpreted the prompt as having an OVS syntax (see section 6.2.2). The remainder of the 528 sentences were considered for further annotation.

6.3.4.3 Procedure of Annotation Round Two

For the second round of annotations, 528 sentence continuations were considered. The task of the annotators in the second round of annotation was to mark whether the sentence

continuations produced by the participants could be ascribed to *the subject* or *the object* that was introduced in the prompt.

Unlike in the pilot experiment, the second-round annotations were done by student assistants rather than participants recruited via Prolific. This decision was motivated by two methodological issues. The first issue regards the naïve annotators' hesitation to appoint the perspective to a protagonist. Annotators were encouraged to rather decide for a protagonist perspective whenever there seemed to be a perspectival bias (which must have been there for all cases of FID, as otherwise the first-round annotators would have decided on AFID, ambiguous FID, or NC, a narrator comment). Still, the naïve annotators that were recruited via Prolific chose the narrator's perspective in 13.34% of the FID cases, which lead to an additional loss of data. With trained annotators, on the other hand, it was possible to point out that the data was produced in a sentence continuation experiment and that it was of particular interest to find out if participants continued the story from the subject's or from the object's perspective.

Secondly, the number of continuations that made it to the second round of annotation (i.e., 528 two-sentence items) was too great to be presented to participants as a multiple-choice experiment – as was done for the pilot data. Splitting the data into lists where each annotator was presented with only a small part of the data would have resulted in numerous lists.

For reasons of simplicity, the trained annotators were presented with the list of data in an excel sheet. With respect to the large amount of data, the annotators were allowed to split the annotation according to their own working routines and concentration.

The instructions used in the pilot were given to the annotators as annotation guidelines (see Appendix G). Furthermore, the annotators were informed about the overall research goal (i.e., they knew they had to annotate the data with respect to the perspective chosen by the participant). They did not know about the hypotheses that the choice of the perspective depends on the verbs used in the prompt. The annotators were given the same options used in the second-round annotations in Qualtrics in the pilot (i.e., *the subject*, *more likely the subject*, *the object*, *more likely the object*, *both of them*, or *an uninvolved narrator*). Again, they were encouraged to decide for a protagonist perspective rather than the narrator – unless there was evidence that the continuation had to be anchored to a narrator.

6.3.4.4 Results of Annotation Round Two

Annotations were collected for all 528 FID continuations from three annotators, resulting in 1584 judgments. In the analyses, *definitely the subject/object* and *more likely the subject/object* were summarized as *subject* or *object* responses, as a differentiation was not important with respect to the research question but merely a matter of comforting the annotators in their decisions.

more likely the subject/ definitely the subject	more likely the object/ definitely the object	equally both of them	narrator's perspective
927	593	53	11

Table 18: Total number of responses across all classes

Across the prompts, verb classes were equally distributed (six verbs for each of the six verb classes, see (236) for a classification, summarized in (239)).

(239)   Affected Subjects
Transitive verbs that take a referent in subject position as argument that experiences an emotion while the object is the target of the emotion

Affected Objects
Transitive verbs that take a referent in object position as argument that undergoes a change in emotional state

Non-Sentient Subjects
Transitive verbs that suggest that the referent in subject position is most likely not aware of the action that is performed

Non-Sentient Objects
Transitive verbs that suggest that the referent in object position is most likely not aware of the action that is performed

Source of Information (S)
Transitive verbs that take a referent in subject position as argument that is the source of information

Source of Information (O)
Transitive verbs that take a referent in object position as argument that is the source of information

As not all data qualified as FID in the first round of annotation, the set of data shown to the second-round annotators was not balanced with respect to verb class, so the total number of responses varied across verb classes.

175

	affected (S)	affected (O)	non-sentient (S)	non-sentient (O)	source (S)	source (O)
Subject	228	57	39	292	68	243
Object	7	181	204	8	172	21
Both	5	9	7	5	19	8
Narrator	0	2	5	1	2	1

Table 19: Total number of responses by verb class

Similar to the first round of annotations, the responses of the three annotators will not be treated as judgments, but rather as annotations so that for each individual continuation there is only one answer. For that purpose, the responses of the annotators were compared, and only cases of agreement of all three annotators were considered for further analysis. The annotations yielded a Fleiss kappa value[71] of 0.752, indicating substantial inter-rater agreement.

	affected (S)	affected (O)	non-sentient (S)	non-sentient (O)	source (S)	source (O)
Subject	72	17	6	91	14	73
Object	2	56	53	1	42	4
No agreement	6	10	26	10	31	14

Table 20: Agreement of all three annotators by verb class

As there were no cases of agreement on the labels *both* or *the narrator*, the following analysis only takes subject or object responses into account.

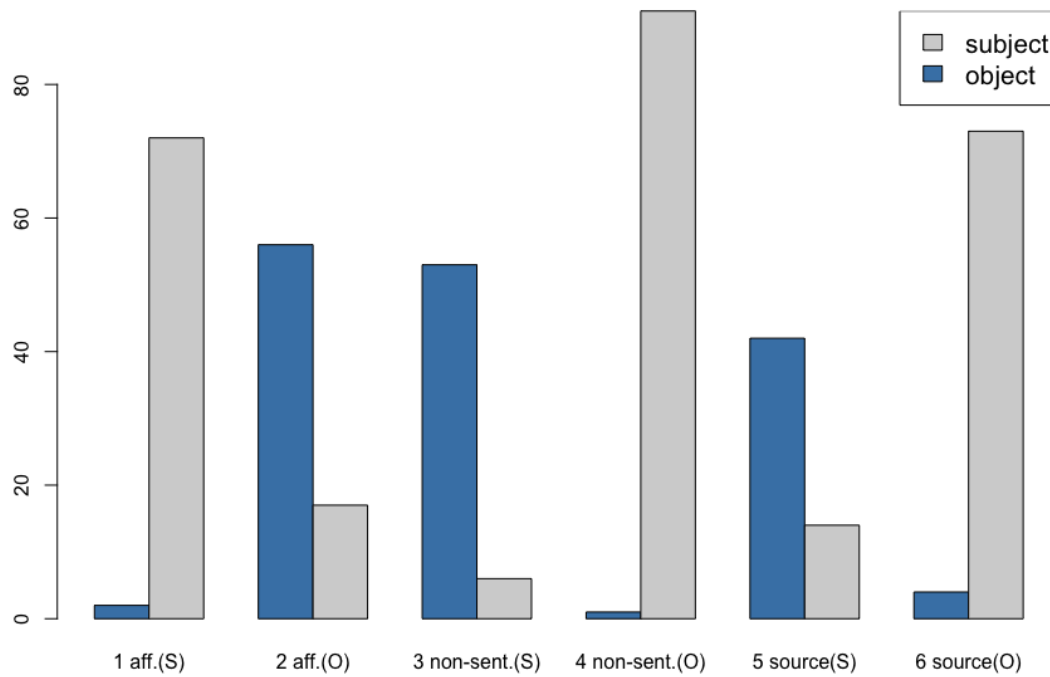[71] Using the irr-package in R (R core team) with the function *kappam.fleiss*

Figure 13: Agreement on subject and object responses by verb class

6.3.4.5 Data Analysis

All cases of agreement were submitted to Bayesian mixed effects models[72] estimated in R (R Core Team 2015) in order to account for the hypotheses postulated in (235). Comparisons of individual classes were calculated using the emmeans package (Lenth 2020).

In order to account for H7 (i.e., verb classes' impact the choice of subject or object continuations), a model including verb class as a predictor[73,74] was compared to a model without the predictor[75] using a Bayes factor comparison. A Bayes factor higher than 100 indicates decisive evidence that the distinction between verbs classes makes a difference for the model outcome (Jeffreys 1961 p.432).

For a comparison of the classes that take an affected referent in either subject or object position as argument (H8), a model was specified to identify if the affected referent was

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[72] The continuation data and the scripts are available online: https://osf.io/wegtn/

[73] The model was specified as follows: (response label ~ 0 + verb class + (0 + verb class | participant) + (1|item). By estimating a model without an intercept, the model estimates the shares in each class directly. This means that the shares are not expressed via a reference class and the differences between that class and the others (for more information on this specification and its advantages, see McElreath 2016 p.150)

[74] Random slopes for items are not possible because each item only exists in one class, therefore a random effects structure with random intercepts for items is already maximal.

[75] The model was specified as follows: (response label ~ 1 + (0 + verb class | participant) + (1 | item))

chosen[76]. The combined estimates[77] indicate that the affected referent was chosen as the perspectival center significantly more often than in 50% of the cases (estimated share = 0.86, CI: [0.78; 0.94]). A closer look at the individual classes (H8.1 & H8.2) indicates that the affected subject was chosen as the perspectival center with an estimated share of 96% (CI: [0.90; 0.99]) while the affected object was chosen with a share of 78% (CI: [0.62; 0.91]).

Combined estimates for the classes that assign a non-sentient referent (H9) indicate that the non-sentient referent was chosen in 7% of the cases (CI: [0.02; 0.13]). Whenever the non-sentient referent was the subject (H9.1) the model estimated a share of 10% subject responses (CI: [0.03; 0.21]). Non-sentient objects (H9.2) were chosen to be the perspectival center in 2% of the cases (CI: [<0.00; 0.07]).

The referent that is the source of information (H10) was chosen as the perspectival center with a share of 15% (CI: [0.06; 0.23]).

Again, the data will be analyzed with respect to H2 (i.e., throughout all continuations there will be more subject continuations than object continuations). The model with response label and verb class as predictors indicates that subject continuations were produced in 57% [CI: 0.53; 0.62] of the cases. Despite an expected balance due to the oppositional pair design, the subject was chosen significantly more often than 50% of the time, confirming the overall subject preference (see Chapters 4 and 5).

6.3.5 Discussion

Unlike in the pilot, in the follow-up a large amount of data was collected in order to conduct statistical analyses – 1350 continuations were produced for six groups of verbs, out of which 431 continuations were clearly identified as cases of FID that could be ascribed to either the subject or the object.

Most importantly, the results show that the number of subject and object continuations differs across different verb classes (H7), indicating that the verb that is used to introduce the referents in the story prompt predicts which referent is chosen as the anchor for a subsequent sentence in FID mode. This is particularly interesting with respect to the classes that yield more object continuations. While the research presented in Chapters 4

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[76] The model was specified as follows: (chosen referent ~ 0 + class + (0 + verb class | participant) + (1 | item))

[77] Due to the unbalanced data set, posterior samples of the model were used to derive an (equally weighted) combined estimate.

and 5 predicts that participants continue prompts with FID anchored to the subject of the prompt, this was not the case whenever verbs were used that assign (i) an emotionally affected object (87% object continuations), (ii) a non-sentient subject (90% object continuations), or (iii) a subject that is the source of information (78% object continuations).

For classes one and two, the combined estimates indicate what is predicted in H8 (i.e., referents that are emotionally more affected by an action are more likely (86%) to be chosen to be the anchor for a subsequent sentence in FID mode regardless of their grammatical function). Likewise, referents that are (typically) non-sentient (i.e., they are unaware of an ongoing action), are less likely (7%) to be chosen as the anchor for a sentence in FID mode than a competing referent regardless of their grammatical function (H9).

In H10 it was claimed that referents that perceive information are just as likely to be chosen as the anchor for a sentence in FID mode as the source of information, regardless of their grammatical function. The data indicates that in fact the referent that receives information is more likely to be chosen as the anchor for a following sentence in FID mode (85%).

Recall that the design was intended to yield minimal pairs that are – theoretically – oppositional. That is, emotional affectedness, non-sentience, and being the source of information were assigned to either the subject or the object. Though the predicted impact of the verbs did show regardless of the grammatical function (compare the results for H8.1 & H8.2 and H9.1 & H9.2), overall subject and object continuations were not distributed equally. This may be explained with regard to the results presented in the previous chapters: protagonists functioning as subjects are more available as anchors for FID than protagonists functioning as objects (H2), so it was to be expected that across all items participants would produce more subject continuations than object continuations.

6.4 General Discussion

In this chapter, I have presented evidence from two sentence continuation studies that investigated the impact of verb semantics on protagonists' potential to be perspectival centers. While previous experiments suggested that referents that are introduced as subjects are preferred as perspectival centers, certain verbs systematically promote the referent in object position to be the perspectival center (see (215) repeated in (240)).

(240) a. Johan pinched Elli. Huh, why did he do that?
       b. Emma kicked Sebastian. Ouch, that hurt!
       c. Kira surprised Leo. Oh, that was so nice of her!
       d. Lars insulted Kirsten. That was just hurtful!
       e. Simon informed Jenna about the new regulations. No problem for her!

However, I have argued that the availability of the referent in object position as the perspectival center does not indicate a preference based on grammatical function. Rather, the availability depends on certain features that are assigned to the referent, which in the case of (240) is the object, such as physical or emotional affectedness.

The claim that different verbs trigger different referents to be the perspectival center was first tested in a pilot study. Although the low number of observations did not allow for a statistical analysis, numeric differences indicate an effect of verb class on the continuation from the subject's or the object's perspective.

In order to investigate whether participants are more likely to pick up the perspective of one or the other referent as the perspectival center regardless of their grammatical function, a second sentence continuation experiment was conducted that presented verb classes in minimal pairs, (i.e., verbs that assign a certain feature to either the subject or the object).

The results of the second experiment support the claim that different verbs single out different referents as perspectival centers, in particular that (i) referents that are emotionally more affected by an action are more likely to be chosen as the anchor for a subsequent sentence in FID mode, (ii) referents that are (typically) non-sentient are less likely to be chosen as the anchor for a sentence in FID mode than a competing referent, and (iii) referents that perceive information are just as likely to be chosen as the anchor for a sentence in FID mode as the source of information. While the comparison of the minimal pairs indicates that grammatical function does not play a role (i.e., emotionally affected referents in subject position lead to more FID continuations from the subject's perspective while emotionally affected referents in object position lead to more FID continuations from the object's perspective), nevertheless, the subject preference that was investigated in Chapters 4 and 5 shows in the data collected in the continuation study. That is, although the design assigns features to either the subject or the object, which could potentially lead to an equal distribution of subject and object continuations, the number of subject continuations was significantly higher than the number of object continuations across all conditions.

I therefore conclude that certain features strongly bias the availability of arguments as perspectival centers (e.g., non-sentient object verbs triggered 98% subject continuations), but the semantics of the verb potentially interacts with the effect of grammatical function (e.g., the affected subject was chosen with an estimated share of 96% while the affected object was chosen with a share of 78%).

One shortcoming with respect to the choice of stimuli is that the verbs do not account for the potential interaction of verbal features. Assuming that non-sentience hinders activation while emotional affectedness promotes it, it would be interesting to investigate whether and how these factors interact and whether they differ in potential. However, this was not done due to the lack of suitable verbs – verbs that assign an affected referent that is non-sentient are rather rare (exceptions are *to infect, to nominate, to betray;* yet, even for these exceptions the referents are not typically unaware).

While I have deliberately refrained from making a generalization regarding the influence that semantic roles have on perspective-taking, the results presented in this chapter may allow for a first generalization regarding a hierarchy of perspectival centers depending on semantic features assigned by the verb: (i) the preference for the affected referent indicates a preference for the EXPERIENCER over the AGENT/STIMULUS; (ii) the preference for the referent that receives information over the source of information may indicate a preference for the GOAL over the SOURCE.

As elaborated earlier, this study was not designed to yield a comprehensive list of verb classes and their potential to activate perspectival centers. In general, the results suggest that (i) verb semantics has a strong influence on perspective taking (see for example the 93% avoidance of non-sentient referents), and (ii) sentence continuations can be used as a means to account for the underlying assignment of perspectival centers.

7 Conclusion

In this dissertation I have investigated the anchoring of FID in contexts where two discourse referents compete as the perspectival center. The main goal of this thesis was to approach the anchoring mechanisms empirically. The empirical studies presented in Chapters 4, 5, and 6 support the claim outlined in Chapter 3 that a discourse referent must be sufficiently activated in a linguistic context in order to serve as the anchor for a sentence in FID mode.

To begin with, in Chapter 2, I introduced FID as a way of speech and thought representation. I outlined the importance of perspective shifts in literary studies, in particular in the field of narratology. Narratologists are interested in capturing the point of view a story is presented from as well as identifying shifts in perspective throughout a novel. The depiction of FID, a technique used to temporally shift perspectives, has received much attention (Fludernik 2014; Discherl and Pafel 2015; Bal 2017), yet there is little research investigating the phenomenon empirically.

I have argued that FID shares characteristics with direct and indirect discourse, but crucially differs from them with respect to its anchoring mechanisms. While in direct and indirect discourse a shift in perspective is explicitly enforced (e.g., by embedding or by the use of quotation marks), there are no such markers that indicate who uttered or thought a sentence that is presented in FID mode. The identification of the factors that determine who gets to be the anchor for the FID has remained a desideratum, however. Though speculations have been formulated that FID must be "linked to a protagonist who is accessible and salient at the current point of the story" (Eckardt 2014 p.50; Harris 2012 for a similar approach) the underlying mechanisms have been investigated only sparsely (Harris 2012; Kaiser 2015; Bimpikou 2019, based on the assumptions presented in Hinterwimmer 2019).

The study of literature is traditionally rather descriptive, but there is growing interest in investigating literary phenomena empirically. The research at hand contributes not only to a proper depiction of FID and its characteristics but also to a better understanding of the mechanisms that establish perspectival centers in narratives. Although this thesis primarily addresses a linguistics audience, the empirical findings and the experimental approach to the topic I have adopted should be of interest to narratologists as well.

In Chapter 3, I provided an extensive depiction of the linguistic characteristics of FID – including an overview of different semantic approaches. Following this, the issue of anchoring FID was illustrated. That is, while it is unproblematic to ascribe FID to a referent whenever there is only one referent available in the context, as in (241) a, the activation of several discourse referents, as in (241) b, challenges the clear ascription of the perspective-dependent sentence.

(241) a. Nina was sitting at the table.
   How disgusting! There was a hair on her plate.
   b. Nina, John and Joe were sitting at the table.
   How disgusting! There was a hair on her plate.

Though in (241) b, the situation is similar (i.e., there is a hair on Nina's plate that is perceived to be disgusting), the ascription of the thought is not as straightforward as in (241) a. That is, it is either Nina, one of her companions, all of them, or a narrating instance that is the anchor to whom the thought must be ascribed.

At a general level, I suggested that the availability of a referent as the perspectival center depends on its activation. I sketched some implications of this claim that motivated the research presented in this thesis:

(242) I. Referents must be activated linguistically
   II. There is no exhaustive list of linguistic markers that activate a referent
   III. A minimum of activation is necessary in order to serve as the anchor for FID
   IV. Linguistic markers that are responsible for the activation of a referent may interact and override each other
   V. Activation allows for a shift in perspective – it does not force it

The data presented in this thesis give reason to assume that referents must be activated linguistically ((242) I). Although the experiments do not account for referents as perspectival centers that are not activated linguistically (i.e., not mentioned in a text but, for example, presented visually), the results indicate that higher linguistic activation increases the availability of a referent as the perspectival center. It can thus be assumed that linguistic activation has an effect on the availability of a referent. However, ultimately, it cannot be excluded that other – non-linguistic – cues impact the anchoring of FID.

While there is still no exhaustive list of linguistic markers that activate a referent, the studies reported in this thesis provide first insights as to which factors are relevant ((242) II). The data indicates an effect of grammatical function, referential expression, global activation, and verbal features assigned to the referents by the verb in the preceding

sentence on the anchoring of FID. There is also some evidence that these factors interact and can override each other ((242) IV) (e.g., subjecthood and reference with a proper name boost availability; global activation overrides local subjecthood).

The claim that a minimum of activation is necessary ((242) III) was not approached empirically. However, the data indicates that low activation impedes anchoring. In Experiment 2, for example, the referent with the lowest number of *availability-increasing features* (i.e., being introduced by an indefinite NP in object position while the competitor was referred to with a proper name in subject position), was rated worst as an anchor for FID. Also, the sentence continuation data in Experiment 6 hint in that direction; referents with low activation (e.g., ones that are non-sentient) are rarely chosen as the perspectival center.

The claim that activation allows for a shift in perspective while it does not force it ((242) V) was not targeted in the investigation, but influenced the experimental design. Though the target sentences in FID mode were carefully created – intended to be identified as FID anchored to a protagonist – it is possible that participants did not interpret the target sentence as a thought anchored to a protagonist but as a comment by a narrator. While in the acceptability rating studies such no-shift interpretations could not be controlled for, the production task could account for such data more appropriately. Continuations that indicated that participants continued from the perspective of the narrator[78] were excluded from further analyses in annotation round one.

To sum up, with respect to the assumptions presented in (242), the data presented in Chapters 4, 5, and 6 of this thesis allow for the following conclusions:

(243) I. Linguistic activation has an effect on the availability as the perspectival center
II. Grammatical function, referential expression, global activation, and verbal features are cues that should be added to the list of linguistic markers that activate a referent
III. Low activation leads to low availability
IV. Linguistic markers such as grammatical function and referential expression interact, while global activation overrides local activation
V. The perspective of the narrator is available despite referential activation

Also, in Chapter 3, I presented a review of related research on perspective-taking that supports the following assumptions:

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[78] Although the prompts introduced two referents that were activated (one more than the other according to the manipulation), participants frequently continued from a narrator's perspective. In Experiment 6, for example, participants continued from the narrator's perspective in 10.30% and from a protagonist's perspective in 40.59% of all continuations.

(244) I. Perspective-taking affects the processing of information presented in a narrative (Pichert and Anderson 1977)
II. Perspective-taking in language is encoded and processed in mental representation (Millis 1995)
III. Perspective-establishing cues have an effect on the perception of a narrative (Hartung et al. 2016)
IV. The linguistic context has an effect on the interpretation of a perspective-dependent expression or phrase (Harris and Potts 2009; Kaiser 2015; van Krieken 2018; Kaiser 2018)

The empirical investigation reported in this thesis therefore adds further support for the claim presented in (244) IV; the acceptability rating studies presented in Chapters 4 and 5 show that perspective-dependent sentences were not perceived to be as natural, depending on manipulations in the linguistic context. Likewise, the manipulations in the linguistic context provided in the prompts in the sentence continuation experiments presented in Chapter 6 led to different ascriptions of the perspectival center, which resulted in continuations from either the subject's or the object's perspective, depending on the context.

In particular, in Chapter 3, I outlined the specific anchoring mechanisms that were subject to empirical investigation in this thesis. I proposed to the following assumptions:

(245) I. Referents functioning as subjects are more available as anchors for FID than referents functioning as objects.
II. Referents referred to with a proper name are more available as an anchor for a sentence in FID mode than referents that are introduced by an indefinite NP.
III. Referents that are emotionally more affected by an action are more likely to be the anchor for a subsequent sentence in FID mode than a competing referent – regardless of their grammatical function.
IV. Referents that are (typically) non-sentient (i.e., unaware of an ongoing action) are hardly available as an anchor for a sentence in FID mode – regardless of their grammatical function.
V. Referents that perceive information are just as likely to be an anchor for a sentence in FID mode as referents that are sources of information – regardless of their grammatical function.

The data presented in the empirical investigation in Chapters 4, 5, and 6 indicate that: (i) referents in subject position are preferred as anchors over referents in object position (see, for example, the significant main effect of grammatical function in Experiment 2); (ii) referents introduced with a proper name are preferred as anchors over referents that are introduced with an indefinite noun phrase (see, for example, the significant main effect of referential expression in Experiment 2); (iii) referents that are activated in a larger context are preferred over referents that are highly activated in the sentence preceding the FID (see, for example, the significant two-way interaction of the presence of a competitor

and the locally activated referent in Experiment 4); and, (iv) referents that are assigned particular verbal features are preferred over competing referents (see the interpretation of the Bayes factor reported in Experiment 6). While (245) III and IV are strongly reflected in the data (86% continuations for the emotionally affected referent's perspective; 93% avoidance of the non-sentient referent's perspective), (245) V must be revised: referents that perceive information were, in fact, more likely to be chosen as an anchor for a sentence in FID mode compared to referents that are the source of information (85% continuations from the receiver's perspective).

While I presented an empirical approach to the issue of anchoring FID – rather than a corpus-based approach – I refrained from discussing a large number of examples found in narratives. Yet, recall that in the introduction I presented a number of examples taken from the Harry Potter series in order to argue that, in fact, perspective-taking is motivated linguistically; it is not – at least not exclusively – an issue of sympathizing with a protagonist. Now, looking at the results presented in this thesis, the examples taken from Harry Potter can be accounted for: even though Frank is a minor character that only appears in one chapter, in (246) he is the only referent linguistically activated in the context, so he serves as the perfect anchor for the following FID.

(246)   Frank knew what he must do. Now, if ever, was the time to go to the police.
         (Rowling, Harry Potter and the Goblet of Fire p.7)

Likewise, Aunt Petunia is the subject of the sentence and thus serves as good perspectival center despite her unpopularity throughout the Harry Potter series.

(247)   Aunt Petunia let out a hair-raising shriek; nothing this filthy had entered her
         house in living memory. (Rowling, Harry Potter and the Half-Blood Prince p.54)

Even though the case in example (248) seems to contradict the claim that referential activation triggers perspective-taking, the findings presented in Chapter 5 hint at what has been proposed for larger contexts: with Harry Potter being globally prominent throughout the larger context, he serves as an anchor for the FID, even with a locally prominent referent interfering.

(248)   Ancient and shriveled, many people said he hadn't noticed he was dead. He had
         simply got up to teach one day and left his body behind him in an armchair in
         front of the staff room fire; his routine had not varied in the slightest since.
         Today was as boring as ever.
         (Rowling, Harry Potter and the Chamber of Secrets p.112-113; italics indicate
         the sentence in FID mode)

The investigation presented in this thesis sheds light on the impact of grammatical function on the availability as perspectival center, but in particular the investigation concerning the role of the subject suffers from confounds. This is because in canonical word order in German, the subject is mentioned first, so the effect of subjecthood cannot be disentangled from the effect of being mentioned first. While this issue could, in theory, be solved by presenting sentences with OVS syntax, so that the object is mentioned first, such an approach does not provide a genuine solution, because while fronting the object is possible in German, OVS syntax is highly marked; unless there is motivation to put focus on the object (e.g., by presenting it as a contrast), an OVS sentence sounds highly unnatural. With no proper solution to investigating the effect of the order of mention and the role of subjects and objects, it may be an option to investigate referential activation in other grammatical functions that are more flexible with respect to their syntactic position, such as adjuncts. If an effect of the order of mention can be found, the findings regarding grammatical function must be revised accordingly.

Another potential shortcoming of the investigation presented in this thesis is its limitation with respect to the range of factors that are investigated. That is, only the role of subjecthood on objecthood was investigated; it is not possible to make any predictions with respect to other grammatical functions. Likewise, only proper names and indefinite NPs were accounted for as referential expressions. These limitations point right at the outlook of this thesis: having provided examples for using perception as well as production tasks investigating the underlying perspectival centers that are activated, future research may (i) further investigate the anchoring of FID or (ii) apply the methodology and design to investigate related phenomena such as protagonist projection or viewpoint shifting. Anchoring mechanisms to investigate further may include the wider range of grammatical function, referential expression, verbal features, order of mention, and number of references. An investigation of coherence relations on perspective-taking may also add valuable insights.

All in all, the work presented in this thesis provides a first empirical in-depth investigation of the anchoring of FID, and thus contributes to the ongoing psycholinguistic investigation of perspective-taking in language and, hopefully, inspires further research in this area.

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Appendix

Appendix A: Experimental Items Experiment 1

1.
In der Silvesternacht vor der Jahrtausendwende schaute sich Miriam aufgeregt auf ihrer Party um. Sehnsüchtig suchte sie ihren Verlobten.
a. FID$_{preferred}$: Jetzt gleich zum Feuerwerk würde sie ihren Liebling küssen.
b. FID$_{dispreferred}$: Jetzt gleich zum Feuerwerk würde er seinen Liebling küssen.
c. Neutral: Er wollte sie beim Feuerwerk küssen.

2.
Als die erste Videospiel-Konsole auf den Markt kam, plünderte Nora ihr Sparschwein. Sie kaufte ihrem Verlobten zum Geburtstag eine der neuen Konsolen.
a. FID$_{preferred}$: Morgen schon würde sie mit ihrem Süßen die Tasten zum Glühen bringen.
b. FID$_{dispreferred}$: Morgen schon würde er mit seiner Süßen die Tasten zum Glühen bringen.
c. Neutral: Er würde mit ihr die Tasten zum Glühen bringen.

3.
Als der Halloween-Abend vorbei war, konnte Peter seinen vollen Süßigkeitenbeutel kaum noch tragen. Er zeigte seiner Schwester, was er alles gesammelt hatte.
a. FID$_{preferred}$: Gleich schon würde sie sich mit diesem Schleckermaul den Bauch vollschlagen.
b. FID$_{dispreferred}$: Gleich schon würde er sich mit dieser Naschkatze den Bauch vollschlagen.
c. Neutral: Sie wollte sich mit ihm den Bauch vollschlagen.

Appendix B: Experimental Items Experiment 2

1.
a. Emily sprach Sascha in der Mensa an, als sich ein seltsamer Geruch von der Essensausgabe ausbreitete.
b. Sascha sprach Emily in der Mensa an, als sich ein seltsamer Geruch von der Essensausgabe ausbreitete.

c. Ein Mädchen sprach Sascha in der Mensa an, als sich ein seltsamer Geruch von der Essensausgabe ausbreitete.
d. Ein Junge sprach Emily in der Mensa an, als sich ein seltsamer Geruch von der Essensausgabe ausbreitete.

e. Ein Mädchen sprach einen Jungen in der Mensa an, als sich ein seltsamer Geruch von der Essensausgabe ausbreitete.
f. Ein Junge sprach ein Mädchen in der Mensa an, als sich ein seltsamer Geruch von der Essensausgabe ausbreitete.

g. Emily sprach einen Jungen in der Mensa an, als sich ein seltsamer Geruch von der Essensausgabe ausbreitete.

h. Sascha sprach ein Mädchen in der Mensa an, als sich ein seltsamer Geruch von der Essensausgabe ausbreitete.

Igitt, sie würde heute wohl doch besser zu Hause essen.

2.
a. Patrick half Kathleen während einer Mission bei einem Onlinespiel, als plötzlich die Verbindung unterbrochen wurde.
b. Kathleen half Patrick während einer Mission bei einem Onlinespiel, als plötzlich die Verbindung unterbrochen wurde.

c. Ein Gamer half Kathleen während einer Mission bei einem Onlinespiel, als plötzlich die Verbindung unterbrochen wurde.
d. Eine Gamerin half Patrick während einer Mission bei einem Onlinespiel, als plötzlich die Verbindung unterbrochen wurde.

e. Ein Gamer half einer Gamerin während einer Mission bei einem Onlinespiel, als plötzlich die Verbindung unterbrochen wurde.
f. Eine Gamerin half einem Gamer während einer Mission bei einem Onlinespiel, als plötzlich die Verbindung unterbrochen wurde.

g. Patrick half einer Gamerin während einer Mission bei einem Onlinespiel, als plötzlich die Verbindung unterbrochen wurde.
h. Kathleen half einem Gamer während einer Mission bei einem Onlinespiel, als plötzlich die Verbindung unterbrochen wurde.

Na toll, jetzt würde er nochmal von vorne anfangen müssen.

3.
a. Kilian spielte Maren eine besonders seltene Schallplatte vor.
b. Maren spielte Kilian eine besonders seltene Schallplatte vor.

c. Ein Musikliebhaber spielte Maren eine besonders seltene Schallplatte vor.
d. Eine Musikliebhaberin spielte Kilian eine besonders seltene Schallplatte vor.

e. Ein Musikliebhaber spielte einer Musikliebhaberin eine besonders seltene Schallplatte vor.
f. Eine Musikliebhaberin spielte einem Musikliebhaber eine besonders seltene Schallplatte vor.

g. Kilian spielte einer Musikliebhaberin eine besonders seltene Schallplatte vor.
h. Maren spielte einem Musikliebhaber eine besonders seltene Schallplatte vor.

Oh, wie er den Klang alter Schallplatten liebte.

Appendix C: Experimental Items Experiment 3

1.
a. Eine wilde Fahrt

Die Kirmes war in der Stadt. Es war ein großes Ereignis. Viele Jugendliche tummelten sich dort nach der Schule. Besonders der Autoscooter war sehr beliebt unter ihnen. Nino rammte Lucie mit dem Wagen in die Seite. Hui, er hatte echt vergessen, wie viel Spaß das machte.

b. Eine wilde Fahrt

Die Kirmes war in der Stadt. Es war ein großes Ereignis. Viele Jugendliche tummelten sich dort nach der Schule. Besonders der Autoscooter war sehr beliebt unter ihnen. Lucie rammte Nino mit dem Wagen in die Seite. Hui, er hatte echt vergessen, wie viel Spaß das machte.

c. Eine wilde Fahrt

Die Kirmes war in der Stadt. Lucie hatte das komplette ersparte Taschengeld dabei. Auf der Kirmes traf sie sich mit Nino am Autoscooter. Sie gab gleich Vollgas. Nino rammte Lucie mit dem Wagen in die Seite. Hui, er hatte echt vergessen, wie viel Spaß das machte.

d. Eine wilde Fahrt

Die Kirmes war in der Stadt. Nino hatte das komplette ersparte Taschengeld dabei. Auf der Kirmes traf er sich mit Lucie am Autoscooter. Er gab gleich Vollgas. Lucie rammte Nino mit dem Wagen in die Seite. Hui, er hatte echt vergessen, wie viel Spaß das machte.

e. Eine wilde Fahrt für Lucie

Lucie war auf der Kirmes. Sie hatte das komplette ersparte Taschengeld dabei. Auf der Kirmes traf sie sich mit Nino am Autoscooter. Sie gab gleich Vollgas. Nino rammte Lucie mit dem Wagen in die Seite. Hui, er hatte echt vergessen, wie viel Spaß das machte.

f. Eine wilde Fahrt für Nino

Nino war auf der Kirmes. Er hatte das komplette ersparte Taschengeld dabei. Auf der Kirmes traf er sich mit Lucie am Autoscooter. Er gab gleich Vollgas. Lucie rammte Nino mit dem Wagen in die Seite. Hui, er hatte echt vergessen, wie viel Spaß das machte.

2.
a. Romantische Verabredungen

Der Frühling nahte. Viele frisch verliebte Pärchen verabredeten sich in dieser Zeit. Der Park war besonders beliebt. Viele von ihnen picknickten dort unter den Bäumen. Franca umarmte Tim zur Begrüßung. Heute würde sie ihm endlich sagen, was sie für ihn empfand.

b. Romantische Verabredungen

Der Frühling nahte. Viele frisch verliebte Pärchen verabredeten sich in dieser Zeit. Der Park war besonders beliebt. Viele von ihnen picknickten dort unter den Bäumen. Tim umarmte Franca zur Begrüßung. Heute würde sie ihm endlich sagen, was sie für ihn empfand.

c. Romantische Verabredungen

Der Frühling nahte. Tim hatte ein Date ausgemacht. Im Park hatte er sich mit Franca auf ein Picknick verabredet. Er hatte einen ruhigen Ort unter einem Baum ausgewählt.

Franca umarmte Tim zur Begrüßung. Heute würde sie ihm endlich sagen, was sie für ihn empfand.

d. Romantische Verabredungen
Der Frühling nahte. Franca hatte ein Date ausgemacht. Im Park hatte sie sich mit Tim auf ein Picknick verabredet. Sie hatte einen ruhigen Ort unter einem Baum ausgewählt. Tim umarmte Franca zur Begrüßung. Heute würde sie ihm endlich sagen, was sie für ihn empfand.

e. Tims romantische Verabredung
Tim hatte ein Date. Er hatte ein Picknick geplant. Nachmittags traf er Franca in einem Park. Er hatte bereits die Picknickdecke an einer ruhigen Stelle unter den Bäumen ausgebreitet.
Franca umarmte Tim zur Begrüßung. Heute würde sie ihm endlich sagen, was sie für ihn empfand.

f. Francas romantische Verabredung
Franca hatte ein Date. Sie hatte ein Picknick geplant. Nachmittags traf sie Tim in einem Park. Sie hatte bereits die Picknickdecke an einer ruhigen Stelle unter den Bäumen ausgebreitet.
Tim umarmte Franca zur Begrüßung. Heute würde sie ihm endlich sagen, was sie für ihn empfand.

Appendix D: Experimental Items Experiment 4

1.
a. Bergpanorama
Mountainbiken war ein beliebtes Hobby. Besonders in den Alpen gab es die unterschiedlichsten Strecken. Viele davon waren sehr anspruchsvoll, aber für Anfänger war auch etwas dabei.
Rafael zeigte Ria einen Steinbock auf einem nahegelegenen Felsen. Wow, er liebte die Natur hier oben einfach nur.

b. Bergpanorama
Mountainbiken war ein beliebtes Hobby. Besonders in den Alpen gab es die unterschiedlichsten Strecken. Viele davon waren sehr anspruchsvoll, aber für Anfänger war auch etwas dabei.
Ria zeigte Rafael einen Steinbock auf einem nahegelegenen Felsen. Wow, er liebte die Natur hier oben einfach nur.

c. Ria macht Urlaub
Mountainbiken war ein beliebtes Hobby. Ria machte eine zweiwöchige Fahrradtour in den Alpen. Sie begleitete Rafael auf der Etappe zur nächsten Alm. Auf halber Strecke füllte sie die Trinkflaschen an einem Bergsee auf.
Rafael zeigte Ria einen Steinbock auf einem nahegelegenen Felsen. Wow, er liebte die Natur hier oben einfach nur.

d. Rafael macht Urlaub
Mountainbiken war ein beliebtes Hobby. Rafael machte eine zweiwöchige Fahrradtour in den Alpen. Er begleitete Ria auf der Etappe zur nächsten Alm. Auf halber Strecke

füllte er die Trinkflaschen an einem Bergsee auf.   Ria zeigte Rafael einen Steinbock auf einem nahegelegenen Felsen. Wow, er liebte die Natur hier oben einfach nur.

2.
a. Zeit zu feiern
An der Uni herrschte Prüfungsphase. Niemand hatte dann Zeit, abends auszugehen. Nach dem Abschluss der Prüfungen wurde daher umso stärker gefeiert. Viele Bars waren dann gut besucht.
Marla prostete Henrik zu. Heute Abend würde sie mal wieder richtig einen drauf machen.

b. Zeit zu feiern
An der Uni herrschte Prüfungsphase. Niemand hatte dann Zeit, abends auszugehen. Nach dem Abschluss der Prüfungen wurde daher umso stärker gefeiert. Viele Bars waren dann gut besucht.
Henrik prostete Marla zu. Heute Abend würde sie mal wieder richtig einen drauf machen.

c. Zeit zu feiern
Henrik ging feiern. Er hatte die letzten Wochen tief in der Prüfungsphase gesteckt. Nach der letzten Prüfung ging er mit Marla etwas trinken. In der Bar bestellte er zwei Bier.
Marla prostete Henrik zu. Heute Abend würde sie mal wieder richtig einen drauf machen.

d. Zeit zu feiern
Marla ging feiern. Sie hatte die letzten Wochen tief in der Prüfungsphase gesteckt. Nach der letzten Prüfung ging sie mit Henrik etwas trinken. In der Bar bestellte sie zwei Bier.
Henrik prostete Marla zu. Heute Abend würde sie mal wieder richtig einen drauf machen.

Appendix E: Experimental Items Experiment 5

affected objects:
Sandra beleidigte Oliver.
Vera beruhigte Markus.
Niklas stellte Melanie bloß.
Theo verärgerte Maria.

affected subjects:
Sonja liebte Dirk sehr.
Annika hasste Matthias für seinen Egoismus.
Philipp vertraute Josephine voll und ganz.
Henning bewunderte Clara.

non-sentient objects:
Nina schaute Vincent hinterher.
Emma beobachtete Emil beim Spielen.
Dennis belauschte Sophia.
Jim verfolgte Anna.

source of information:
Lisa erzählte Tom, was am Vormittag passiert war.
Lena informierte Timo darüber, dass das Restaurant sehr gute Kritiken bekommen hatte.
Mark wies Elena darauf hin, dass der Tennisclub um 19 Uhr schloss.
Ben teilte Lina mit, dass die Umsätze unter den Erwartungen geblieben waren.

mixed class:
Johanna lud Elvis auf einen Kaffee ein.
Ina kaufte Jonas ein Busticket.
Sven machte Vera einen Antrag.
Nico rief Lara vom Bahnhof aus an.

Appendix F: Experimental Items Experiment 6

emotionally affected objects:
Lisa schrie Tim an.
Sophie verunsicherte Niklas.
Marie provozierte Daniel.
Florian langweilte Emma.
Alexander ermutigte Julia.
Jannik überraschte Paula.

emotionally affected subjects:
Vanessa bewunderte Moritz.
Laura vermisste Justin.
Michelle hasste Nicolas.
Jonathan misstraute Jacqueline.
Julian vergötterte Johanna.
David bemitleidete Lena.

non-sentient objects:
Alina schaute Tobias hinterher.
Katharina verfolgte Philip.
Nina beobachtete Jakob beim Spielen.
Marvin beschattete Luisa.
Maximilian vermutete Celina im Büro.
Simon belauschte Antonia.

non-sentient subjects:
Lea fiel Jan positiv auf.
Jasmin ging Tom auf die Nerven.
Annika inspirierte Paul.
Leon brachte Melina auf eine gute Idee.
Marcel stand Alexandra im Weg.
Fabian nahm Karoline die Sicht.

source of information subjects:
Emily teilte Nils die Lottozahlen mit.
Pia wies Louis auf das Parkverbotsschild hin.
Miriam informierte Elias über Laktoseintoleranz.

Christian zeigte Larissa den Weg.
Erik erzählte Franziska eine Geschichte.
Finn sagte Antonia die Wahrheit.

source of information objects:
Leonie erfuhr von Lukas den Klausurtermin.
Nele hörte von Jonas den neusten Tratsch.
Hannah erhielt von Felix eine Nachricht.
Dominic informierte sich bei Sara über die Ermittlungen.
Kevin hörte Mia zu.
Lennart nahm Elisas Rat an.

Appendix G: Annotation Guidelines

While annotating the data, please have this sheet available so that you can make sure to use the
LABELS correctly.
Please use the labels as they are indicated below, i.e. capitalized, avoid typos or blanc spaces as
this would complicate further data processing. Please read the entire 2 sentences and treat them
as one coherent story. Decide for a label based on your first intuition without "overthinking"
possible alternative interpretations. If you come up with two possible interpretations decide for
the one that seems more intuitive to you.

In the context of the first sentence, note if the second sentence can be understood as

1. a **narrator comment** (**NC**) defined by:
A subjective comment that must be attributed to a narrator (indicated by the use of a first-person
pronoun or by information that is beyond the characters knowledge) e.g.
... Ganz ehrlich, der ist mir auch unsympathisch.
... Naja, dabei würde es den ganzen Tag regnen.

2. **direct** or **indirect speech** or **thought** (**S**) defined by:
A comment that indicates a speech act or thought e.g.
... Also, du solltest dir mal etwas anderes anziehen.

3. an utterance in **FID** mode (**FID**) that is anchored to one of the two protagonists

4. an ambiguous utterance in **FID** mode (**AFID**) can plausibly be **anchored to either one or
the other** protagonist or possibly both.

5. for all cases that are **ungrammatical** (not including typos or incorrect capitalization) use **N**.
You will frequently come across the adverbial use of the interjection such as
Also, ging er nach Hause.
Make sure to spot these cases and mark them with an **N**.

Borderline cases you might come across:
If the finite verb of a subjective comment is in present tense the comment may be understood to
be **direct speech.** However, for all cases that **lack indicators that the sentence is actually
uttered out loud (such as a second person pronoun)** please use one of the **FID labels**.

Also, please highlight cases that indicate that participants interpreted the prompt with an Object-
Verb-Subject reading such as
Ella verfolgte Jonas. Also, wo sie wohl hin wollte?