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On the difference between the ‘In’ and ‘According to’ operators

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Abstract

Semanticists and philosophers of fiction that formulate analyses of reports on the content of media – or ‘contensive statements’ – of the form ‘In/According to s , ϕ ’, usually treat the ‘In s ’-operator (**In**) and the ‘According to s ’-operator (**Acc**) on a par. I argue that **In** and **Acc** require separate semantic analyses based on three clusters of linguistic observations: (1) preferences for **In** or **Acc** in contensive statements about fictional or non-fictional media, (2) preferences for **In** or **Acc** in contensive statements about implicit or explicit content and (3) tense preferences in contensive statements with **In** and **Acc**. To account for these three observations I propose to adopt Lewis’s possible world analysis for contensive statements with **In** and to analyse contensive statements with **Acc** as indirect speech reports.

Keywords: ‘According to s ’, contensive statements, fiction operators, ‘In s ’, parafictional statements, speech reports

1 Introduction

Semanticists of fiction distinguish between ‘fictional’ statements, i.e., statements that are part of a fictional narrative such as (1) below taken from *The Hobbit*, and ‘parafictional’ statements, i.e., statements about the content of some fictional narrative.¹ Parafictional statements can feature either an ‘In s ’-operator (henceforth abbreviated

¹The terminology is originally Voltolini’s (2006). I use the terms as Recanati (2018) does.

as **In**) as in (2a) or an ‘According to *s*’-operator (henceforth abbreviated as **Acc**) as in (2b):²

- (1) In a hole in the ground there lived a hobbit.
- (2) a. In *The Hobbit*, Bilbo travels to the Lonely Mountain.
b. According to *The Hobbit*, Bilbo travels to the Lonely Mountain.

On the face of it, the **In** and **Acc** operators also exist in other languages such as Dutch (‘in’/‘volgens’), French (‘dans’/‘selon’) and Spanish (‘en’/‘según’) but this paper focuses on English data.

Whereas fictional statements *determine* what is true in the fiction (i.e., the fact that (1) is part of *The Hobbit* makes it fictionally true that a hobbit lived in a hole in the ground), parafictional statements *report* on what is true in the fiction (i.e., (2a) and (2b) seem to be actually true statements because the novel *The Hobbit* is in fact such that in it, Bilbo travels to the Lonely Mountain). One of the central objectives of semantics of fiction is to provide a semantic analysis of fictional and parafictional statements that takes into account this difference in function.

In discussing these analyses almost³ all philosophers (e.g., Zucchi (2021); Recanati (2018); Zalta (1983); Kroon and Voltolini (2018)) and semanticists (e.g., von Stechow and Heim (2011)) treat **In** and **Acc** on a par, i.e., (2a) and (2b) receive the same truth conditions.

The first main objective of this paper is to establish that there are in fact interesting semantic differences between **In** and **Acc**. These differences have probably remained largely unrecognized or glossed over because semanticists of fiction traditionally focus on providing analyses for reports on the content of *fictional* media (i.e., parafictional statements) only; since **In** and **Acc** both seem acceptable in such statements (e.g., in (2a) and (2b)), a uniform semantic analysis seems justified. To tease apart **In** and **Acc** I adopt a broader perspective in this paper and consider reports on the content of media whether fictional or non-fictional, i.e., so-called ‘contentive’ statements (cf. Ross 2012). For instance, apart from parafictional statements (2a) and (2b), the following report on the content of Monk’s biography *Ludwig Wittgenstein: The Duty of Genius* is also a contentive statement:

²Most theorists take parafictional statements to also have implicit variants where the fiction operator is covert (e.g., “Bilbo travels to the Lonely Mountain”). Moreover, as Sainsbury (2014) notes, parafictional discourse can also feature other fiction operators such as ‘partial fiction operators’ like ‘In/According to the first three chapters of *s*’ or fiction operators such as ‘It is argued in/clear by *s* that’. Following Voltolini (2019), I take these to be derivative of the **In** and **Acc** operators.

³Notable exceptions are Dohrn (2015) (whose observations are discussed in this paper), and Sainsbury (2014) and Voltolini (2019). The latter two authors argue that **In** involves a more ‘distanced’ stance towards the fiction than **Acc**. However, these authors do not discuss the linguistic observations concerning the diverging behaviour of **In** and **Acc** discussed in the current paper. Rather, part of their debate is on whether the following minimal pair illustrates the semantic difference between **In** and **Acc**:

- (I) a. In *War and Peace*, there are both fictional and real characters.
b. According to *War and Peace*, there are both fictional and real characters. (Sainsbury, 2014, p.278)

Whereas Sainsbury takes (Ia) to be true and (Ib) false, Voltolini takes both to be false. I do not further discuss these types of statements in this paper since my focus lies on the use of **In** and **Acc** in parafictional statements and both (Ia) and (Ib) seem to have a distinct ‘metafictional’ flavour, i.e., talk about fictional entities *as fictional entities* (see e.g., Kripke (2011); Recanati (2018); Semeijn and Zalta (2021)).

- (3) According to *Ludwig Wittgenstein: The Duty of Genius*, Wittgenstein worked as a hospital porter during WWII and advised patients not to take the drugs they were prescribed.

The paper is organized as follows. First, I will explore three clusters of partly novel observations concerning the divergent linguistic behaviour of **In** and **Acc** that a uniform treatment of the operators *cannot* but that the proposed semantic analyses *can* explain. These observations add to existing observations in recent linguistic literature that show that there is a crucial difference between **Acc** and other intensional operators (e.g., Krawczyk (2012), Kaufmann and Kaufmann (2020) and Bary and Maier (2020)). The observations relate to the fictionality of the medium that is reported on (section 2.1), reporting explicit and implicit content (section 2.2) and tense use in contensive statements (section 2.3). Second, I will present semantic analyses of **In** and **Acc** that can account for these observations. Concerning **In**, I propose that this operator receives Lewis’s (1978) widely adopted possible world analysis (section 3). Roughly: ‘**In** s , ϕ ’ is true iff in worlds compatible with s , ϕ . Regarding the analysis of **Acc**, I suggest that philosophers of fiction can borrow many useful insights from research done in the semantics of speech reports, i.e., Krawczyk’s (2012), Anand and Korotkova’s (2019), Bary and Maier’s (2020) and Kaufmann and Kaufmann’s (2020) analyses of the phrase ‘According to s ’. In line with these accounts, I propose to analyse contensive statements with **Acc** as indirect speech reports (section 4). Roughly: ‘**Acc** s , ϕ ’ is true iff s asserts that ϕ . Last, I will discuss how the proposed analyses can account for the three clusters of data showing the diverging behaviour of **In** and **Acc** (section 5).

2 The diverging behaviour of ‘In’ and ‘According to’

In this section I will discuss three clusters of linguistic observations concerning the diverging linguistic behaviour of **In** and **Acc** (and some qualifications to them). Independently from the possible merit of the analyses of **In** and **Acc** discussed later in this paper, this section thus establishes the need to distinguish between these two operators.

2.1 Fiction/non-fiction

A central observation concerning **In** and **Acc** is that whereas contensive statements about fiction can be formulated with both **In** and **Acc**, contensive statements about non-fiction with **In** rather than **Acc** are typically unacceptable. Consider the following minimal pairs of statements:

- (4) a. In the *Star Wars* saga, Darth Vader is a Sith Lord.
 b. ? According to the *Star Wars* saga, Darth Vader is a Sith Lord.
- (5) a. # In *Ludwig Wittgenstein: The Duty of Genius*, Wittgenstein worked as a hospital porter during WWII and advised patients not to take the drugs they were prescribed.
 b. According to *Ludwig Wittgenstein: The Duty of Genius*, Wittgenstein

worked as a hospital porter during WWII and advised patients not to take the drugs they were prescribed.

Whereas use of **Acc** seems acceptable to report on the content of fictional and non-fictional media, use of **In** seems restricted to reports on the content of fictional media. Even stronger, this fiction/non-fiction preference is also mirrored in our use of **Acc**. As noted before, **Acc** can be (and is) used to report on the content of fictional media. I therefore generally do not mark such uses of **Acc** as infelicitous. However, use of **In** does typically sound more appropriate in parafictional statements than use of **Acc**, e.g., (4a) and (4b) are both acceptable but (4a) is a more natural way of talking about the content of the *Star Wars* films. Thus the general picture that is sketched is that the canonical use of the operators links **In** to fiction and **Acc** to non-fiction.

The observation made above can be qualified in several ways. First, use of **Acc** in contentive statements about fiction is not always unnatural and sometimes is even more appropriate than use of **In**. Contentive statements that report on content of a fictional medium that is viable for ‘export’ (i.e., propositional content that we may take to be not only true in the fiction but also true about the actual world) display such preferences. Following Gendler (2000), we can distinguish two types of export. First, we may export fictional truths that consist of empirical facts that were explicitly stated in a medium (or that are directly entailed by what was stated) in a process that Gendler (2000) calls ‘narrative as clearinghouse’. For instance, I may read the following in Fleming’s novel *Thunderball*:

- (6) New Providence, the island containing Nassau, the capital of the Bahamas, is a drab sandy slab of land fringed with some of the most beautiful beaches in the world (Example originally from Friend (2008).)

and learn from this that (actually) Nassau is on New Providence. Based on this I may utter the following contentive statements:

- (7) a. In *Thunderball*, Nassau is on New Providence.
b. According to *Thunderball*, Nassau is on New Providence.

Second, we can export general truths or ‘lessons’ that follow more indirectly from what was explicitly stated or shown in a fiction in a process that Gendler (2000) calls ‘narrative as factory’. For instance, I may learn that (actually) love conquers all from reading the Harry Potter novels or that (actually) it is never too late to redeem yourself from watching the *Star Wars* saga, even though these things are never stated or shown explicitly in these media. As a result I may utter the following:

- (8) a. In the *Star Wars* saga, it is never too late to redeem yourself.
b. According to the *Star Wars* saga, it is never too late to redeem yourself.

As has been noted by Dohrn (2015), use of **Acc** seems appropriate for contentive statements that report on general lessons drawn from fiction as in (8b). I suggest that use of **Acc** is decidedly more natural in contentive statements related to *both* types of export (i.e., in (8b) and (7b)), than in contentive statements that report on fictional content that is *not* viable for export such as (4b). Arguably, there is even a preference for use of **Acc** over use of **In** in export cases (i.e., a preference of (7b) over

(7a) and a preference of (8b) over (8a)), that seems especially strong in contensive statements that report on general lessons (e.g., (8b)). This latter intuition becomes even stronger when we consider ‘fictions’ whose point is clearly to teach us something about the actual world. Consider the following contensive statements about Searle’s Chinese room thought experiment:

- (9) a. According to the Chinese room thought experiment, something that manipulates symbols based on syntax alone, does not truly understand a language.
 b. ? In the Chinese room thought experiment, something that manipulates symbols based on syntax alone, does not truly understand a language.

Here use of **Acc** to report on the fictional content that is viable for export in (9a) is appropriate whereas use of **In** in (9b) is unnatural.

A second qualification we can make is that use of **In** is not in fact unequivocally wrong for contensive statements about non-fictional media. Zucchi provides the following example of a contensive statement featuring **In** about Woodward’s biography *Shadow*:

- (10) a. In *Shadow*, Clinton only cares about sex and golf. (Zucchi, 2001, p.350)
 b. According to *Shadow*, Clinton only cares about sex and golf.

Not only use of **Acc** but also use of **In** is acceptable in this non-fiction contensive statement. However, note that such use of **In** is restricted to reports on subjective viewpoints or portrayals that are expressed by some medium rather than objective facts. Use of **In** here seems to signal distancing from the reported content. Likewise, a contensive statement with **In** that reports on an objective fact expressed by *Shadow* sounds as odd as (5a):

- (11) a. # In *Shadow*, Clinton was born in Arkansas.
 b. According to *Shadow*, Clinton was born in Arkansas.

2.2 Explicit/implicit content

The second observation about the difference between **In** and **Acc** relates to whether the reported content is explicit or implicit in the medium. Semanticists of fiction often assume some version of the so-called ‘Reality Principle’⁴: we assume the fictional worlds to be as much like the actual world as the story permits. In other words, we can distinguish two types of fictional truths: ‘Explicit fictional truth’, i.e., propositions that are explicitly stated in a story (or follow from what was explicitly stated) and ‘implicit fictional truth’, i.e., propositions that are assumed to be fictionally true because we consider them to be actually true and the story has not forced us to revoke them. For instance, it is explicitly fictionally true in *The Lord of the Rings* that Frodo inherits Bag End because this follows directly from some of the statements in the novels. On the other hand, it is implicitly fictionally true in *The Lord of the Rings* that water is H₂O because we believe this to be actually true and nothing in the novels contradicts this information.

⁴See Lewis’s (1978) Analysis 1 and 2, Ryan’s (1980) Principle of Minimal Departure, Walton’s (1990) Reality and Mutual Belief Principles, and Friend’s (2017) Reality Assumption.

Semanticists of fiction generally allow for both implicit and explicit fictional truths to feature in parafictional statements. This type of approach ignores important differences in linguistic behaviour between **In** and **Acc**. **In** is appropriately used to report on both implicit and explicit fictional truth. Consider the following statements:

- (12) In *The Lord of the Rings*, Frodo inherits Bag End.
- (13) In *The Lord of the Rings*, water is H₂O.

Acc displays different behaviour. To the extent that use of **Acc** to report on fictional content is acceptable at all, **Acc** can only appropriately be used to report on explicit fictional truth.⁵ Consider the following statements:

- (14) According to *The Lord of the Rings*, Frodo inherited Bag End.
- (15) # According to *The Lord of the Rings*, water is H₂O.

Use of **Acc** is thus restricted to parafictional statements that report content that is explicitly stated (or shown) in the medium or follows from this.

This observation generalizes to contensive statements about non-fiction. Consider the following contensive statements about a news report that reports on a drought (but does not state anything about the molecular structure of water):

- (16) According to this news report, there was a terrible drought.
- (17) # According to this news report, water is H₂O.

Although the fact that water is H₂O may be assumed to be true (by speaker and hearer alike) when engaging with this news report, such ‘implicit truths’ cannot feature in contensive statements with **Acc**. Again, **Acc** is only appropriate to report on what was explicitly stated in the medium or what follows from this.

2.3 Tense use

The third and last observation concerning **In** and **Acc** that I will discuss relates to tense use preferences in contensive statements. As has been observed by Zucchi (2001), parafictional statements with **In** display a general preference for present tense use while past tense, although often acceptable, sounds awkward and future tense often sounds wrong. Parafictional statements with **In** trigger this preference for present tense independently from whether the embedded content includes an eventive or stative verb. Consider for example the following contensive statements about the Harry Potter novels:

- (18) In the Harry Potter novels, there **are**/**?were**/**#will be** wizards in England.
- (19) In the Harry Potter novels, Snape **kills**/**?killed**/**#will kill** Dumbledore.

Whereas (18) includes a stative verb and (19) contains an eventive verb, both contensive statements trigger a preference for present tense.

⁵Interestingly, Dohrn (2015) and Zucchi (2021) also note this about **Acc** but do not distinguish between **In** and **Acc** in this respect, i.e., they judge statements such as (13) to be equally inappropriate or odd (see (Dohrn, 2015, p.51) and (Zucchi, 2021, p.126, footnote 24)).

Moreover, parafictional statements with **In** display a preference for present tense independently from when the events described in the fiction supposedly take place. For example, (re)consider the following contensive statements about the Harry Potter novels, the *Star Wars* saga and the *Star Trek* series for which the time of the relevant fictional events and states described respectively overlap, precede and succeed the fictional counterpart of the utterance time of the contensive statement:

- (18) In the Harry Potter novels, there **are/?were/#will be** wizards in England.
- (20) In the *Star Wars* saga, Luke **destroys/?destroyed/#will destroy** the Death Star.
- (21) In the *Star Trek* series, Earth **colonizes/?colonized/#will colonize** Mars in the year 2103.

As [Zucchi \(2001\)](#) admits, the prohibition against past and future tense in parafictional statements is not absolute. Consider:

- (22) In Patrick O'Brian's first novel, Jack Aubrey was a post captain, in his new novel, he is a commodore, in the next novel he will be an admiral. ([Zucchi, 2001](#), p.334)
- (23) In the *Star Wars* saga, Luke is the hero. He will eventually destroy the Death Star. (example suggested by an anonymous reviewer)
- (24) In the first novel, Harry learns he is a wizard and travels to Hogwarts for the first time, finally escaping the constraints of the family that raised him.⁶ ([Bryson, 2014](#))

It seems that comparison of media *or* fictional events in terms of how they temporally relate to each other, influences tense use. I leave a full exploration of such special cases in which the preference for present tense is overridden to future research.

This preference for present tense does not generalize to parafictional statements with **Acc**. Rather, to the extent that **Acc** is at all acceptable to report on fictional content, preferences for tense use within these statements seems to depend on the time of the events described in the narrative relative to the utterance time of the contensive statement, i.e., whether, at the time of utterance, the relevant fictional events took, take or will take place:

- (25) According to the Harry Potter novels, there **are/#were/#will be** wizards in England.
- (26) According to the *Star Wars* saga, Luke **#destroys/destroyed/#will destroy** the Death Star.
- (27) According to the *Star Trek* series, Earth **#colonizes/#colonized/will colonize** Mars in the year 2103.

In fact, this is true for contensive statements with **Acc** in general, i.e., tense use in contensive statements with **Acc** about non-fictional media also seems to depend

⁶This example is taken from the online grammar platform Scribbr which advises writers to use simple present to report on the content of fictions, except is cases such as (24) that involve relative past tense constructions.

on the time of the events described in the medium relative to the utterance time of the contentive statement. Consider tense use in the following statements about the content of news reports that report on respectively protests going on at this moment, a robbery last night and tomorrow’s weather:

- (28) According to this news report, there **are/#were/#will be** protests in Paris.
- (29) According to this news report, masked men **#rob/robbed/#will rob** the Regio Bank in Erp.
- (30) According to this weather forecast, it **#is/#was/will be** extremely dry.

3 Semantic analysis of ‘In *s*’

Now that I have established the need to distinguish between **In** and **Acc**, let’s turn to the semantic analyses. I will begin with **In**.

I adopt Lewis’s (1978) well known Analysis 2 of the ‘In story *s*’-operator. Lewis treats this operator as an intensional operator, i.e., as quantifying over possible worlds. Below a simplified representation of this operator’s semantic definition:

“In *s*, ϕ ” is true iff in all possible worlds compatible with story *s*, ϕ is true

The obvious question now is what makes a world ‘compatible’ with some fiction. In his seminal paper ‘Truth in Fiction’ (1978), Lewis goes through several analyses of this notion. According to Analysis 0, the possible worlds that are compatible with a story *s* (or the *s*-worlds) are the worlds where *s* is told as known fact (rather than fiction). Hence, everything that is explicitly stated in *s* will also come out as true in *s*-worlds (and hence in *s*). For instance, it is explicitly stated in the Sherlock Holmes novels that Holmes smokes a pipe and so this is true in all worlds where the story is told as known fact. Hence the analysis predicts that it is true in the Sherlock Holmes novels that Holmes smokes a pipe.

However, the set of worlds where the Sherlock Holmes novels are told as known fact includes worlds where for instance water is not H₂O, since the story doesn’t state anything about the molecular structure of water. Hence, if we simply take *s*-worlds to be ‘worlds where *s* is told as known fact’ (if we adopt Analysis 0), it does *not* come out as true in the Sherlock Holmes novels that water is H₂O. According to Lewis this is not satisfactory because our intuitive understanding of fictional truth adheres to the Reality Principle: we assume the fictional world to be as much like the actual world as the story permits. Hence we *do* intuitively want to incorporate such background information into the analysis of fictional truth. Lewis argues that in order to do so we have to analyse the fiction operator as a counterfactual, i.e., what is true in *s* is what would be true if *s* were told as known fact. On the Stalnaker/Lewis (Lewis (1973); Stalnaker (1968)) analysis of counterfactuals, a statement of the form ‘If ϕ , then ψ ’ is true iff some possible world where ϕ and ψ are true is closer to the actual world than any world where ϕ is true but ψ is not true. A world is ‘closer’ to to some other world if it is more similar to it. In other words, we take the actual world as our ‘starting point’ and see what it would be like if the counterfactual’s antecedent were true in our world. For instance, the counterfactual ‘If I had thrown this brick, the window

would have broken’ is true iff the window breaks in all possible worlds where I throw the brick that are most similar to the actual world. Possible worlds where I throw the brick but it is lifted out of the air by a giant eagle are hence excluded.

To not make unknown or little known facts relevant to fictional truth, Lewis replaces the notion of ‘the actual world’ with ‘the community of origin’s overt conception of the actual world’ in his counterfactual analysis of **In**. For instance, although it is actually true that I went grocery shopping yesterday and that Trump won the elections in 2016 (and hence this is true in all worlds where the Sherlock Holmes novels are told as known fact that are closest to the *actual* world), these things should arguably *not* come out as being true in the Sherlock Holmes novels because Doyle and his audience were unaware of these facts. Hence we arrive at Lewis’s final analysis (Analysis 2). The following is a simplified version of Lewis’s (1978, p. 45) formulation:

“In s , ϕ ” is true iff in all possible worlds where story s is told as known fact (rather than fiction) that are closest to the community of origin’s overt conception of the actual world, ϕ is true

The ‘community of origin of s ’ is the community that the author of s was in when writing s . A community’s ‘overt conception of the actual world’ consists in the overt beliefs about the actual world in the community, i.e., beliefs that are generally and openly shared. Analysis 2 allows us to still import fictional truths such as that water is H_2O . This is an overt belief in the community of origin of the Sherlock Holmes novels, i.e., a general and openly shared belief between Doyle and his readers. However, information such as that Trump won the election in 2016 will not come out as true in the fiction.

4 Semantic analysis of ‘According to s ’

4.1 Indirect speech report

Contensive statements that feature the operator **Acc** are analysed as a type of indirect speech report, i.e., reports on what a medium asserts:

“According to s , ϕ ” is true iff s asserts that ϕ

This analysis of contensive statements with **Acc** is in line with Krawczyk’s (2012), Kaufmann and Kaufmann’s (2020), Anand and Korotkova’s (2019) and Bary and Maier’s (2020) analysis of the general (i.e., also outside of contensive statements) use of the phrase ‘According to s ’. These semanticists treat ‘According to s ’ not as a simple intensional operator (cf. von Stechow and Heim (2011)), but rather treat statements that are formed with this phrase as indirect speech reports. Indeed, such an analysis fits the use that ‘According to s ’, unlike **In**, has outside of contensive statements; The phrase ‘According to s ’ can be used to report not only on the content of a medium but also on what some *person* asserted. **In**, on the other hand, can only combine with a narrative:

- (31) a. According to Joe, seagulls are the worst.
 b. # In Joe, seagulls are the worst.

The fact that these phrases take different arguments already highlights the fact that **In** and **Acc** must be very different operators.

As Anand and Korotkova (2019) note, reports with ‘According to *s*’ behave like regular indirect speech reports. For instance, whereas belief reports can be followed by a denial of the embedded content having been said, speech reports cannot:

- (32) a. Joe thinks that seagulls are the worst. He never said that, though.
 b. # Joe asserted that seagulls are the worst. He never said that, though.

Likewise, it seems that (31a) cannot be followed by a denial of the embedded content having been said:

- (33) ? According to Joe, seagulls are the worst. He never said that, though.

Reports with **Acc** behave like *indirect* speech reports in that the report does not have to repeat the exact phrasing of the reported speech. Suppose Joe’s exact words were: “I hate seagulls! There is no animal that is worse”. As in indirect speech report report (34b) (and unlike in direct speech report (34a)), we can report on this speech act by combining **Acc** with the paraphrase “seagulls are the worst”:

- (34) a. # Joe said: “Seagulls are the worst”.
 b. Joe said that seagulls are the worst.
 c. According to Joe, seagulls are the worst.

Following Anand and Korotkova (2019) I assume that this analysis of **Acc** can not only apply to reports on what some speaker has said but also to reports on what some inanimate object ‘says’ as long as the object is a repository of propositional information (or ‘ROI subject’, see Anand and Hacquard (2014)) such as books, theories, films or lecture notes. In other words, we can report on the content of a medium by talking about the medium as the ‘agent’ of a communicative act. For instance, we can talk about what a book ‘tells us’.⁷ I thus assume that **Acc** can feature in contensive statements which as a result are interpreted as reports on what some medium (e.g., *The Lord of the Rings* or a news report) asserts (cf. Zalta’s (2003 [1987]) analysis of **In** and **Acc**).

Assuming that contensive statements with **Acc** are reports on what a medium asserts, a complete analysis of the phrase ‘According to *s*’ thus takes both media and agents as possible arguments:

“According to *s*, ϕ ” is true iff medium/agent *s* asserts/asserted that ϕ ⁸

⁷I assume that nonverbal media are also ROI subjects and hence we also report on those as ‘telling us’ things. In case the reader thinks nonverbal media don’t assert in this way, they may read for instance ‘the *Star Wars* saga’ as ‘the script of the *Star Wars* saga’.

⁸Note that the semantic analysis thus implies no commitment to the embedded proposition on the side of the speaker. However, statements of the form ‘According to *s*, *p*’ sometimes do *pragmatically* imply commitment (or distancing) to *p*, depending on whether *s* is presented as, or assumed to be, an authority or not. For instance, compare the following:

- (III) According to his doctor, Julian should stay in bed all day.
 (IV) According to his overprotective mother, Julian should stay in bed all day.

Whereas (III) is naturally interpreted as providing evidence for the embedded proposition, (IV) is not.

Note that this analysis includes a disjunction between current and past assertions because I take a medium’s assertion to be a constantly ongoing event, whereas I take reports on agents’ assertions to (usually) be about past speech acts. This is contra [Krawczyk \(2012\)](#) who analyses statements with ‘According to *s*’ to be about past speech acts. Since we are currently interested in fiction operators, I will focus on use of **Acc** in *contensive* statements. The semantic analysis presented at the beginning of this section will thus suffice for the discussion of the data in section 5, i.e., *contensive* statements with **Acc** are reports on what a medium *asserts*.

4.2 ROI analysis

An alternative way of formulating the analysis of the phrase ‘According to *s*, *p*’ that avoids the medium/agent disjunction is with a ‘ROI analysis’ in the manner of [Kaufmann and Kaufmann \(2020\)](#) or [Bary and Maier \(2020\)](#). The following is the formulation offered by Kaufmann and Kaufmann:

We assume that [‘According to *s*’ phrases] combine with an INDIVIDUAL denoting expression and are defined only if this individual counts as a repository of information (agents associated with doxastic commitments; reports; records;. . .). If defined, the sentence is true iff the content associated with the individual entails the PROPOSITION (2020, p.7)

A statement of the form ‘According to *s*, *p*’ is thus only defined if *s* is a ROI in Kaufmann and Kaufmann’s sense. Kaufmann and Kaufmann use the term ROI as an umbrella term for media (e.g., books, films, reports, etc.) *and* agents associated with a set of doxastic commitments. If the set of propositions associated with this ROI entails *p*, then the statement ‘According to *s*, *p*’ is (not only defined but also) true.

I take the ROI analysis and the analysis in terms of ‘assertion’ put forth in this paper to be different ways of expressing essentially the same core idea. In the case of agents, the propositions that are associated with the ROI are the agent’s doxastic commitments. I assume that one commits oneself to some proposition by asserting it. This means that whatever propositions are associated with the ROI *are* the propositions that were asserted by the agent.⁹ In the case of media, the propositions that are associated with the ROI are the propositions expressed by the medium. In other words, what the medium ‘tells us’. In other words, ROIs are associated with sets of propositions that are asserted by some medium or that have been asserted by some agent. If this set of asserted propositions entails *p*, then the statement ‘According to *s*, *p*’ is true.

4.3 Two features of assertions

Before moving on, it is instructive to highlight two features of the speech act of assertion that will be relevant later.

⁹More precisely, someone’s doxastic commitments are determined by their assertions *and* their retractions. This points to a potential benefit of the ROI analysis; Whereas doxastic commitments can be retracted, the fact that *p* was asserted cannot. Consider the case in which John earlier asserted that seagulls were the best but later took that back and has now asserted that seagulls are the worst. It is still *true* that John asserted that seagulls are the best. However, it is *false* that John’s (current) doxastic commitments entail that seagulls are the best. Importantly, it also seems *false* to say that according to John, seagulls are the best. In response to this we may add the qualification of talking about an agent’s *unretracted* assertions to the analysis of the phrase ‘According to *s*, *p*’ in terms of assertion.

First, since assertions are non-fictional statements, when a asserts ϕ this means that a states that ϕ is true in the *actual world*, i.e., a communicates that the actual world is in the set of ϕ worlds. Likewise, when some medium is reported on as making an assertion, this means that it is treated as expressing something about the actual world. In other words, it is reported on as if it is non-fiction. As noted by an anonymous reviewer, the ROI analysis also implies this since ROIs are understood as repositories of information *about the actual world*.

It is possible to avoid this, i.e., it is possible to formulate the semantic analysis of **Acc** with speech verbs that are similar in meaning such as “say” or “express”. Arguably, “say” or “express” are more generic (e.g., fictional contents may be *said* or *expressed* but are not *asserted*). I use “assert” because, as will become clear later (section 5.1), I want to restrict the analysis to reports on speech acts that clearly relate the embedded content to the actual world.

Second, unlike simple intensional operators, indirect speech reports are generally not closed under logical entailment (see e.g., [Maier \(2019\)](#); [Sæbø \(2013\)](#); [von Stechow and Zimmermann \(2005\)](#)). Consider the following belief report:

(35) Anne believes that Chrissy is cool.

Under a simple modal analysis of belief (Cf. [Hintikka \(1962\)](#)), (35) is true iff Chrissy is cool in all possible worlds that are compatible with Anne’s beliefs. Given that Chrissy being cool implies (amongst other things) that there is someone who is cool, it is also true in all possible worlds that are compatible with Anne’s beliefs that there is someone who is cool. Hence, it follows from (35) that Anne also believes that there is someone who is cool. Moreover, logical truths (e.g., that bachelors are unmarried men) are necessary, i.e., they are true in all possible worlds. Hence it is also true in all worlds compatible with Anne’s beliefs that bachelors are unmarried men; Anne also believes this. In short, under a simple intensional analysis of belief, any agent that forms beliefs is logically omniscient, i.e., believes all logical truths and all logical consequences of their beliefs.

Although such an intensional analysis may be fine when we offer a description of an idealized rational agent’s beliefs, it cannot straightforwardly be applied to speech reporting. Consider the following variants of speech reports:

(36) Anne asserts/says/claims/yells/mutters/whispers that Chrissy is cool.

On a simple intensional analysis of asserts/says/claims/yells/mutters/whispers, (36) is true iff Chrissy is in fact cool in all possible worlds that are compatible with what Anne asserts/says/claims/yells/mutters/whispers. Like the intensional analysis of belief above, the intensional analysis here thus implies that (36) entails that Anne also asserts/says/claims/yells/mutters/whispers all logical consequences of Chrissy being cool (e.g., that there is someone who is cool) *and* all logical truths (e.g., that bachelors are unmarried men). But does it follow from (36) that Anne asserts/says/-claims/yells/mutters/whispers that there is someone who is cool? [Maier \(2019\)](#) notes that for many so-called ‘descriptive communication verbs’ (e.g., yells/mutters/whispers) the entailment is definitely off and hence the intensional analysis cannot work. For less descriptive verbs (e.g., say/assert/claim) the entailment will sometimes seem acceptable. For the latter type of verbs we can follow von Stechow and Zimmerman’s

(2005) suggestion to analyse indirect speech reports with ‘say’ as ambiguous between a strict reading – where they are *not* closed under entailment – and a non-strict reading – where they *are* closed under entailment.

However, even on a non-strict reading of speech verbs such as ‘say’, ‘assert’ and ‘claim’, a simple intensional analysis will still not suffice: Although we may accept that we can derive from (36) that Anne asserted that there is someone who is cool, in any case it still does not follow that Anne asserted that bachelors are unmarried men. Moreover, even on a non-strict reading, speech reports are only closed under entailment *to a certain extent*, i.e., not *all* logical entailments of what was stated are reportable with indirect discourse. For instance, it does *not* follow from (36) that Anne asserted that Chrissy is cool or a murderous clown (even though Chrissy being cool or a murderous clown *does* strictly speaking follow from Chrissy being cool). In other words, even on a non-strict reading of ‘say’, ‘assert’ and ‘claim’, only a subset of the entailments of what was explicitly stated are also actually ‘said’, ‘asserted’ and ‘claimed’.¹⁰

The described concept of assertion fits use of ‘According to’: From the fact that Anne asserted that Chrissy is cool, it *does* follow that according to Anne, there is someone who is cool. However, it does *not* follow that according to Anne, Chrissy is cool or a murderous clown, or that according to Anne, all bachelors are unmarried men. We may adjust the ROI analysis to account for this data by adding the qualification that the content associated with the ROI *properly* entails the proposition.

In the above semantic analysis of **Acc** “asserts” is to be read non-strictly, i.e., *s* asserts that ϕ iff *s* explicitly states ϕ or ϕ is properly entailed by what *s* explicitly states.

4.4 Authors and (unreliable) narrators

As has been noted by an anonymous reviewer, the proposed analysis raises some questions concerning the notion of ‘assertion’ that is at play. For instance, a book cannot have any beliefs and hence a book’s assertion cannot be construed as a proposal to update the common ground between speaker and hearer, if the common ground is understood as consisting of propositions that are commonly believed or commonly accepted (see [Stalnaker \(1978\)](#)). If the reader is uncomfortable with stretching the notion of assertion in this way, they may opt for an (adjusted) ROI analysis instead. Alternatively, the reader may wonder whether we may ascribe the relevant speech act to the author instead: maybe what we really mean when we say that ‘According to medium *s*, *p*’, is that the author of *s* asserted that *p*. I suggest that, although this seems plausible in many cases of non-fictional media (e.g., newspaper articles, biographies, etc.), what a medium tells us and what the author asserted *can* come apart. Consider for instance:

- (37) According to the Harry Potter novels, love conquers all. Rowling never said that, though.

¹⁰See e.g., [Abreu Zavaleta \(2019\)](#); [Bary and Maier \(2020\)](#); [Brasoveanu and Farkas \(2007\)](#); [Sæbo \(2013\)](#) for some further discussion on this topic.

A different suggestion would be to take the narrator of the medium as making the assertion. However, as the case of unreliable narrators shows, what the narrator asserts and what the medium asserts can also come apart. For instance, consider the following excerpt of Kesey’s *One Flew Over the Cuckoo’s Nest*:

- (38) Then, just as she’s rolling along at her biggest and meanest, McMurphy steps out of the latrine door right in front of her, holding that towel around his hips – stops her *dead!* She shrinks to about head-high to where that towel covers him, and he’s grinning down on her.

Although the narrator states that nurse Ratched (who previously grew to the size of a truck) shrinks to the size of a hobbit, it is *not* the case that according to *One Flew Over the Cuckoo’s Nest*, Ratched shrinks to the size of a hobbit. I thus take ‘what the medium tells us’ to also be distinct from what the narrator (fictionally) asserted.

In fact, as the case of unreliable narration illustrates, how to determine what exactly is and isn’t asserted by some medium from what is stated or shown can become very complicated in some cases. The analysis of assertion sketched in the previous subsection (i.e., s asserts that ϕ iff s explicitly states ϕ or ϕ is properly entailed by what s explicitly states) is too simple to be directly applied to all fictional media. On the one hand, sometimes what a fictional medium tells us may only (very) indirectly follow from what was explicitly stated or shown (see the discussion on narrative as factory export in section 5.1). On the other hand, sometimes even though some proposition p (e.g., that Nurse Ratchet shrinks to the size of a hobbit) *is* part of what is explicitly stated in some fiction (as in (38)), contentive statements such as:

- (39) a. In *One Flew Over the Cuckoo’s Nest*, nurse Ratchet shrinks to the size of a hobbit.
b. According to *One Flew Over the Cuckoo’s Nest*, nurse Ratchet shrinks to the size of a hobbit.

both seem false. Lewis’s analysis 2 assumes reliable narration and hence is not able to account for such cases; p is part of s (part of what is told as known fact) and hence deemed true in s -worlds. Similarly, the analysis of assertion presented in section 4.3 is unable to account for such cases; p is part of what is explicitly stated in s (or what is properly entailed) and hence deemed part of what is asserted by s . In a similar vein, the ROI analysis leaves unexplained how exactly to determine what propositions are associated with the ROI in cases of unreliable narration. Future research will have to determine how to improve or add to the analyses of **In** and **Acc** so that they can be properly applied to cases of unreliable narration. There are some suggestions available in the literature on how to analyse truth *in* fiction in case of unreliable narration (e.g., Maier and Semeijn (2021); Zipfel (2011)) that may also generalise to truth *according to* a fiction. For now – to not overcomplicate the discussion – when discussing data concerning contentive statements about fiction, I focus on examples of fictions featuring single reliable narration (i.e., examples where if p is stated or shown in the fictional medium, p is also true in and according to the fiction) and argue that the ‘naive’ analyses of **In** and **Acc** presented in this paper can account for the described data as long as we maintain this focus.

5 Explanation of the data

Now that I have discussed Lewis’s analysis of **In** and have proposed an analysis of **Acc** that borrows insights from semantics of speech reports, I return to the observations concerning the diverging linguistic behaviour of **In** and **Acc**. I will argue that the analyses of **In** and **Acc** discussed above can account for them.

5.1 Fiction/non-fiction

5.1.1 Canonical use

First, let’s consider our general preferences for **In** and **Acc** when reporting on the content of media. As I have discussed, canonical use links **In** to fiction and **Acc** to non-fiction. The proposed analyses explain why. When we report on the content of some non-fictional source *s* (e.g., a biography, news report or encyclopedia entry), we will report on the medium as telling us (or asserting) something about the actual world – not as some story that is compatible with some set of worlds that may or may not include the actual world. Hence we have a strong preference for **Acc** in contentive statements about non-fiction. By contrast, when talking about the content of a fictional medium *s* it is appropriate to consider what is true in the set of *s* worlds without reporting on *s* as telling us anything about the actual world. Hence **In** is appropriate whereas use of **Acc** (i.e., reporting on the content of a fiction story as if it relates to the actual world) is less natural. Thus there is a general preference to use **In** for reports on fiction and to use **Acc** for reports on non-fiction.

As I have shown, however, although there may be a preference for **In**, **Acc** is in fact generally acceptable for contentive statements about fiction. Reconsider for instance (2b) and (4b):

- (2) b. According to *The Hobbit*, Bilbo travels to the Lonely Mountain.
- (4) b. According to the *Star Wars* saga, Darth Vader is a Sith Lord.

The semantic analysis of **Acc** suggests that this is because it is considered generally admissible to report on the content of a fictional medium by talking about it as something that asserts something about the actual world. Usually, such use of **Acc** will sound unnatural because fictional media are standardly not considered to be appropriate authorities or sources for claims about the actual world. Hence a statement such as (4b), which means something like “The *Star Wars* saga asserts that Darth Vader is a Sith Lord”, sounds awkward. In fact, it is strictly speaking not even true! The *Star Wars* saga, being a work of fiction, does not really assert anything about the history of the galaxy. We merely pretend that it does when engaging with the fiction. Likewise, as one anonymous reviewer noted, fictional narratives are strictly speaking not repositories of information (about the actual world). Hence, on a ROI analysis (e.g., Kaufmann and Kaufmann (2020)), a statement such as (4b) is not even defined.

The observation that we *do* sometimes use **Acc** in parafictional discourse such as (2b) thus (on both a ROI analysis and an analysis in terms of assertion) pushes us towards what Recanati (2018) has dubbed the ‘fictional approach’ to parafictional statements. Use of **Acc** in parafictional discourse can be proper or felicitous (but not

true) when we report on the content of fictions by engaging in an extension of the original pretence, i.e., talking about the fictional medium as a non-fictional report on actual events. This entails engaging in an extension of – in Recanati’s (2000) terminology – the ‘primary pretence’ initiated by the author of the fiction (this should be distinguished from what Recanati dubs the secondary ‘Meinongian pretence’). For instance, within the original *The Hobbit* pretence (initiated by Tolkien) the text that the reader has in front of them is a true *non-fictional* account of events (i.e., consists of assertions). A statement such as (2b) is felicitous if it constitutes a correct continuation of this original pretence, i.e., embeds content that indeed is asserted by the medium within this pretence. For instance, (2b) is felicitous if it true that *within* the scope of the pretence of *The Hobbit*, the (non-fiction) medium asserts that Bilbo travels to the Lonely Mountain. On the current analysis, parafictional statements with **Acc** such as (2b) are thus an interesting hybrid type of discourse: They are parafictional because they are reports on the content of a fictional medium *s*, but also constitute an unofficial extension of the original fictional discourse of *s* (which makes them strictly speaking false and hence awkward). Parafictional statements with **In** (e.g., (2a) and (4a)), however, involve no such pretence and can be really true.

The proposed analysis thus deems contentive statements about fiction with **Acc** strictly speaking false. In case the reader finds this counter-intuitive, they can opt for a semantic analysis of contentive statements with **Acc** in terms of the more neutral term “expressing”:

“According to *s*, ϕ ” is true iff *s* expresses that ϕ

Such an analysis would deem contentive statements such as (4b) true (cf. Murday (2010); Voltolini (2019)); fictional media may not ‘assert’ (all) their content but they do ‘express’ it. However, this kind of analysis is unable to account for the observations described in section 2.1 concerning preferences for **In** and **Acc** to report on fictional and non-fictional media, and on content viable for export. Hence I bite the bullet and opt for an analysis of **Acc** that can account for all observations described in this paper at the cost of deeming statements such as (4b) strictly speaking false.

5.1.2 Export

Next, let’s consider how the proposed analysis captures our intuitions concerning reports on content that is viable for export. As has been discussed, these contentive statements constitute exceptions to the general awkwardness of the use of **Acc** for fiction.

First, let’s consider narrative as clearinghouse, i.e., content viable for export that has been explicitly stated (or shown), or that follows directly from this as in the *Thunderball* example:

- (6) New Providence, the island containing Nassau, the capital of the Bahamas, is a drab sandy slab of land fringed with some of the most beautiful beaches in the world.

Here, the literature on semantics of speech reports (e.g., Maier (2019); von Stechow and Zimmermann (2005), see section 4.3) offers a straightforward explanation of why

the content viable for export is part of what has been asserted by the medium. Similar to how a proposition such as that there is someone who is cool is directly entailed by Anne’s explicit statement that Chrissy is cool, the proposition that Nassau is on New Providence is directly entailed by the explicit statement (6) in *Thunderball*. In other words, it is clearly part of what is properly entailed by what was explicitly stated, i.e., by the propositions associated with the ROI. Independently from what analysis we adopt of export¹¹, it is generally assumed that content viable for export is somehow licensed by the author to be taken as *actually* true (in addition to fictionally true). For instance, in the case of *Thunderball*, the audience may draw inferences about the real world (i.e., that Nassau is on New Providence) based on what was explicitly stated in fiction. Given the acceptability of these inferences, it is thus also appropriate to report on the medium as telling us something about the actual world (and not just the fictional world under some pretence), i.e., it is *really* true that *Thunderball* tells us that Nassau is on New Providence. Hence the proposed analysis predicts a higher acceptability rate for **Acc** when reporting on fictional content that is viable for narrative as clearinghouse as in (7b):

- (7) b. According to *Thunderball*, Nassau is on New Providence.

Second, let’s consider the second type of export that we discussed: narrative as factory, i.e., learning general lessons from engaging with fiction (e.g., learning that ‘love conquers all’ from reading the Harry Potter novels or that ‘it is never too late to redeem yourself’ from watching *Star Wars*). As has rightly been noted by an anonymous reviewer, this type of export is less easy to account for because it does not fit the simple picture of ‘proper entailment’ sketched in section 4.3. In this sense, contentive statements that report on narrative as factory content are importantly different from the other examples of contentive statements discussed in this paper. For example, that ‘it is never too late to redeem yourself’ is not something that is explicitly shown in *Star Wars*, or something that follows directly from what is explicitly shown. Such general lessons seem to merely follow *indirectly* from a fiction’s explicit content. For these cases of export, we have no straightforward explanation of why such content is also part of what was properly entailed by what was explicitly asserted.¹² However, we do still seem to have the intuition that narrative as factory content *is* part of what a fiction asserts or tells us about the actual world, albeit indirectly. For instance, I assume that it *is* appropriate to report on for instance the Harry Potter novels as asserting/claiming/telling us that (actually) love conquers all, and I suggest that this is what licenses our use of **Acc** in such cases. Similarly, although the *Star Wars* saga does not tell us anything about the history of the galaxy, we can take it to be a proper source of (non-fictional) moral truths. Hence – although we take statements such as (4b) to be strictly speaking false – we take (8b) to be true:

- (8) b. According to the *Star Wars* saga, it is never too late to redeem yourself.

¹¹See e.g., Currie (1990); Friend (2011); García-Carpintero (2013); Stock (2011).

¹²The equivalent situation for the Anne/Chrissy case would be if Anne made a series of assertions and one can ‘read between the lines’ that she indirectly meant to make an additional claim (e.g., that Chrissy is not to be trusted).

This is because we take it to be actually true that the *Star Wars* saga asserts/tells us that it is never too late to redeem yourself. Hence use of **Acc** is appropriate in such cases.

Before moving on to the explanation of the other data, a brief remark on drawing general lessons from fiction is in order. How exactly we determine the content of these indirect assertions (i.e., the general lessons we may learn from fiction) from what is explicitly stated or shown in a fiction is a complicated story. Bauer and Beck (2014; 2021) have made a first attempt at spelling out how general lessons (or the ‘subjective meaning of a text’) is derived from a written narrative’s grammatical meaning. They also assume “that fictional texts – in some sense – talk about the real world and can – in some sense – express truth” (2014, p. 268) and attempt to spell out how we arrive at a fiction’s “claim about the actual world” (2014, p. 264). In their framework, a reader may derive this ‘pragmatic meaning’ from a fictional text s by establishing an appropriate accessibility relation between s -worlds and the actual world. Such an accessibility relation can for instance have the form ‘ s -worlds are exactly like the actual world, except that fictional character x stands for me and behaves as I should’. I suggest that incorporating Bauer and Beck’s account (or a similar story on how to determine the indirect claims made by fictions) is thus a way of spelling out in more detail what narrative as factory content is appropriately embedded under **Acc** in contentive statements.

In sum, whether content viable for export is something that directly (as in narrative as clearinghouse) or indirectly (as in narrative as factory) follows from what is explicitly stated or shown in the fiction, it is content that we may take as being (not just fictionally true but also) true about the actual world. In other words, export content consists of the propositions that the medium really (not just under some pretence) asserts about the actual world. Hence the proposed analysis of **Acc** predicts a higher acceptability rate for **Acc** when reporting on fictional content that is viable for either type of export. This higher acceptability may even trump the acceptability of **In** when it obviously is the point of the fiction to tell us something about the actual world (as is the case of thought experiments such as Searle’s *Chinese room*, cf. statements (9a) and (9b)).

5.1.3 *In* and non-fiction

The analyses also account for the fact that sometimes **In** may be appropriate for contentive statements about non-fiction as in (10a):

- (10) a. In *Shadow*, Clinton only cares about sex and golf.

According to Lewis’s semantic analysis of **In**, (10a) roughly means that in the worlds compatible with *Shadow*, Clinton only cares about sex and golf. In other words, the medium is not presented as telling us something about the actual world. Rather, because we are reporting on subjective content, it is acceptable to simply report on what the worlds compatible with the medium are like (i.e., report on *Shadow* as if it is fiction). The perceived distancing from the reported content by the speaker of the contentive statement seems to be the result of pragmatic implication (i.e., given that

the relevant medium is non-fictional, why doesn't the speaker report on its content as asserting something about the actual world?)

5.2 Explicit/implicit content

In this section I argue that the proposed analyses of **In** and **Acc** can also account for the observations concerning implicit and explicit content.

First, Lewis's analysis of **In** was formulated so as to include implicit fictional truths. The worlds compatible with s are the worlds where s is told as known fact that are *as similar as possible* to the community of origin's conception of the actual world. Roughly, everything that we commonly believe to be actually true will be true in the worlds compatible with s , unless s contradicts it. So even though the proposition that water is H_2O is never stated explicitly (nor follows from anything that was stated) in *The Lord of the Rings*, still this is true in the worlds compatible with *The Lord of the Rings*. This is because the worlds where *The Lord of the Rings* is told as known fact that are *closest* to the community of origin's conception of the actual world are worlds in which water is H_2O . Thus **In** can appropriately be used to report on such implicit fiction truths as in (13):

(13) In *The Lord of the Rings*, water is H_2O .

Second, the analysis of contentive statements with **Acc** as indirect speech reports excludes reports on implicit fictional content.¹³ Remember that under the non-strict reading that we adopt of "asserts" in the semantic analysis of **Acc**, s asserts only those things that are explicitly stated by s and the proper entailments of what s explicitly stated. Information that is merely assumed by s but that is neither said nor even indirectly entailed by what was said cannot feature in indirect speech reports (e.g., from the fact that Anne asserts that Chrissy is cool we cannot derive that Anne asserts that Chrissy plays basketball, even though it may be common ground that she does). Likewise, it is not appropriate to report on 'content' that was not stated explicitly (or somehow follows from what was stated) by some medium (e.g., *The Lord of the Rings* or a news report on a drought) with **Acc** as in (15) and (17):

(15) # According to *The Lord of the Rings*, water is H_2O .

(17) # According to this news report, water is H_2O .

even though this information may arguably be part of what is assumed to be true by the medium.

5.3 Tense use

Last, the proposed semantic analyses of **In** and **Acc** can account for the described observations concerning tense use.

¹³There is a potential source of terminological confusion here. General lessons that we may draw from fictions (e.g., that love conquers all) are not 'implicit fictional truths' in the sense described here; It is not content that is mere background information assumed to be common ground between author and audience. As discussed in subsection 5.1, I assume that these general truths *are* part of what is asserted by the medium, albeit indirectly (i.e., it is part of the 'explicit' content in this sense).

5.3.1 *In* and generic present

First, the analysis of **In** predicts a preference for present tense in contensive statements with **In**. To see why, let's first consider tense use under other intensional operators such as *believe*:

(40) Adeela believes that Sara was nervous.

Because this propositional attitude report is a report of a current belief (i.e., the attitude verb is in present tense), the tense use in the embedded clause tells us whether Adeela believes Sara to be nervous before, during or after the time of utterance of (40).¹⁴ In the above example: if (40) is uttered at t_1 then (40) is true iff in worlds compatible with what Adeela believes at t_1 , Sara *was* nervous at t_1 (i.e., *is* nervous at some t where $t < t_1$).

In, although also an intensional operator, functions somewhat differently. Whereas someone's beliefs may change over time (e.g., Adeela might change her mind about whether Sara is in fact nervous), the content of a story or medium (e.g., the Harry Potter novels) consists in an abstract set of statements or system of axioms that is timeless. The Harry Potter story today is not going to differ from the Harry Potter story tomorrow; it is eternally the same abstract object. Hence, although we report on what some agent's beliefs are at a certain point in time in (40), in contensive statements we do not report on what the Harry Potter novels are like at a certain point in time. Reconsider the present tense version of (18):

(18) In the Harry Potter novels, there are wizards in England.

Even though (18) is uttered at a specific point in time t_1 , (18) does not mean that in worlds compatible with the Harry Potter novels at t_1 , wizards are in England at t_1 . Rather, (18) uttered at t_1 is true iff in worlds compatible with the Harry Potter novels (simpliciter), there are wizards in England (at some t). Hence, because it is true that there are wizards in England at a specific point on the fictional timeline of the Harry Potter novels, (18) is true. Indeed, given this fact, the past and future tense versions of (18) (although they sound odd or infelicitous) are also strictly speaking true on this analysis. It is true at some point on the fictional timeline of the Harry Potter worlds that there *were* wizards in England and similarly there is such a point where there *will be* wizards in England. In other words, Lewis's analysis of **In**, since it does not designate a specific time of evaluation, strictly speaking permits present, past and future tense use in contensive statements:¹⁵

(41) In the Harry Potter novels, there ?were/#will be wizards in England.

I suggest that this fact licenses a gnomic or generic use of the present tense (see e.g., Carlson (1982)) that is similar to that in scientific statements that express timeless truths (e.g., the fact that whales are, were and will be mammals is most naturally expressed as "Whales *are* mammals"). We thus get a preference for present tense in

¹⁴Reports with past or future tense attitude verbs (e.g., 'Adeela believed/will believe that Sara is nervous') pose additional complications since tense in these reports can be bound rather than indexical (see Abusch (1997); Toshyuki and Sharvit (2012)).

¹⁵In fact, Lewis (1978) uses both past and present tense in his examples of parafictional truths.

parafictional statements with **In**.¹⁶ The same reasoning applies to contensive statements with **In** that report on fictions about past or future events (e.g., it is true at some point on the fictional timeline of *Star Wars* that Luke destroys the Death Star) and hence these will also display a preference for present tense.¹⁷

5.3.2 *Acc* and natural sequence of tense

Second, the proposed analysis of **Acc** accounts for tense use in contensive statements with this operator. Contensive statements with **Acc** are analysed as indirect speech reports (i.e., reports on what a medium ‘asserts’) and hence tense use in such contensive statements mirrors that of indirect speech reports.

As is well known, tense use in indirect speech reports can be complicated due to so-called sequence of tense.¹⁸ However, if an indirect speech report reports on a *current* speech event (i.e., the main verb is in present tense), then the tense use in the embedded clause is simply anchored to the utterance time of the speech report and natural sequence of tense (rather than backshifting) is appropriate. In other words, tense use shifts depending on whether the time of the described events coincides, precedes or succeeds the utterance time of the speech report. For indirect speech reports on current speech events, this means that tense use of the speech report will mirror that of the reported speech. For instance, if Adeela says “Sara will be nervous” at t_1 , a speech report at t_1 will also use future tense:

(42) Adeela asserts that Sara will be nervous.

Sentence (42) uttered at t_1 is true iff Adeela asserts at t_1 that Sara is nervous at some t such that $t > t_1$.

A contensive statement with **Acc** is analysed as a report on what a medium *asserts*. Hence it is a report on a current speech event, i.e., the main verb is in present tense. Unlike contensive statements with **In**, contensive statements with **Acc** are thus time bound in the sense that natural sequence of tense is appropriate. Tense use in contensive statements with **Acc** shifts depending on whether the events described by the medium overlap, precede or succeed the utterance time of the contensive statement. For example, since the *Star Wars* saga is about events that supposedly took place a long time ago (in a galaxy far, far away), we use past tense when we report on its content using **Acc**. For example, on either an ‘extended pretence’ (i.e., where we pretend that *Star Wars* is a non-fictional report) or an ‘export’ reading (which is hard to

¹⁶See Zucchi (2001) for an alternative possible world analysis of **In** that accounts for this present tense preference by switching the time of evaluation to the time of the described events.

¹⁷The same reasoning applies to contensive statements with **In** that report on non-fiction (e.g., (10)) which thus also display a preference for present tense (cf. Zucchi (2001)):

(V) In *Shadow*, Clinton only cares/? cared/# will care about sex and golf.

¹⁸See e.g., Abusch (1997). In English, sequence of tense for instance occurs in indirect speech reports on past events. Suppose that Adeela at t_1 said: “Sara is nervous”. If, at a later point t_2 , I would report on this speech act, I would say:

(VI) Adeela asserted that Sara was nervous.

Because the main verb of (VI) (i.e., “asserted”) is in past tense, the subordinate verb (i.e., “was”) ‘shifts back’ to past tense as well (even though Adeela’s utterance itself was in present tense).

get), we report that the *Star Wars* saga asserts that Luke *destroyed* the Death Star. Hence, to the extent that (26) is acceptable, it displays a preference for past tense:

(26) According to the *Star Wars* saga, Luke destroyed the Death Star.

Sentence (26) uttered at t_1 is true iff *Star Wars* asserts at t_1 that Luke *destroyed* the Death Star at t_1 (i.e., *destroys* the Death Star at some t such that $t < t_1$). Likewise, since a medium like the news report on protests in Paris in (28) reports on events that are currently taking place, and the *Star Trek* series (reported on in (27)) is (amongst other things) about events that supposedly will take place in the future, we report on the content of these media using present and future tense respectively.

5.3.3 Brief remarks on the analysis of tense

Before closing this discussion of the described observations concerning tense use, some brief comments on the analysis of tense are appropriate. Tense is an interesting but complex topic and I am unable to offer a full-fledged analysis of tense in this paper. Rather, I work with a naive account of the interpretation of tense (e.g., I ignore issues concerning historical present or use of simple present to report on scheduled events). Moreover, there are two interesting complications that the preceding discussion glosses over.

First, there is an interesting disanalogy concerning tense use between contensive statements with **Acc** and indirect speech reports in present tense such as (42). I assume that in both types of statements, tense use is anchored to the utterance time (of the speech report or contensive statement). However, whereas for indirect speech reports this means that the speech report will mirror the tense use of the reported speech event (e.g., Adeela uses future tense and the embedded clause in (42) mirrors this), tense use in contensive statements with **Acc** does not necessarily mirror the tense use in the medium itself. For instance, a science fiction novel may be written from the point of view of the year 4020 and include the past tense statement “Mars was inhabited in 3020”. However, the novel currently (in 2023) *asserts* that Mars *will be* inhabited in 3020 and hence it is true that ‘According to the novel, Mars *will be* inhabited in 3020’. If we would again report on the content of the novel in the year 4020, however, we *would* use past tense in contensive statements with **Acc**: “According to the novel, Mars was inhabited in the year 3020”.

Second, I currently assume a simple analysis of “will” as a tense marker (see e.g., Prior’s (1967) ‘Ockhamist semantics’ or Kissine (2008); Salkie (2010)). However, many theorists have argued that “will” should be treated as a modal instead. As has been argued by Salkie (2010), under a modal analysis (e.g., Berbeira Gardón (2006); Enç (1996)) “will” still has a temporal dimension (e.g., (42) uttered at t_1 is true iff Adeela asserts at t_1 that for all worlds w' that are open possibilities at t_1 , Sara is nervous at w' at some t where $t > t_1$). Hence I suggest that a modal analysis can also be incorporated into my analysis. “Will” would still be appropriately used to describe future events (rather than present or past tense).

6 Conclusions and further research

Almost all semanticists and philosophers of fiction treat the **In** and **Acc** operators in parafictional statements on a par. In this paper I have discussed three sets of linguistic observations (and qualifications to these observations) concerning the diverging behaviour of **In** and **Acc**. These concern preferences for using **In** for contensive statements about fiction and **Acc** for non-fiction; the unacceptability of using **Acc** to report on implicit content (whereas **In** is fine for implicit and explicit content); and preferences for present tense in contensive statements with **In**, whereas natural sequence of tense is appropriate for contensive statements with **Acc**. This data directly supports the first main claim of this paper: that **In** and **Acc** are different operators that should receive separate semantic analyses.

Secondly, I have proposed to adopt Lewis's possible world analysis of parafictional statements for contensive statements with **In**: "In s , ϕ " is true iff in the worlds compatible with s , ϕ . I have proposed to analyse contensive statements with **Acc** as indirect speech reports: "According to s , ϕ " is true iff s asserts that ϕ . Lastly, I have explained how the proposed analyses account for the three described clusters of linguistic observations.

A natural direction for future research is to subject the proposed semantic analyses of **In** and **Acc** to empirical scrutiny. The picture of the use of **In** and **Acc** that has been sketched in this paper is based on linguistic intuitions that have been tested with native or bilingual English speakers. However, the intuitions are not crystal clear on all fronts and naturally invite experimental conformation in order to establish a stabler empirical basis. Especially, data concerning tense use described in section 2.3 provides a fruitful starting point for empirical research since intuitions seem less firm here and there are several interesting exceptions that are as of yet unexplained.

Another potentially fruitful direction for future research is to explore to what extent the presented observations generalize to other languages. Although I focus on English language use, on the face of it, the **In** and **Acc** contrast also exists in other languages such as Dutch, Spanish and French:

(43) Dutch

In De Hobbit *reist* Bilbo naar de *Eenzame Berg*.

In *The Hobbit* travels Bilbo to the Lonely Mountain.

'*In* *The Hobbit*, Bilbo travels to the Lonely Mountain.'

(44) Dutch

? *Volgens* De Hobbit *reist* Bilbo naar de *Eenzame Berg*.

According-to *The Hobbit*, travels Bilbo to the Lonely Mountain.

'According to *The Hobbit*, Bilbo travels to the Lonely Mountain.'

(45) Spanish

En El Hobbit, *Bilbo viaja a la Montaña Solitaria*.

In *The Hobbit*, Bilbo travels to the Mountain Lonely.

‘In *The Hobbit*, Bilbo travels to the Lonely Mountain.’

(46) Spanish

? *Según* El Hobbit, *Bilbo viaja a la Montaña Solitaria*.
According-to *The Hobbit*, Bilbo travels to the Mountain Lonely.

‘According to *The Hobbit*, Bilbo travels to the Lonely Mountain.’

(47) French

Dans Le Hobbit, *Bilbo voyage vers la Montagne Solitaire*.
In *The Hobbit*, Bilbo travels to the Mountain Lonely.

‘In *The Hobbit*, Bilbo travels to the Lonely Mountain.’

(48) French

? *Selon* Le Hobbit, *Bilbo voyage vers la Montagne Solitaire*.
According-to *The Hobbit*, Bilbo travels to the Mountain Lonely.

‘According to *The Hobbit*, Bilbo travels to the Lonely Mountain.’

Dutch ‘in’ and ‘volgens’, Spanish ‘en’ and ‘según’ and French ‘dans’ and ‘selon’ seem to display similar behaviour to **In** and **Acc** in English (e.g., preferences for ‘in’, ‘en’ and ‘dans’ over respectively ‘volgens’, ‘según’ and ‘selon’ for contentive statements about fiction). This suggests that there is indeed an important contrast here that is not just a peculiarity of English grammar. It would be interesting to see whether the **In/Acc** contrast generalizes to languages that are not Indo-European.

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References

- Abreu Zavaleta, M. (2019). Weak speech reports. *Philosophical Studies*, 176(8), 2139–2166, <https://doi.org/10.1007/s11098-018-1119-2>
- Abusch, D. (1997). Sequence of tense and temporal de re. *Linguistics and Philosophy*, 20(1), 1–50, <https://doi.org/10.1023/A:1005331423820>
- Anand, P., & Hacquard, V. (2014). Factivity, belief and discourse. L. Crnič & U. Sauerland (Eds.), *The art and craft of semantics: A festschrift for irene heim* (Vol. 1, pp. 69–90). MIT Working Papers in Linguistics.
- Anand, P., & Korotkova, N. (2019). *Speech reports*. (lecture notes. <http://esslli2019.folli.info/courses/speech-reports/>)

- Bary, C., & Maier, E. (2020). *The landscape of speech reporting*. (manuscript. <https://ling.auf.net/lingbuzz/003526>)
- Bauer, M., & Beck, S. (2014). On the meaning of fictional texts. D. Gutzman, J. Köpping, & C. Meier (Eds.), *Approaches to meaning: Composition, values, and interpretation* (Vol. 32, p. 250-275). BRILL.
- Bauer, M., & Beck, S. (2021). Isomorphic mapping in fictional interpretation. E. Maier & A. Stokke (Eds.), *The language of fiction* (p. 277-300). Oxford: Oxford University Press.
- Berbeira Gardón, J.L. (2006). On the semantics and pragmatics of will. M. Carretero et al. (Eds.), *A pleasure of life in words: A festschrift for Angela Downing* (p. 445–465). Madrid: Universidad Complutense de Madrid.
- Brasoveanu, A., & Farkas, D. (2007). Say reports, assertion events and meaning dimensions. G. Alboiu, A. Avram, L. Avram, & D. Isac (Eds.), *Pitar mos: A building with a view. papers in honour of alexandra cornilescu* (pp. 175–196). Bucharest: Editura Universității din București.
- Bryson, S. (2014). *Scribbr post: Verb tenses in academic writing — rules, differences & examples*. <https://www.scribbr.com/language-rules/tenses/#:text=There%20are%20three%20main%20verb,progressive>).
- Carlson, G.N. (1982). Generic terms and generic sentences. *Journal of Philosophical Logic*, 11(2), 145–181, <https://doi.org/10.1007/BF00278382>
- Currie, G. (1990). *The nature of fiction*. Cambridge: Cambridge University Press.
- Dohrn, D. (2015). According to the fiction: A metaexpressivist account. F. Dorsch & D.-E. Ratiu (Eds.), *Proceedings of the european society for aesthetics* (Vol. 7, p. 37-60). The European Society for Aesthetics.
- Eng, M. (1996). Tense and modality. S. Lappin (Ed.), *The handbook of contemporary semantic theory* (pp. 345–358). Oxford: Blackwell Publishers Ltd.
- Friend, S. (2008). Imagining fact and fiction. K. Stock & K. Thomson-Jones (Eds.), *New waves in aesthetics* (p. 150-169). London: Palgrave Macmillan UK. Retrieved from https://doi.org/10.1057/9780230227453_8
- Friend, S. (2011). Fictive utterance and imagining ii. *Supplementary Proceedings of the Aristotelian Society*, 85, 163–180,
- Friend, S. (2017). The real foundation of fictional worlds. *Australasian Journal of Philosophy*, 95(1), 29–42, <https://doi.org/10.1080/00048402.2016.1149736>

- García-Carpintero, M. (2013). Norms of fiction-making. *British Journal of Aesthetics*, 53(3), 339-357,
- Gendler, T.S. (2000). The puzzle of imaginative resistance. *Journal of Philosophy*, 97(2), 55–81,
- Hintikka, J. (1962). *Knowledge and Belief: An Introduction to the Logic of the Two Notions*. Ithaca: Cornell University Press.
- Kaufmann, M., & Kaufmann, S. (2020). *Talking about sources*. (manuscript. <http://magdalena-kaufmann.uconn.edu/papers/givenPREFINAL.pdf>)
- Kissine, M. (2008). Why will is not a modal. *Natural Language Semantics*, 16, 129-155,
- Krawczyk, E. (2012). *Inferred propositions and the expression of the evidentiality relation in natural language: Evidentiality in Central Alaskan Yup'ik Eskimo and English* (Unpublished doctoral dissertation). Georgetown University.
- Kripke, S. (2011). Vacuous names and fictional entities. *Philosophical Troubles* (pp. 52–74). Oxford: Oxford University Press.
- Kroon, F., & Voltolini, A. (2018). Fictional Entities. E.N. Zalta (Ed.), *The Stanford encyclopedia of philosophy* (Winter 2018 ed.). Metaphysics Research Lab, Stanford University. <https://plato.stanford.edu/archives/win2018/entries/fictional-entities/>.
- Lewis, D. (1973). *Counterfactuals*. Oxford: Blackwell Publishers Ltd.
- Lewis, D. (1978). Truth in fiction. *American Philosophical Quarterly*, 15(1), 37–46, Retrieved from <https://www.jstor.org/stable/20009693>
- Maier, E. (2019). On the exceptionality of reported speech. *Linguistic Typology*, 23(1), 197–205,
- Maier, E., & Semeijn, M. (2021). Extracting fictional truth from unreliable sources. E. Maier & A. Stokke (Eds.), *The language of fiction* (p. 186-220). Oxford: Oxford University Press.
- Murday, B. (2010). Two-dimensionalism and fictional names. F. Lihoreau (Ed.), *Truth in fiction* (pp. 43–76). Berlin, Boston: De Gruyter.
- Prior, A. (1967). *Past, present and future*. Oxford: Oxford University Press.

- Recanati, F. (2000). *Oratio Obliqua, Oratio Recta*. Cambridge: MIT Press.
- Recanati, F. (2018). Fictional, metafictional, parafictional. *Proceedings of the Aristotelian Society*, 118(1), 25–54, Retrieved 2018-05-03, from <https://academic.oxforduniversitypress.com/aristotelian/article/118/1/25/4898115>
- Ross, J. (2012). *The semantics of media*. Dordrecht: Springer. Retrieved from <https://books.google.nl/books?id=cLuLBQAAQBAJ>
- Ryan, M. (1980). Fiction, non-factuals, and the principle of minimal departure. *Topics in Catalysis*, 9(4), 403–422, [https://doi.org/10.1016/0304-422X\(80\)90030-3](https://doi.org/10.1016/0304-422X(80)90030-3)
- Sainsbury, R.M. (2014). Fictional worlds and fiction operators. M. García-Carpintero & G. Martí (Eds.), *Empty representations* (pp. 277–289). Oxford: Oxford University Press.
- Salkie, R. (2010). Will: tense or modal or both? *English Language & Linguistics*, 14(2), 187–215, <https://doi.org/10.1017/S1360674310000055>
- Semeijn, M., & Zalta, E.N. (2021). Revisiting the ‘wrong kind of object’ problem. *Organon F*, 28(1), 168–197,
- Stalnaker, R.C. (1968, 01). A theory of conditionals. N. Rescher (Ed.), *Studies in logical theory: American philosophical quarterly monograph series 2* (Vol. 6, p. 98–112). Oxford: Blackwell Publishers Ltd.
- Stalnaker, R.C. (1978). Assertion. P. Cole (Ed.), *Pragmatics* (Vol. 9, pp. 315–32). New York: New York Academic Press.
- Stock, K. (2011). Fictive utterance and imagining. *Supplementary Proceedings of the Aristotelian Society*, 85, 145–161,
- Sæbø, K.J. (2013). Reports of specific indefinites. *Journal of Semantics*, 30(3), 267–314, <https://doi.org/10.1093/jos/ffs015>
- Toshuyuki, O., & Sharvit, Y. (2012). Embedded tenses. R.I. Binnick (Ed.), *The oxford handbook of tense and aspect*. Oxford: Oxford University Press.
- Voltolini, A. (2006). *How ficta follow fiction: A syncretistic account of fictional entities*. Springer Netherlands. Retrieved from

<https://books.google.fr/books?id=eTxGAAAAQBAJ>

- Voltolini, A. (2019). Varieties of fiction operators: Methods and applications. A. Capone, M. Carapezza, & F. Lo Piparo (Eds.), *Further advances in pragmatics and philosophy: Part 2 theories and applications* (p. 199-210). Springer.
- von Fintel, K., & Heim, I. (2011). *Intensional Semantics*. MIT. unpublished textbook.
- von Stechow, A., & Zimmermann, E. (2005). A problem for a compositional treatment of de re attitudes. G. Carlson & F. Pelletier (Eds.), *Reference and Quantification: The Partee Effect* (pp. 207–228). Stanford: CSLI.
- Walton, K.L. (1990). *Mimesis as Make-Believe: On the Foundations of the Representational Arts*. Cambridge, MA, USA: Harvard University Press. Retrieved from <http://www.hup.harvard.edu/catalog.php?isbn=9780674576032>
- Zalta, E.N. (1983). *Abstract Objects: An Introduction to Axiomatic Metaphysics*. Berlin: Springer.
- Zalta, E.N. (2003 [1987]). Erzählung als Taufe des Helden: Wie man auf fiktionale Objekte Bezug nimmt. *Zeitschrift für Semiotik*, 9(1–2), 85–95, Retrieved from <http://www.jstor.org/stable/42971494> (Translated (Arnold Günther) as Referring to fictional characters in *Dialectica*, 2(2003):243–254.)
- Zipfel, F. (2011). Unreliable narration and fictional truth. *Journal of Literary Theory*, 5(1), 109-130,
- Zucchi, A. (2001). Tense in fiction. C. Cecchetto, G. Chierchia, & M.T. Guasti (Eds.), *Semantic interfaces: Reference, anaphora and aspect*. Stanford: CSLI.
- Zucchi, A. (2021). On the generation of content. E. Maier & A. Stokke (Eds.), *The language of fiction* (p. 107-130). Oxford: Oxford University Press.