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# On commitment to untruthful implicatures

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**Abstract:** In the current debate on the lying-misleading distinction, many theorists distinguish between lying as insincere assertion and misleading through conveying an untruthful implicature. There is growing empirical evidence that average speakers count untruthful implicatures as cases of lying. What matters for them is the (degree) of commitment to an untruthful implicature. Since untruthful conversational implicatures may arise with non-assertions, and untruthful presuppositions are also judged as lying, a realistic conception of lying should aim at a definition of lying that it is able to cover these possibilities. Such a conception, which supports traditional assumptions about the semantics-pragmatics distinction, leads to a commitment-based definition of lying, as recently proposed by a number of authors.

**Keywords:** commitment; lying; misleading; semantics-pragmatics interface; untruthful implicature

## 1 Introduction

The recent decade has faced a renewed academic interest in lying and deception. Research in the philosophy, psychology, and linguistics of lying aiming at a valid conception of lying draws either on speech act concepts, analyzing lying as an insincere assertion (e.g., Stokke 2018), or on Gricean implicature theory, analyzing lying as a violation of the first specific maxim of Quality (e.g., Dynel 2018; Fallis 2012). There is, however, a third option, namely to combine both approaches and define lying as an untruthful (insincere) assertion and/or an untruthful implicature which is based on an assertion (Meibauer 2014a; see the debate between Dynel 2015, Horn 2017, and Meibauer 2016). The latter approach is realistic in the sense that it targets the widest pragmatic definition of lying which covers the intuitions of average discourse participants. Such a realistic conception of lying is dismissed by researchers who want to uphold a strict opposition between the concepts of lying and misleading, thus tracing back lying to Gricean what-is-said and misleading to what-is-implicated. For them, it is of primary importance to defend a sharp dividing line between these two levels (Horn 2017; Saul 2012; Stokke 2018). Their

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argumentation is supported by the idea that only what-is-said is connected to speaker commitment, but not what-is-implicated.

In this article, I will challenge this picture. In particular, I will show (a) that verbal misleading is a conversational implicature, (b) that implicatures are true or false and thus contribute to the truth conditions of an utterance (i.e., the “total signification of an utterance” (Grice 1989: 40), see also Martinich 2010), (c) that speakers are committed to the truth of the conversational implicature, and (d) that the average discourse participant refers to the level of the total signification of an utterance when evaluating an utterance as a lie.

With respect to (a), I will discuss the position of Saul (2012) and maintain that the concept of misleading, as used in the lying-misleading debate, boils down to the concept of untruthful conversational implicature. Thus, the realistic conception of lying does not need the concept of verbal misleading. The claims in (b) and (c) are not so unusual as they may appear at first sight. Concerning (b), Bach (2006: 27) holds with respect to an untruthfully implicating speaker that “what is implicated is part of the total truth-conditional content of his utterance”. With respect to (c), we may cite Sperber and Wilson (1991 [1986]: 384) who say that “(In implicating propositions) I take as much responsibility for their truth as for the truth of the proposition I have explicitly expressed ... The speaker is committed to the truth of all determinate implicatures conveyed by her utterance, just as much as if she had expressed them directly.” Finally, positions (c) and (d) are strongly supported by recent experimental work that will be discussed in more detail in the course of the review.

The outline of this article is as follows. Section 2 clarifies the notion of commitment. In particular, I will discuss the approach of Geurts (2019) who assumes that speaker commitments play a fundamental role with respect to speech acts as well as implicatures. In Section 3, I will ask whether commitment to the truth of conversational implicatures is weaker than commitment to the truth of assertions, and Section 4 reviews pertinent experimental results. The discussion of recent experimental findings in Section 5 yields strong support for the hypothesis that untruthful implicatures are considered as lies by average discourse participants, and that commitment is an important measure for this evaluation. The final discussion in Section 6 relates these findings to the recent controversy between so-called adverbial versus commitment approaches to lying (García-Carpintero 2021; Viebahn 2021).

## 2 The notion of commitment

The notion of commitment has been used in a number of disciplines, among them speech act theory, the analysis of modality and evidentiality, and the study of

dialogue and argumentation (De Brabanter and Dendale 2008). Concerning speech act theory, Harnish (2005) draws a distinction between approaches in the tradition of John L. Austin that refer to rules or conventions (e.g., Alston 2000; Searle 1969), and approaches in the tradition of Paul Grice referring to propositional attitudes (e.g., Bach and Harnish 1979). Harnish (2005: 23) calls a theory using concepts like ‘commitment’, ‘responsibility’, ‘blameworthy’, etc. a “*normative theory of illocutionary acts*”. Though such a normative theory has many advantages, he explains, among them being able to “bypass the notion of ‘what is said’” and analyzing illocutionary acts “in terms of conditions one is committed to”, Harnish (2005: 23) suspects that commitment is a “very high-level concept” being difficult to settle in a reasonable manner. Indeed, it is hard to find precise definitions in the pertinent literature. The core idea seems to be that someone who is committed to something is forced to back up in case he or she is suspected to have violated their commitments.

Against that background, the recent attempt by Geurts (2019) at establishing a new foundation for pragmatics, understood as a general theory of communication, is quite remarkable since the notion of commitment plays a key role in this approach. In communication, he argues, social commitments are the crux of the matter (Geurts 2019: 2). Though he is skeptical against mentalistic approaches being based on the expression of speaker intentions, he concedes that one should bring the social and the mental perspective together. Thus, he proposes the following normative definition of commitment (Geurts 2019: 3–4).

On my account, commitment is a three-place relation between two individuals,  $a$  and  $b$ , and a propositional content,  $p$ :  $a$  is committed to  $b$  to act on  $p$ , or  $C_{a,b}p$  for short. So, if Albert promises Brenda to do the dishes, then as a result of Albert’s promise:  $C_{a,b}$  ( $a$  will do the dishes). To say that  $a$  is committed to  $b$  to act on  $p$  is to say that  $a$  is committed to act in a way that is consistent with the truth of  $p$ . I take this to entail that  $b$  is entitled by  $a$  to act on  $p$ , and should  $b$  wish to act on  $p$ , and  $p$  turn out false, then  $b$  may hold  $a$  responsible for the consequences.

Because such commitments are social (not psychological) in essence, the speaker may be submitted to commitments he or she isn’t even aware of.

That commitments play a role in the characterization of speech act types (or illocutions) is not a new insight (Shapiro 2020; Oishi 2022). Notably, Searle (1979: 62) invokes commitment in his essential and sincerity rules for assertion, giving rise to the widespread idea that lying is essentially an insincere assertion. Alston (2000: 120), in contrast, proposes a definition of assertion containing the notion of responsibility. A speaker takes on responsibility for the truth of being the case that  $p$  when he “knowingly took on a liability to (laid herself open to) blame

(censure, reproach, being taken to task, being called to account), in case of not-*p*” (Alston 2000: 55). Since responsibility, like commitment, has an internal aspect – the speaker commits himself to the truth of *p* – as well as an external aspect – the speaker has to explain himself in case he is mistrusted – Harnish (2005: 33–38) thinks about identifying both notions.

What is new in Geurts’ approach is the generalization of the commitment approach to conversational implicatures and the common ground. Drawing on Grice’s (1989: 31) classical definition, Geurts (2019: 21) claims that the speaker is also committed to conversational implicatures:

It is common ground that:

- i. the speaker has said that *p*;
- ii. he observes the maxims;
- iii. he could not be doing this unless he was committed to *q*,
- iv. he has done nothing to prevent *q* from becoming common ground;
- v. he is committed to the goal that *q* become common ground.

And so he has implicated that *q*.

It is crucial for Geurt’s social approach that this schema does not contain any reference to the speakers’ beliefs or their intentions (Geurts 2019: 22).

However, with respect to the first specific maxim of Quality (possibly being violated in lying), he faces a problem since this maxim refers directly to the speaker’s belief. A way out of this dilemma is his proposal to introduce “private commitments” and postulate a maxim of Integrity demanding that the speaker should avoid conflicting commitments.

Green (2019: 48) criticizes, with respect to the first condition, i.e., “the speaker has said that *p*”, that Geurts does not escape psychological notions since “saying” is conceived of as “speaker meaning” by Grice. I think that a Gricean, intentionalist view of the expressed speaker intention is compatible with a view focusing social commitments, since we speak of different levels here, namely the psychological and the sociological level. What is relevant for the present argumentation is that Geurt’s approach allows for commitment to conversational implicatures.

### 3 Commitment to implicatures and cancellability

Context-dependency, reconstruability, and cancellability are the most important properties of conversational implicatures. Regarding the latter, one distinguishes

between cancellability by adding a cancelling phrase and cancellability by presenting the respective utterance in a potential context in which the respective implicature does not occur (Jaszczolt 2009; Zakkou 2018). Assertions, in contrast, can never be cancelled; they can only be denied.

Because conversational implicatures are cancellable, they are excellent means of deceiving and lying, for the risk of the speaker of being caught in the act is heavily reduced. If caught, the speaker has the option of blaming the addressee for having wrongly derived something he never had in mind. In the end, the addressee is the one who is paying the bill (Adler 1997, 2018). We will see, however, that the possible cancellation of a conversational implicature does not imply that a speaker never had an intention to bring a certain implicature into play, and, moreover, that the attempt at cancelling a conversational implicature might be implausible or even near to impossible.

Haugh (2013: 135) mentions three cases that show that a rigid cancellability criterion may be problematic. First, in some cases, conversational implicatures may be entailed so that they cannot be cancelled. The following example provided by Carston (2002: 139) illustrates this case:

- (1) Adam: Does John drink slivovitz?  
 Bob: He doesn't drink any alcohol.  
 +> John does not drink slivovitz.  
 → John does not drink slivovitz.

It follows logically from Bob's utterance: "If John does not drink alcohol, then he does not drink slivovitz." At the same time, "John does not drink slivovitz" is a conversational implicature of Bob. However, it may be argued that entailments and conversational implicatures operate on different levels so that the mutual off-setting is not viable. Second, when conversational implicatures are speaker-intended, the intention cannot retroactively be invalidated. Cancellation thus means that an implicature is withdrawn, but not that it hasn't been intended in the first place (Burton-Roberts 2010, 2013). Therefore, in order to avoid misconceptions, one should better speak of clarifications here. Third, and most importantly, though ironies and metaphors are floutings of the maxim of Quality in Grice's (1989) approach, it may be near to impossible to cancel them (Blome-Tillmann 2008; Weiner 2006). If there is a mutual understanding between the speaker and the addressee that an irony or metaphor has been conveyed, it is no use to deny that. Quite on the contrary, the speaker does not come out of the mess he has gotten himself into. Another case is an utterance containing an element like Japanese utterance final *kara* (Engl. *so*) that reinforces the respective

implicature (see Haugh 2013: 142–143).<sup>1</sup> It is clear that the respective implicature will not be cancellable (see also Huitink and Spenader 2004; Lauer 2014).

Though there are difficulties with a strict notion of cancellability, it is widely accepted that this is a core property of conversational implicatures. Still, we may ask whether, concerning cancellability, generalized conversational implicatures (GCI) behave differently in comparison to particularized conversational implicatures (PCI). This distinction, famously introduced by Grice (1989: 37), posits that there are verbal implicature triggers that normally lead to the derivation of a conversational implicature in the case of GCI, while there are other cases of implicating that *q* that do not normally depend on such triggers and thus are more bound to contextual information. Note that not all researchers have endorsed the distinction, and even Levinson (2000), otherwise studying GCI in much detail, simply neglects PCI. We may ask, then, whether GCIs are harder to cancel than PCIs, because the former are more bound to the semantics of a language; or, conversely, whether PCIs are harder to cancel because they are more salient in a given discourse. If conversational implicatures can be lies, this is a relevant question to ask. In the course of this article, we will look at pertinent empirical findings.

Looking at the validity of assertions, we find that they are not totally immune against modification and attenuation. The question is, then, whether there are procedures of cancellation that are specific for conversational implicatures vis-à-vis assertions, or whether these procedures are basically the same for both. Regarding conversational implicatures, Haugh (2013: 147) draws a distinction between the denial, the retraction and the clarification of conversational implicatures. Boogaart et al. (2021) assume also three ways of denying conversational implicatures, namely denying the alleged implicature, appealing to another implicature, and coming up with excuses. For the denying of literal meaning (e.g., in the case of assertions), these authors assume processes like (a) denying having uttered certain words altogether, (b) providing another literal meaning, (c) appealing to a non-literal interpretation (e.g., via implicature), and (d) coming up with excuses. By and large, what has been communicated may be a subject of negotiation. Finally, Caponetto (2020) mentions denial, retraction, and amendment as three ways of relativizing a certain speech act. In sum, then, it seems to be accepted that assertions as well as conversational implicatures may be attenuated to a certain extent – the crucial difference being that the literal meaning of assertions is more resistant to cancelling than conversational implicatures.

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<sup>1</sup> Haugh (2013: 143) explains that utterance-final *kara* “is canonically attached in Japanese subordinate clauses to indicate a cause or reason for an action or attitude that is describe in the main clause”. In using *kara*, “the speaker also retains greater control over the subsequent inferences made by the recipient, which means that such implicatures are not explicitly deniable”.

## 4 Is the speaker committed to conversational implicatures?

When asking whether speakers are committed to untruthful implicatures, we should distinguish the following assumptions. First, the speaker is not committed to conversational implicatures, only to assertions. Second, the speaker is committed to conversational implicatures in exactly the same way as he or she is committed to assertions. Third, the speaker is *less* committed to a conversational implicature than to an assertion. Fourth, the speaker is *more* committed to a conversational implicature than to an assertion.

Moeschler (2013) allows for commitment to implicatures, though he argues that two scales are in play, namely a commitment scale (entailment > presupposition > explicature > implicature) and an accessibility scale (explicature > implicature > entailment > presupposition). The basic idea is that strength of commitment and accessibility relate to semantics versus pragmatics: “semantic relations are less accessible, but stronger; pragmatic relations are more accessible, but lighter” (Moeschler 2013: 96). Indeed, such trade-offs could play a role in the evaluation of an untruthful implicature as a lie and possibly are key to explaining variation in speaker judgments. Moeschler (2013: 87) assumes that the strength of hearer-derived content correlates with his assumptions of the speaker-commitment. He does not talk about assertions in this connection, although one assumption could be that commitment to conversational implicatures is much weaker than commitment to assertions: this would comply with the third above-mentioned assumption.

Of particular interest, for the purpose of our leading question, is a comparison between the conflicting findings of Mazzarella et al. (2018) and Bonalumi et al. (2020). Mazzarella et al. (2018) want to show that saying, presupposing, and implicating go together with different degrees of speaker commitment. In two experiments, they asked whether participants would still trust a speaker after they found out that the content of an assertion, presupposition, or implicature was false. To this end, they posed a punishment question and a trust question concerning a character from a vignette. The result was that “speakers are judged as less blameworthy when they implicate rather than explicitly communicate or presuppose a false piece of information” (Mazzarella et al. 2018: 22). Therefore, the authors assume that untruthfully asserting (“saying”) speakers suffer more from a loss of reputation than untruthfully implicating speakers. What is remarkable, however, is the exclusion of 130 potential participants (out of 291) who were not able to correctly answer a question targeting at the derivation of an implicature.

This shows that the mere derivation of an implicature may be a challenge for some speakers.

Mazzarella et al. (2018) tested only PCIs. Maybe this is the reason for the fact that many participants had difficulties with deriving the intended implicature; after all, hearers can never be sure by hundred percent that they have derived the speaker-intended implicature correctly and completely. The context given in a certain vignette may also be far too restricted. Concerning presuppositions, the situation is a little bit better since here, the experimental design used the formal presupposition-triggers *it*-clefts, iterative expressions (*too*), change-of-state verbs (*repair*), and emotive factive verbs (*be relieved that*).

With respect to their condition 3 – concerning saying versus implicating – Mazzarella et al. (2018: 20) report: “The punishment question did not show any significant difference, with 63% participants punishing the *saying* speaker and 37% the *implicating* speaker (26/41, binomial  $p = 0.12$ ). By contrast, participants were significantly more likely to trust the implicating speaker than the saying speaker (73%, 30/41), binomial  $p = 0.004$ .”

Granted that at least some of the participants were not sure that they have derived the implicature correctly, it is surprising that so many of them were ready to punish the speaker of the untruthful implicature. That the one who is untruthfully implicating is more trusted than the lying speaker can be explained by the tendency of the uncertain addressees to not totally withdraw their trust. So, if one wants to avoid the risk of a big loss of reputation, one should deceive by way of untruthfully implicating.

However, the final conclusion of Mazzarella et al. (2018: 23), i.e., “that implicating is taken to be less committal than saying and presupposing”, remains unclear. For it is obvious that the participants have no difficulties with the assumption that speakers are committed to the content of their implicatures. Possibly, variation in the judgments is connected to the addressees’ uncertainty with respect to a correct derivation, and thus an effect of computation of contextual information.

In contrast to Mazzarella et al. (2018), Bonalumi et al. (2020) argue explicitly against the view that explicit communication correlates positively with higher commitment assignment and responsibility. For the hearer, speaker commitment is dependent of ‘what is meant’, not of ‘what is said’. Of primary importance is the relevance of the communicated content (the speaker is committed to) which is largely independent of explicit or implicit conveyance. While the object of their investigation is the speech act of promising, the authors assume that their results can also be transferred to assertions.

Bonalumi et al. (2020: 5; see also Bonalumi et al. 2019) proceed from the following definition of commitment (to a promise):



1. participants' explicit moral judgements about the communicator, i.e., about whether the communicator should engage in some reparation strategy following the violation of the commitment;
2. whether participants take into account the violation of commitment when engaging in partner choice, or, on other words, whether the communicator incurred reputational costs; and
3. whether participants perceive a violation of promise.

The authors used three conditions, namely 'Enriched/implicit condition', 'Explicit condition' und 'Explicit but Not Relied On condition'. One of their scenarios is exemplified in the following cases (Bonalumi et al. 2020: 7; scenario A, study 1):

*Enriched/implicit condition:*

Jack lent 200 EUR to his friend Ben a couple of months ago. Jack's landlord wants the rent to be paid by Monday of the next week, and Jack does not have enough money to pay it. So a week before the rent is due, Jack asks Ben to return the money, saying that he wouldn't be able to pay the rent by the Monday deadline otherwise.

Ben replies "Don't worry, I will definitely pay you back."

Ben pays back on Thursday, three days after the rent was due.

*Explicit condition:*

Jack lent 200 EUR to his friend Ben a couple of months ago. Jack's landlord wants the rent to be paid by Monday of the next week, and Jack does not have enough money to pay it. So a week before the rent is due, Jack asks Ben to return the money, saying that he wouldn't be able to pay the rent by the Monday deadline otherwise.

Ben replies "Don't worry, I will definitely pay you back before Monday."

Ben pays back on Thursday, three days after the rent was due.

*Explicit but Not Relied On condition:*

Jack lent 200 EUR to his friend Ben a couple of months ago. Jack's landlord wants the rent to be paid by Friday of the next week, and Jack does not have enough money to pay it. So a week before the rent is due, Jack asks Ben to return the money, saying that he wouldn't be able to pay the rent by the Friday deadline otherwise.

Ben replies "Don't worry, I will definitely pay you back before Monday."

Ben pays back on Thursday, the day before the rent is due.

The 255 participants in study 1 had the task to evaluate the speaker's behavior (using a 6-point scale) with respect to a required apology ("The speaker owes the hearer an apology."), future partner choice ("If you were the hearer, you would rely on the speaker in the future."), and the assessment of the target utterance as an insincere (violated) promise ("The speaker failed to live up to their promise.").

By and large, the results stand in contrast to Mazzarella et al. (2018), since they do not support the hypothesis that there is a basic difference between explicit and implicit promising. What matters for the participants is what the speakers meant (i.e., what they are committed to), not what they said. In particular, the participants judged that (a) an apology was more apt in the *Explicit condition* than in the *Explicit but Not Relied On condition*, (b) that they saw no difference in this respect between the *Explicit condition* and the *Implicit condition*, and (c) no difference between the *Implicit condition* and the *Explicit but Not Relied On condition* (Bonalumi et al. 2020: 10).

Concerning the future trust in the speaker's reliability and the broken promise, the participants made no distinction between the *Explicit condition* and the *Implicit condition*. In both conditions, they felt a lack of reliability of the speaker and diminished future trust, and had the impression of a broken promise to a greater extent than in the *Explicit but Not Relied On condition* (Bonalumi et al. 2020: 11).<sup>2</sup>

The differences in the results of Mazzarella et al. and Bonalumi et al. are explained in a convincing way by Yuan and Liu (2022). The authors surveyed 385 participants with Mandarin Chinese as their first language in relation to promises and assertions, both made explicitly and implicitly (as conversational implicature). They each asked a series of questions about commitment (relating to personality judgment, future partnership, punishment, fault attribution), with a 1–7 scale provided. The results showed that “providing a false message and violating a promise bring different consequences/costs to the hearer” (p. 138). The ratings for promises were much higher than the ratings for assertions. Thus, commitment covaries with speech-act types.<sup>3</sup>

In sum, then, we can conclude that commitment to an implicature is a viable concept. Whether there must be a stronger speaker commitment to asserted content vis-à-vis implicated content, is still an open question. In any case, there is some evidence that what ultimately matters is the addressee's attribution of commitment to the speaker (see Morency et al. 2008) independently of the kind (i.e., explicit or implicit) of communicated content.

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2 Study 2 by Bonalumi et al. (2020) addressed the GCI – PCI distinction. Cases in which the promise was fully explicit were contrasted with “cases in which the promise needs to be fully retrieved by the hearer” (p. 11). In Study 2, participants took the implicit message (the PCI) in the Implicit condition less into account than in Explicit condition. Using different stimuli in study 3, the authors conclude that the “results corroborate the results of Study 1 and 2” (p. 21).

3 Note that speech-act types may be connected to different cultural norms and expectations. See Meibauer (2017) and Thalmann et al. (2021) for further discussion.

## 5 Are untruthful implicatures lies?

Misleading may happen non-verbally or verbally. Wearing a wig, a person induces in the observer the belief that he or she has a full head of hair. Putting my suitcases before the door, I lead my neighbors into the false belief that I am going to leave the place. Verbal misleading uses the same mechanism of inducing a false belief in the hearer. It is not a case of simple misunderstanding.

What is the difference between lying and misleading? In the case of lying, the hearer need not believe *p*. In the case of misleading, however, the hearer must believe *p*, since *to mislead* is a success predicate. Moreover, we think of lying as being intentional, while misleading may happen unintentionally. Surprisingly, the seminal study of Saul (2012) does not give an explicit definition of misleading (and this observation extends to much work dealing with misleading). Meibauer (2014b: 113) proposes the following definition that seems to fit to what Saul has in mind:

A speaker *S* misleads iff

- a. *s/he* utter a sentence *s* meaning *p*, and thereby
- b. intentionally or unintentionally (accidentally)
- c. leads the hearer into a false belief.

Lying as well as untruthfully implicating involve intentionality. In contrast, condition *b.* in the above definition of misleading allows for unintentionality (accidentality). The question, then, is whether there is a difference between verbal misleading and untruthful implicature. If there is no difference, one could apply Ockham's razor and dispense with the notion of misleading. The often-used collocation "mere misleading" points to potential moral evaluations with respect to misleading (see Adler 1997, 2018; Barber 2020; Bastler 2019; Baumann 2015; Pepp 2020; Saul 2012; Timmermann and Viebahn 2021; Wiegmann and Neelemann 2022). Yet, we do not need the notion of misleading when we want to talk of moral differences between lying and untruthfully implicating.

Addressing the distinction between lying and misleading, Bach (2013) sums up:

This distinction is often understood as the difference between, in meaning something, trying to deceive explicitly and merely inexplicitly or indirectly. However, that overlooks the fact that almost all the utterances we count as lies are at least partly inexplicit and that there is no difference in kind between the communicative intentions associated with fully explicit utterances and those associated with less explicit ones. Whether or not the speaker is completely explicit, what the speaker means is a matter of his communicative intention, something, the audience has to identify in any case. Trusting the speaker is another matter.

Thus, misleading is seen by Bach as a case of inexplicit (implicit, indirect) communication.

What kind of linguistic entities are conversational implicatures? Let us shortly recap some of their properties. First, they are propositional, i.e., they possess a propositional content. Second, they may be true or false and therefore contribute to the truth-conditions of an utterance. Third, the content of a conversational implicature is usually paraphrased, i.e., a certain wording is selected. Note that paraphrases of conversational implicatures often use the declarative form (Albeit other forms are not excluded in principle, cf. the case of indirect speech acts; see Meibauer 2019a.).

Consider the canonical case of Grice's (1989: 37) speaker saying *X is meeting a woman tonight* implicating "that the person to be met was someone other than X's wife, mother, sister, or perhaps even close platonic friend." While this is straightforward, nothing prevents the hearer from deriving a slightly modified version, e.g., 'The woman whom X will meet [at the hotel bar] tonight is [most certainly] not his wife' (the square brackets indicate enrichment and epistemic modification, respectively). Because conversational implicatures are hypotheses of the hearer, we can never be sure that the conversational implicature derived by the hearer is *exactly* the same as the one intended by the speaker. We can agree, however, that paraphrases of conversational implicatures should take the most neutral form that makes sense in a particular context.

If conversational implicatures can be true or false, they should have their own truth-conditions. But where and how are these truth-conditions calculated? How can we represent them in the overall language architecture? While Horn (2004: 25, Fn.1) concedes that what is implicated may have its own truth-conditions, he remains silent about a computational level where all the meaning aspects are merged. More generally, approaches sticking to a sharp dividing line between semantics and pragmatics (e.g., Horn 2017), are very reluctant here. Grice (1989) and Bach (2006), in contrast, suppose that it is the level of the total utterance meaning where all partial meanings come together. Arguably, this is also a level on which to settle a general concept of lying, although there may be more restricted conceptions that are also plausible (for instance, the 'privileged interactional interpretation' assumed by Ariel 2002; see also Sternau et al. 2015).

In the following, I will discuss recent experimental work focusing the question whether the average speaker thinks of untruthful implicatures as lies. By and large, Weissman and Terkourafi (2018) deny this. They presented 11 types of GCI and 4 types of PCI to 60 participants. Their task was to evaluate the target utterance of a story and judge whether this utterance was a lie ("Did X lie?"), using a 7-point scale. The authors used the three conditions "not lie", "false implicature", and "lie".

Although there was a certain amount of variation in the judgments, only three cases (out of 11) were evaluated on average as lies. These were cases with cardinals and cases where nouns and verbs were repeated. According to Weissman and Terkourafi, these cases can be analyzed as cases with a conventionalized meaning. Finally, there was no significant difference between GCIs and PCIs.

On closer consideration of the vignettes, however, it turns out that in the lying version, a motive of the liar was given whereas such a motive was absent in the cases with untruthful implicatures. Because hearers have to derive a conversational implicature, thereby looking for a potential motive for the deception, it cannot be excluded that these additional computational costs caused the average judgments to fall below the threshold of 3.5 on the scale.

Let us look at one of the vignettes that Weissman and Terkourafi (2018) used:

Rumors have spread about an incident in the art studio yesterday. Alex was in the studio all day and saw Sarah, frustrated with a project, pick up a hammer, walk over to a statue and kick the statue over with her foot, causing it to smash all over the floor. The following day, Alex talks about the incident.

Mark: I heard Sarah had a meltdown in the art studio yesterday! What happened?

Alex: You should've been there! In a fit of rage, Sarah picked up a hammer and broke a statue (p. 9).

It is true that Sarah picked up a hammer and that she broke a statue, but it is not true that she used the hammer for breaking the statue, which is suggested by the pertinent GCI. Indeed, she kicked the statue. That this case has not been considered as a lie can be explained by the lack of a motive for lying. Why should Alex try to deceive Mark? This lack of a motive of the liar holds for the vignettes used by Weissman and Terkourafi (2018) in general.

Interestingly, Weissman and Terkourafi (2018: 16) comment on a methodological problem of their study. They aim at the question how near to the literal meaning GCIs are. The assignment of a liar's motive could be a factor that contributes to shifting the implicature to the category of PCI. Therefore, it seems that they want to exclude the ascription of a deceptive aim. If so, it follows that GCI and PCI are rather dismissed as sources of lying. In contrast, if one assumes that lying with untruthful implicatures may be possible, the vignettes should be construed in such a manner that the intention to deceive seems plausible.

In a replication study, Wiegmann (2022) shows that, by making the conversational implicature explicit and adding a concluding sentence to the story stating that the addressee believed the implicated content (Explicit Condition), the interpretation of the 15 stories used in Weissman and Terkourafi (2018) totally changed. While in the Original Condition, results were similar to the ones obtained by Weissman and

Terkourafi, results in the Explicit Condition “were almost opposite”, since “the majority of the stories (60%, 9 out of 15) received ratings significantly higher than the midpoint of the scale, only four stories were not considered to be lies, and the ratings for two stories did not differ significantly from the midpoint (...).” These results show that participants are very sensitive to the wording of the respective stories and that participants’ uncertainty with respect to an adequate pragmatic inference plays an important role.<sup>4</sup>

With respect to crafting stories that make a deceptive intent of the speaker more plausible, the studies by Antomo et al. (2018), Or[r] et al. (2017), Wiegmann and Willemssen (2017), Wiegmann et al. (2021), and Reins and Wiegmann (2021) are more convincing because they construe plausible scenarios of deception. Let us shortly review their findings.

In contrast to Weissman and Terkourafi (2018), Antomo et al. (2018) found a significant difference between GCIs and PCIs. They argue that untruthful implicatures may be regarded as lies (Antomo et al. 2018: 142): “Since our data show that both untruthful implicature types are assessed significantly more as lies compared to true ones, we can conclude that implicatures can be interpreted as lies.” GCIs are evaluated as clear cases of lying, in contrast to PCIs. Nevertheless, even in PCIs, there is a clear contrast between false and true PCIs. Or[r] et al. (2017) even find that PCIs are evaluated as part of what-is-said: “Once an implicature is viewed by interlocutors as the most relevant contribution made by the speaker, it can represent what the speaker said and affect the perceived truth-conditional content.” (Or[r] et al. 2017: 87) The participants assessed a literally true sentence as a lie, if an untruthful PCI was triggered. Similarly, Wiegmann and Willemssen (2017) found that participants judged half-truths (deliberately leaving out relevant information) as lies.

In Wiegmann et al. (2021) and its follow-up study Reins and Wiegmann (2021), the hypothesis that it is possible to lie by using untruthful implicatures has been corroborated.<sup>5</sup> Moreover, it turns out that commitment to a proposition is an important measure. This seems to support a commitment-based definition of lying.

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<sup>4</sup> Moreover, as Weissman (2022) shows, participants are sensitive to the discourse genre, defined as “the societally-shared discourse expectations and standards that accompany the setting of an interaction” (353). Using 10 stories with GCIs and PCIs in the discourse genres “oath in the courtroom”, “politician giving a public address”, “casual conversation between two friends” and a sliding scale for the ratings, Weissman (2022: 374) found that “while this context-based difference was significant for GCIs, such was not the case for PCIs”. Again, I would suspect that the PCIs (because of phrases like *let’s just say, works for the FBI, all-natural ingredients*) were hard to interpret in the context of the three context types.

<sup>5</sup> Note that in Reins and Wiegmann (2021: 5, 8), Wiegmann et al. (2021) is cited as „Wiegmann and Meibauer (ms)“.

Let us shortly recap the relevant studies. Wiegmann et al. (2021) used 14 vignettes based on cases discussed in the pertinent literature. Participants were asked to evaluate target utterances applying a 7-points scale (1 = no lie, 7 = lie). The implicatures were triggered on the basis of the maxims of Quantity, Relation and Manner, and were of the GCI- and PCI-kind. Besides commitment, the proxy measures suggestion, probability, falsity and morality were tested. On the whole, the results confirm that the participants are sensitive to the kind of communicative situation, as represented in the vignettes, and carefully take the motives of the speakers and the attributed speaker commitment into account. A main finding was that “ten out of the fourteen Deceptive Implicatures vignettes received mean lie ratings significantly higher than the midpoint of the scale (4), three were not significantly different from the midpoint, and one was significantly below it (...).” Most importantly, the correlation of the commitment ratings with the lie ratings were high (0.87). The linguistic task is, then, to explain the variation of speaker judgments with respect to the cases and the semantics and pragmatics of the triggers contained in them.

In Reins and Wiegmann (2021), the analysis of the predictor “commitment” has been continued. The goal was to develop a commitment-based definition of lying that covers untruthful GCIs, PCIs, and presuppositions. Using 16 vignettes covering PCIs, GCIs, presuppositions, and actions, the study showed that participants considered the respective utterances and actions in 15 of the 16 cases as lies. Most remarkably, they found that there is a very high correlation between the evaluation as a lie and deniability ( $r = -0.96$ ). This leads the authors to the conclusion that commitment is a better predictor than the type of deception. Based on these findings, they propose a commitment-based definition of lying requiring “that agents are committed to the explicated content of their communicative acts, as well as to those contents without which their communicative acts would not be meaningful contributions to a conversation” (Reins and Wiegmann 2021: 25). This means that explicit as well as implicit meanings may contribute to the interpretation of an utterance as a lie.

Table 1 gives an overview on the reported studies and findings.

Finally, I would like to report on the findings of Skoczeń (2022) that support the hypothesis that untruthful implicatures can be considered as lies. Skoczeń (2022) is interested in the question whether in much-discussed cases like *Bronston v United States*, an untruthful implicature can be regarded as perjury (Solan 2018). Regarding utterances with the scalar implicature triggered by the quantifier *some* (*Some of the invoices are unpaid*), Skoczeń (2022) used three context types, namely a neutral context, a court context with an explicit motive of the liar, and a court

Table 1: A survey of experimental studies on untruthful implicatures.

| Studies in chronological order | Number of participants | Mean age           | Method                                                                            | Number of stories | GCI-PCI | Main results                                                                                                                                                                                                                 |
|--------------------------------|------------------------|--------------------|-----------------------------------------------------------------------------------|-------------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Orlir et al. (2017)            |                        |                    |                                                                                   |                   |         |                                                                                                                                                                                                                              |
| - Experiment 1                 | 28                     | 27.8               | Rating of stories; 1-7 scale                                                      | 12                | PCI     | "The results from experiments 1 and 2 indicate that PCIs influence speaker's truth evaluations. Literally true propositions with false PCIs were often enough viewed by participants as not true and even as lies." (p. 101) |
| - Experiment 2                 | 30                     | 25.70              | Ratings of stories; 1-7 scale                                                     | 12                | PCI     | Participants considered untruthful implicatures as lies. This effect showed with respect to the maxims of Quantity, Relation and Manner.                                                                                     |
| Wiegmann and Willemssen (2017) |                        |                    |                                                                                   |                   |         |                                                                                                                                                                                                                              |
| - Experiment 1                 | 451                    | 32                 | Rating of stories; Yes-No answers (Lie-No lie)<br>Quantity (omission, half-truth) | 4                 | PCI     |                                                                                                                                                                                                                              |
| - Experiment 2                 | 208                    | 34                 | Relation                                                                          | 2                 | PCI     |                                                                                                                                                                                                                              |
| - Experiment 3                 | 197/206/386            | 34/34/35           | Manner: Ambiguity, obscurity, order                                               | 2                 | PCI     |                                                                                                                                                                                                                              |
| Antomo et al. (2018)           |                        |                    |                                                                                   |                   |         |                                                                                                                                                                                                                              |
| - Experiment 1                 | 30                     | 35.1               | Rating of stories; 1-5 scale<br>1-5 scale                                         | 12                | Both    | Adults rate false implicatures to be applicable as lies. (p. 146)<br>Children rate false PCIs as cases of lying. (p. 146)                                                                                                    |
| - Experiment 2                 | 60                     | Age span 5-9 years | 1-5 scale (smileys)                                                               | 12                | PCIs    |                                                                                                                                                                                                                              |
| Weisman and Terkourafi (2018)  | 60                     | 37.22              | Rating of stories; 1-7 scale                                                      | 15                | Both    | 2 stories = lies, 11 stories = not lies; 4 stories "somewhere in the middle" (p. 18)                                                                                                                                         |
| Wiegmann et al. (2021)         | 200                    | 32.3               | Rating of stories; 1-7 scale                                                      | 14                | Both    | Deceptive implicatures were predominantly considered as lies (10 out of 14). Commitment as the best proxy measure.                                                                                                           |



Table 1: (continued)

| Studies in chronological order | Number of participants | Mean age | Method                                                                            | Number of GCI-PCI stories | Main results                                                                                                                                                                                                                             |
|--------------------------------|------------------------|----------|-----------------------------------------------------------------------------------|---------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Reins and Wiegmann (2021)      | 300                    | 34.21    | Rating of stories                                                                 | 16                        | GCI, PCI, presuppositions (PSPs), non-verbal action<br>Participants considered “all of the deceptive presuppositions, deceptive GCIs, and deceptive nonverbal actions, as well as most of the deceptive PSPs” as cases of lying. (p. 17) |
| Weissman (2022)                | 642                    | 31.82    | Rating of stories; sliding scale                                                  | 10                        | Both<br>Discourse genres (courtroom, political speech, casual speech) are relevant for lie ratings in the case of GCI but not in the case of PCI. (p. 374)                                                                               |
| Wiegmann (2022)                | 222                    | 35       | Rating of stories; 1–7 scale; replication study of Weissman and Terkourafi (2018) | 15                        | Both<br>11 stories were considered as cases of lying, once the intention to deceive and the implicature was made explicit.                                                                                                               |

context without an explicit motive of the liar. The results support the view that untruthful implicatures are considered as lies:<sup>6</sup>

In the case of the utterance containing the word “some,” that typically generates scalar implicature (‘not all’), there is a robust folk intuition across all contexts that a false implicature is a lie. Most participants judged the protagonist as communicating that not all the objects had the property. When presented with the information that it turned out that all the objects had the property, participants judged the protagonist as having uttered a lie in all three tested context types (Skoczeń 2022: 798).

Summing up, there is ample evidence for the view that untruthful implicatures are considered as lies when ordinary interlocutors think that speakers are committed to the untruthful proposition. In the next section, I will discuss whether this supports the so-called adverbial approach by García-Capintero (2021) or the commitment approach by Viebahn (2021).

## 6 Further discussion

The search for a correct definition of lying has driven analytical and empirical research in recent years. It is often assumed that there must be one absolutely correct definition that is completely superior to all other proposals. This is probably an overly naïve view of an extremely complex subject, because there may be several convincing definitions – depending on the wider theoretical background.<sup>7</sup> Based on the view suggested by the studies under consideration that it is possible to lie even with untruthful implicatures, we will now ask how this can best be captured in a general definition of lying. In particular, we will look at those definitions that understand speaker commitment as a central moment of such a definition.

In Meibauer (2014a), I proposed extended definitions of lying with respect to untruthful implicatures and presupposition, based on the assumption that lying is an insincere assertion. Via the definition of assertion, commitment comes into play. In Meibauer (2014b), I argued that speakers are, in principle, committed to implicatures

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<sup>6</sup> In a series of five experiments, Skoczeń and Smywiński-Pohl (2022) were able to show that a courtroom context had an influence on the derivation of GCI with some. In particular, participants were more inclined to interpret a statement literally when distrusting it in the courtroom context than outside the courtroom context, where they had no problem considering intentionally false implicatures as lies. Judgment as perjury seems to depend heavily on objective facts and less on the attribution of an intent to deceive.

<sup>7</sup> For instance, if researchers do not believe in the necessity of an intention to deceive on the part of the speaker, they would not include such a condition in their favourite definition of lying.

in the same way as to assertions, though the rationale of a conversational implicature is, of course, to avoid commitment.<sup>8</sup>

Commitment-based definitions of lying tend to make the concept of commitment a central one. In a way, the notion of commitment (non-commitment) serves functions that were fulfilled by the notions of sincerity (insincerity, see Stokke 2018) and truthfulness (untruthfulness, see Dynel 2018) in earlier approaches; see Meibauer 2019b). By and large, Wiegmann et al. (2021) and its follow-up study Reins and Wiegmann (2021) endorse the commitment-based definition of lying (CL) proposed by Viebahn (2021).

- (CL) A lies to B if and only if there is a proposition  $p$  such that:
- (L1) A performs a communicative act C with  $p$  as content;
  - (L2) with C, A intends to communicate  $p$  to B;
  - (L3) with C, A commits herself to  $p$ ; and
  - (L4) A believes that  $p$  is false.

The advantages of this definition are manifold: The notion of a “communicative act” entails different kinds of speech acts as well as conversational implicatures and pre-suppositions. Introducing “commitment” into the definition accounts for the finding that commitment is the best proxy measure for lying, and leaves the possibility open that there are degrees of commitment, e.g. with respect to assertion versus conversational implicature as well as generalized versus particularized implicature. Note, however, that not all factors leading to a particular judgment need to be listed in a complete definition if they can be derived from other factors or components in a modular architecture of speech production and comprehension. Seen in this light (CL) can only capture a prototypical aspect of a complete theory of lying.

While the relation of (CL) to the overall architecture of speech production and comprehension is not fully spelled out, there are several attempts at locating definitions in Neo-Gricean and Post-Gricean pragmatic frameworks. For instance, Meibauer (2014a) was situated in Levinson’s (2000) Neo-Gricean framework, Reins and Wiegmann (2021: 20–22) stick to Relevance Theory, holding that the level of an explicature is the relevant computational level for GCIs, and Weissman (2022) sides with Ariel (2002) in assuming that a level of PII (privileged interactional interpretation) is most relevant.<sup>9</sup>

Whereas Viebahn (2021) relates commitment to the speaker’s not being in the state of consistently dismissing an audience challenge, Reins and Wiegmann (2021:

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<sup>8</sup> See also Meibauer (2005, 2011).

<sup>9</sup> On lying with explicatures, see Meibauer (2014a: 140–147). Regarding explicatures as the most relevant level, like Reins and Wiegmann (2021) do, tends to ignore PCIs. Note that Relevance Theory denies the distinction between PCI and GCI; see Carston (2002).

25) defend a specific notion of commitment, “namely that agents are committed to the explicated content of their communicative acts, as well as to those contents without which their communicative acts would not be meaningful contributions to a conversation”. Note that the linguistic entities of implicature and presupposition are circumscribed in a rather inexplicit way broadly echoing Grice’s cooperative principle.

García-Carpintero (2021) argues that the so-called “adverbial” account is superior to the commitment account.<sup>10</sup> Broadly drawing on a Gricean background, García-Carpintero (2021: 400) defines the adverbial account of lying as follows:

- (AL) A lies in communicating propositions  $p$  to B if and only if:
- (1) A assertorically commits to  $p$
  - (2) A’s utterance says/makes explicit  $p$
  - (3) A believes  $p$  to be false

However, (AL-1) restricts lying to assertions, which is not adequate when one considers non-assertions triggering untruthful implicatures and presuppositions. In contrast, (CL) allows for these cases. For García-Carpintero (2021: 401), “merely hinting or otherwise implying” a proposition is a case of “misleading”. In spirit, this is the approach of Saul (2012). Yet, the empirical results reported in this article suggest that (AL) falls short of capturing the folk intuitions about lying. Furthermore (AL) sticks to the speech act of an assertion while (CL) does not mention assertion at all. The latter approach thus includes the case of lying by using, for instance, a question containing an untruthful presupposition.<sup>11</sup> Note that there is initial empirical evidence for that possibility (Viebahn et al. 2021).

Marsili (2021) proposes a commitment-based definition of lying along the following lines:

- S lies iff
- (a) S utters a sentence with content  $p$
  - (b) In virtue of doing (a), S is accountable and discursively responsible for  $p$
  - (c) S’s utterance is insincere

Remarkably, this definition is completely compatible with the (CL) approach, since it does not restrict lying to assertion (as AL does) and lets it open how the

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**10** Why this particular label has been chosen, remains unclear to me. The idea seems to be that AL focuses the specific *way* of doing something. This is, however, also at the heart of the commitment approach.

**11** It remains silent about the possibilities of lying with conventional implicatures and explicatures (see Meibauer 2014a and Stokke 2018).

transmission of an untruthful proposition is achieved (i.e., by way of assertion and/or implicature).

Like García-Carpintero (2021), Meibauer (2014a) finds that sentence modality, via sentence types, is a fundamental link between the grammar and the pragmatics of a natural language; though this is an aspect that is neglected in many contemporary theories of lying it is a hugely important one, since it bears on the question what kinds of linguistic entities may be exploited for lying (Meibauer 2018).

In sum, then, we may conclude that commitment, as already pointed out by the classic speech-act theorists, is a central property when lying is judged. Beyond this, the important task is to find out how variation between participants, as related to context types and the phrasing of the vignettes, comes about. We should not forget that vignettes are only a vast simplification of a complex real-life situation. Evaluating fictive communication, as represented in scenarios, is different from evaluation in real-life communication. Intentionalist and social approaches to commitment, as well as semantic (what-is-said) and pragmatic (what-is-implicated) approaches to lying are compatible with each other, when one has a balanced view of the semantics-pragmatics interface.

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## Bionote

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