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**‘Well, that’s just great!’ – An empirically based analysis of non-literal and attitudinal content of ironic utterances\***

**Abstract**

This study contributes to the ongoing debate about the informational status of attitudinal content with a focus on verbal irony. Specifically, we investigate how the different meaning components involved in ironic utterances blend into the spectrum between primary and secondary content of utterances. After an analysis of the semantic and pragmatic characteristics of ironic meaning components and their linguistic expression, we show, based on experimental data, that ironic, non-literally asserted content is “less” at issue than non-ironic, literally asserted content. Crucially, our findings also suggest that an ironic utterance’s non-literally asserted content is more at issue than the attitudinal content expressed with the ironic utterance. No difference is observed between attitudinal content manifested as ironic criticism and content manifested as ironic praise. Our findings support the notion of at-issueness as a graded criterion and can be used to argue that verbal irony in general seems to be difficult to reject directly and, thus, be treated as at issue.

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**1 Introduction**

Investigations of the semantic and pragmatic status of attitudinal content typically consider meanings that are literal. Research on attitudinal content that is non-literal, as is the case with metaphoric language or verbal irony, is sparse and confounded by the fact that the expression’s non-literality seems to critically supplement the main point of the utterance. Consider the following example of verbal irony.

- (1) [After breaking a plate]  
Well, that’s just great!

The utterance in (1) articulates an assertion which denotes the opposite of the expression’s literal meaning. At the same time, by saying something positive, the speaker conveys a negative attitude towards the corresponding denotatum, i.e., the plate’s broken state. An evaluation of this sort, which materializes as ironic criticism in the example, has been argued to be a key component of verbal irony, see, for example, Dews & Winner (1999), Kreuz & Glucksberg

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(1989), Wilson (2006). But what exactly is the informational status of the speaker attitude expressed with an ironic utterance? In the literature on attitudinal content, the evaluative content of, e.g., slurs has been characterized as not-at-issue content, that is, as content which does not contribute to the question under discussion directly, see, among others, Carrus (2017), McCready (2010). This raises the question whether this also applies to attitudinal content of ironic utterances. Further, what is the informational status of content expressed non-literally in comparison with literally expressed content? Does the former contribute to the question under discussion in the same way as the latter? It appears, for example, that ironically expressed content can be dissented with less easily than non-ironic, literal content, as is reflected in the difference in suitability between ((2)b) and ((2)b') below, responding to an ironic utterance in ((2)a) and, respectively, a non-ironic utterance in ((2)a').

- (2) [After an ambivalent performance]
- a. A: Well, that lead singer really hit every single note!
  - b. B: <sup>??</sup>No, that is not true, the performance was flawless.
- a.' A: Well, that lead singer sang totally off key!
- b.' B: No, that is not true, the performance was flawless.

An explanation of this effect holds, one may argue, that a non-literally expressed assertion has a different conversational status than a literally expressed one and is, thus, more difficult to dissent with directly. Furthermore, as verbal irony always conveys an evaluation of some sort, and as an evaluation is, supposedly, more difficult to reject, it is also less prone to figure as at-issue content in a discourse.

Against this background, the current study aims at analyzing how the different meaning components involved in ironic utterances blend into the spectrum between primary and secondary content, that is, the spectrum between at-issue and not-at-issue content. Specifically, our paper seeks to answer the following questions: First, is ironic, non-literally expressed content less at issue than literally expressed content? Second, is ironic, non-literally expressed content more at issue than the attitudinal content expressed with an ironic utterance? Last, do different ironic attitudinal contents vary w.r.t. their at-issueness so that ironic criticism is less at issue than ironic praise?

The structure of this paper is as follows. In section 2, the central meaning components of ironic utterances will be characterized with a particular focus on how these are encoded linguistically. In section 3, we determine the semantic and pragmatic source as well as the informational status of contents involved in verbal irony based on an experimental study including a detailed description of the design of the material employed in the experiment. Section 4 concludes our investigation.

## 2 Ironic meaning components and their expression

A main function of verbal irony, as has often been claimed in the literature, is to add an aspect of humor in a conversational exchange, see, for example, Dews & Winner (1999), Giora (1995). Dews et al. (1995: 297) state that “speakers choose irony over literal language in order to [...] soften the edge of an insult, to show themselves to be in control of their emotions, and to avoid damaging their relationship with the addressee”. This particular communicative effect produced by an ironic utterance is rooted in the meaning characteristics verbal irony conveys in contrast to non-ironic language. In the following, we assume these characteristics to be associated with two main components, including a content expressed non-literally, on the one hand, and the speaker’s attitude to evaluate the expression’s denotation, on the other.

### 2.1 Two components of ironic utterances

Consider the example in (3), which, when uttered ironically, asserts that it is not a sunny day, that is, a meaning that is an alternate to the sentence’s literal meaning.

- (3) [On a rainy day]  
This is such a sunny day!

Drawing on Kaplan’s (1999) distinction between descriptive and expressive content, we consider the negated version of the semantic content of (3) to represent the descriptive content of the sentence. The non-literalness of the meaning of the expression is a central characteristic of ironic and sarcastic language, see, e.g., Sperber & Wilson (1981). From a semantic viewpoint, verbal irony has been described to involve a form of (indirect) negation, see Giora (1995). Observe that under the assumption that verbal irony involves negation, ironically asserted content is not non-truth-conditional in the strict sense but only not truth-conditional inasmuch as an ironic interpretation entails some negated version of the non-ironic alternate’s truth-conditional content.<sup>1</sup> In contrast to semantic approaches, pragmatic approaches view the notion of contextual inappropriateness of the expression as central in explaining the non-literalness of ironic speech acts, see Attardo (2000).

Another central content involved in verbal irony is associated with the speaker’s intention to produce an evaluative comment. We consider this content to represent expressive content. It has been analyzed as another utterance’s echo in the literature, see, among others, Jorgensen et al. (1984), Wilson

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<sup>1</sup> This insight will be relevant for the interpretation of our experimental data, see sections 3.3 and 4.

(2006), with the echo giving rise to some sort of mockery effect in verbal irony. Consider the following example.

- (4) [After arriving at a small Bed & Breakfast]  
That is quite a “hotel” the agency chose for our honeymoon!

With this utterance, the speaker communicates that somebody, perhaps a travel agent, has used the label *hotel* for the denotatum under discussion, which, however, would better be described as *Bed & Breakfast*. At the same time, the speaker articulates a negative evaluation of the corresponding denotatum. While the non-literality of the utterance’s meaning represents the first central characteristic of verbal irony, this evaluative “undertone” is the second main feature of ironic utterances.

Observe that the evaluative attitude expressed with an ironic utterance is often negative, referred to as ironic criticism, but it can also be positive (ironic praise), see, e.g., Dews & Winner (1999), Kreuz & Link (2002). The latter type is illustrated in the following example.

- (5) [Tom received an A grade]  
That is such a bad grade, Tom!

When uttering (5) ironically, the speaker literally says something negative in order to express something positive. Wilson (2013) argues that ironic praise is subject to stronger use restrictions than ironic criticism, which is often considered the default in verbal irony, see also Wilson & Sperber (1992). The standard of verbal irony to involve a negative attitudinal polarity has been explained by means of a normative bias, see Kreuz & Glucksberg (1989). Due to this normative bias, which describes people’s general aspiration to fulfill social norms rather than defy them, an ironically praising utterance standardly refers to a preceding assertion, event, situation, etc. while ironic criticism can be used without such a reference point. Against this background, also more recent experimental research on irony detection can be interpreted, which found ironic praise, as the less prototypical type of irony, “to generate variance with surplus meaning beyond the variance generated by ironic criticism in irony detection”, see Brunsch & Ruch (2017: 87).

## 2.2 Encoding verbal irony

Empirical investigations on how verbal irony is encoded in an utterance have a focus on suprasegmental and non-verbal features. Based on stimuli collected from sitcoms, Attardo et al. (2003) conclude acoustic pitch as well as facial expression – primarily the so-called “blank face” – to be used as cues to signal irony. It is unclear, however, how systematic effects of this sort are and if they apply to natural speech as well. Results of a controlled irony-rating study conducted by Rockwell (2000) using auditory utterances indicate that only for

staged irony, raters were able to discriminate ironic from non-ironic utterances. Spontaneous irony could not be discriminated from non-irony based on vocal cues.

Another non-verbal means to indicate irony are quotation marks. In general, quotes are a metalinguistic device used to “mention” an expression, i.e., to draw the addressee’s attention to an expression’s linguistic side, see, for example, Quine (1981). Quotes as used in ironic utterances like in (3) and (4) above have commonly been characterized as a form of scare quotation in the literature, see, among others, Meibauer (2007) and Predelli (2003). Quotes have an apologetic function here and express a specific speaker modality implying a reservation w.r.t. the semantic appropriateness of the expression in quotes. Quotes materialize typographically as inverted commas and are often encoded as air quotes in the gestural mode. It is an open question whether the ironic use of quotes is also reflected acoustically, but evidence exists that quotes are acoustically represented in non-ironic utterances, when they are used, for example, to indicate pure quotation (“*Hotel*” has five letters), see Schlechtweg & Härtl (2019).

The lexical inventory used to indicate irony involves certain modifiers and particles as well as expressive lexical material. The name-mentioning modifier *so-called*, for instance, as in *The so-called “hotel” turned out to be a small Bed & Breakfast*, can adopt a distancing function and is semantically related to privative modifiers (*pretended, fake*) in such contexts. With this use of the modifier, the speaker questions the semantic appropriateness of the head noun’s name, thus producing an ironic or sarcastic interpretation of the construction, see Härtl (2018).

As verbal irony is used to express an evaluative attitude, modal particles are also expected to be involved in ironic utterances. Consider the following example from German.

- (6) Das ist (ja) eine schöne Wohnung.  
‘That is (PRT) a nice apartment.’

Notice that the use of the German particle *ja* facilitates the option to read the sentence in (6) ironically, which is essentially blocked (in the written mode) if the particle is not present. In its modal function, *ja* can, for example, be used to intensify the illocutionary force of a speech act and indicate that the utterance is intended as a threat, cf., *Komm ja nach Hause!* ('come PRT at home', *Will you just come home!*), see Mroczynski (2012: 206). When used with its discursive function, *ja* marks a proposition as uncontroversial and known in the relevant discourse domain. It links the utterance's content to some existing (implicit or explicit) pretext as a reference point in the common ground, see, for example, Diewald & Fischer (1998), Karagjosova (2003), and instructs the addressee to retrieve content from the common ground that is currently not under consideration, see Repp (2013). As regards informational status, *ja* has been analyzed to indicate that the proposition in *ja*'s scope is not used to directly address the current question under discussion, see Viesel (2015).

We assume the discourse function of *ja* to be the key factor why it figures in ironic utterances in German, under the assumption that verbal irony is a form of echoic language, see Wilson (2006), Wilson & Sperber (1992). According to Gibbs & Colston (2007), ironic utterances make reference to state-of-affairs that are expected or desired based on mutually shared knowledge. Verbal irony can echo a previous remark explicitly (e.g., *The so-called "hotel" turned out to be a small Bed & Breakfast*) or echo an assumption about a general norm (*What lovely weather for a picnic!*). Against this background, the use of *ja* can be argued to support ironic readings of sentences like (6) because it tells the addressee to establish a link between the expressed proposition and certain shared background knowledge about a previous remark or a norm, respectively. Observe that even when *ja* is used as an indicator that the current question under discussion is not addressed directly with an (ironic) utterance, this does not imply that a proposition in the scope of *ja* cannot be the target of negation, see Viesel (2016: 193).

Other potential cues for irony in German involve the particles *na*, *aber* and *wirklich* ('really'). Consider the following examples uttered ironically.

- (7) [After some bad news]  
Na, das sind aber tolle Neuigkeiten!  
PRT that is PRT great news  
'Well, that is really great news!'
- (8) [After a dull joke]  
Na, der ist wirklich zum Totlachen!  
PRT this is PRT to the dead laugh  
'Well, this one is killing me!'

While *na* is an interjection used in sentential-initial position to connect thoughts, *wirklich* has an affirmative function, pertaining to the simulated literalness of the ironic utterance, and puts emphasis on the endpoint of an evaluative scale.<sup>2</sup> *Aber*, again in the modal function, emphasizes the subjective evaluation by the speaker, see Möllering (2004). Notice that *wirklich* and *aber* are attitudinally neutral and, thus, sensitive to the evaluative polarity of the ironic utterance. *Aber*, for example, adopts a negatively enforcing function in (7) but a positively enforcing one with ironic praise, as is illustrated in (9).

- (9) [After some good news]  
 Na, das ist aber ein ganz schlechter Tag heute!  
 PRT that is PRT a totally awful day today  
 ‘Well, today really is an awful day!’

While the particles discussed above function as discourse-related and modal cues to mark verbal irony, the attitudinal content itself in an ironic utterance is encoded by means of evaluative lexical material, for example, through sentiment adjectives like *great*, *nice*, *bad*, *awful*, as exemplified in the examples above. We will come back to empirical particulars of this point in section 3.3.

In this section, we have argued verbal irony to comprise two main contents, i.e., the expression’s non-literal meaning and the speaker’s attitude to evaluate the expression’s denotation. The latter materializes usually as ironic criticism but also as ironic praise. Cues for verbal irony involve discourse and modal particles as well as certain modifiers and expressive lexical material. We are now ready to address our main question, which aims at localizing the contents of ironic utterances in the spectrum between primary and secondary content, i.e., between at-issue content and not-at-issue content of an utterance.

### 3 Irony in the spectrum between primary and secondary content

For the purpose of our analysis, by ‘source’, we refer to the difference between truth-conditional content (entailments and presuppositions),<sup>3</sup> on the one hand, and non-truth-conditional content (implicated content), on the other. Truth-

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<sup>2</sup> Note that *ganz* (‘totally’) in the example in (9) below fulfills a similar function within the DP. We speculate the use of these adverbs in ironic utterances to be explained by the fact that verbal irony may be easier to detect as such with “extreme” propositions. We wish to thank Heiko Seeliger for this suggestion.

<sup>3</sup> We speak of presuppositions as semantic presuppositions, see, e.g., Potts (2015), and not as pragmatic presuppositions, see, among others, Stalnaker (1974/1999).

conditional content is asserted explicitly. In contrast, implicated content is content which is not said explicitly but communicated in compliance with Gricean principles of conversation (Grice 1975).

Furthermore, by ‘status’, we refer to the difference between at-issue content and not-at-issue content, see, among others, Gutzmann (2015), Potts (2015), Tonhauser (2012). The standard definition holds at-issue content to represent the main assertion of an utterance and to answer the (underlying) question under discussion. Therefore, at-issue content is responsive to a direct negation like *No, that is not true*. Not-at-issue content, in contrast, is linked to secondary aspects of an utterance and does not, or only indirectly, contribute to the question under discussion. A typical instance of not-at-issue content is an appositive relative clause as in *Kim, who lives in Berlin, fascinates Joan*, whose content can only be indirectly rejected by means of a discourse-interrupting protest like *Wait a minute – Kim lives in Rome!*, see Fintel (2004).

### 3.1 Not-at-issue content as salient content

Presuppositions and implicatures are commonly taken to represent content which does not contribute to the question under discussion or does so only indirectly, see Potts (2005). This assumption, however, does not imply that these contents cannot be treated as salient and thus as “somehow” at issue by the interlocutors in a conversation. For instance, certain presupposed contents, although they are typically meant to be backgrounded and non-controversial, can be accommodated as new information, see Lewis (1979), and, thus, gain main point status.<sup>4</sup> This is illustrated in the following example, which is adapted from Simons (2005):

- (10) a. A: I should ask the new guy out – he seems really nice.  
 b. B: Yes, and his girlfriend is lovely, too!

By definition, the at-issue content in B’s utterance is associated with the information that the new guy’s girlfriend is as good-looking as he himself. At the same time, however, the information is expressed that the new guy has a girlfriend, and we can reason this to be the utterance’s actual main point communicated to A. The example illustrates that content which is presented as presupposed can be perceived as more on the at-issue side even though it formally figures as not-at-issue content. With respect to B’s reply in ((10)b), the latter is reflected by the fact that the information of the new guy having a girlfriend cannot be easily rejected by means of a direct negation, cf. *??No, that’s not true – he is single!* Similarly, conversational implicatures resist direct negation.

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<sup>4</sup> We stay agonistic w.r.t. the question whether main point status is an empirically primitive notion like salience or psychological prominence, which are also often characterized as (conceptual) primitives, see, for example, Schmidt (1996).



This is illustrated in (11), with A's response in ((11)c) intended to reject the implicature articulated in B's answer that it must be before 11:00 o'clock.

- (11) a. A: Can you tell me the time?  
 b. B: Well, the postman has not come yet.  
 c. A: <sup>??</sup>No, that is not true – it is after 11:00 o'clock.

Under certain circumstances, however, contents that are typically perceived as not at issue can also be rejected with a direct negation and, it follows, be treated as at issue by the respondent. An example are sentence-final appositives as in *Joan admires Kim, who lives in Berlin*, whose content can be targeted with a direct denial like *No, that is not true – Kim lives in Rome*, see AnderBois et al. (2015), Syrett & Koev (2015). Furthermore, a direct negation targeting not-at-issue content improves to a significant extent with the presence of a lexical tag in the denial,<sup>5</sup> i.e., an anchor that can be used to determine the scope of the negative operator. The contrast between ((12)b) and ((12)c), both with the intended meaning that Kim does not live in Berlin, shows this:

- (12) a. Kim, who lives in Berlin, fascinates Joan.  
 b. <sup>??</sup>No, that is not true.  
 c. No, Kim lives in Rome.

While certain not-at-issue contents can be treated as salient to some extent in a conversational exchange, attitudinal contents as they are involved in slurs and other evaluative expressions typically resist to be treated as at issue. Consider the example in ((13)a) and potential denials illustrated in ((13)b – d).

- (13) a. There is a cur living at the neighbors' place.  
 b. No, that is not true.  
 c. No, that is not true – the neighbors own a cat!  
 d. <sup>??</sup>No, that is not true – that dog is actually quite cute!

The denial alone, see ((13)b), targets the descriptive content of *cur*, i.e., the fact that the neighbors own a dog, as explicated in ((13)c). Observe that a direct denial combined with an explanation that targets *cur*'s evaluative content gives rise to markedness of the expression, see ((13)d). In contrast, a response addressing the evaluative content with an indirect rejection, e.g., *Wait a minute, that dog is actually quite cute!*, is unmarked. The oddity of the direct denial in ((13)d) can be explained by the fact that the use of expressive content, according to Potts (2007), is like a performative act, that is, an act that does not contribute debatable content to the common ground, cf. Carrus (2017). Below, we will draw a similar conclusion for the attitudinal content expressed with an ironic utterance.

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<sup>5</sup> We wish to thank Craige Roberts for pointing this out to us.

The view pursued here implies that (not-)at-issueness is a gradual feature and, thus, present to certain degrees in an utterance, see Härtl & Seeliger (2019). The notion is motivated by experimental results as they are reported in Smith & Hall (2011), who found substantial heterogeneity among projective meanings w.r.t. their projective strengths. In assertions containing an appositive like *Kim, who lives in Berlin, a great city, has finally arrived*, graded at-issueness is reflected in supposedly graded acceptabilities for the different denial options so that *No, she hasn't* > *No, she doesn't* > *No, it isn't*. Notice that with our gradual construction of (not-)at-issueness, the treatment of contents introduced in the discourse is in focus in a backward-looking way, cf., Gutzmann & Turgay (2019). Thus, we assume different contents to have different potentials to become at issue in a conversational exchange.

### 3.2 Hypothesized types of contents in ironic utterances

Regarding their informational status, we assume the contents involved in ironic utterances to not directly contribute to the question under discussion and, thus, to be less at issue than a literal and attitudinally neutral utterance. Consider ((14)a), uttered ironically.

- (14) [After an ambivalent performance]
- a. A: Well, the singer really delivered every note in place!
  - b. B: <sup>??</sup>No, that is not true, she hit every single tone.
  - b.' B: <sup>??</sup>No, that is not true, the performance was wonderful.

The examples show that both the non-literal content, see ((14)b), as well as the (negative) evaluation, see ((14)b'), are difficult to dissent with directly. Instead, their rejection takes on the form of discourse-interrupting phrases (e.g., *Wait a moment, she hit every single tone!* and, respectively, *Wait a second, the performance was wonderful!*). Recall, however, the notion discussed in the previous section that certain contents that are typically not at issue can gain salience under specific circumstances and, thus, be treated as more at issue to a significant extent. Consider the following dialogue.

- (15) [On a rainy day]
- a. A: What wonderful weather for a picnic!
  - b. B: No, that is not true – it's perfect weather for a day outside!

Observe that in this example, while it may be not unmarked, a direct denial is used to address ironic content. We claim instances of this sort to express an interlocutor's intention to treat an ironic content as at issue and, thus, take it to contribute to the question under discussion. This view will be relevant for our experimental set-up, see section 3.3.

As concerns the source of the contents involved in ironic utterances, we assume them to be treated as implicatures in a conversational exchange. Consider the examples below, which show that both the non-literal content, see ((16)b), as well as the evaluative content, see ((16)b'), are, in general, cancelable by the speaker.

- (16) [After arriving at a small Bed & Breakfast]
- a. That is quite a “hotel” the agency chose for our honeymoon!
  - b. I don't want to say it's not a real hotel – I just don't like it.
  - b.' I don't want to say I don't like it – it is just not a real hotel.

Notice, however, that in certain contexts, the non-literal content of an ironic utterance is more difficult to cancel than its evaluative component. Reconsider the example in (14) in that respect. Observe that the cancellation in ((17)c) is noticeably marked and is only appropriate under the speaker's assumption that she did not express the corresponding content *literally*.

- (17) [After an ambivalent performance]
- a. A: Well, the singer really delivered every note in place!
  - b. B: Do you want to say she sang off-key?
  - c. A: ?I did not say that!
  - b.' B: Do you want to say you didn't like the performance?
  - c.' A: I did not say that!

The contrast between ((17)c) and ((17)c') indicates that the non-literal content expressed in an ironic utterance, although difficult to dissent with directly, is communicatively more prominent, cf. ((17)c), than the evaluative content, cf. ((17)c'). This insight is compatible with experimental findings from Härtl & Seeliger (2019). Based on two experimental studies on ironically used DPs containing the modifier *so-called* (e.g., *The so-called “hotel” turned out to be a small Bed & Breakfast*), the authors argue that the head nominal's non-literality is more at issue than the speaker's attitude to evaluate the head's denotatum negatively. Based on these premises, for ironic utterances of the type under discussion, we hypothesize their evaluative content to be less prone to figure as at-issue content in comparison with the utterance's non-literal content (Hypothesis H<sub>A-1</sub>), which in turn figures as less at issue than the content entailed in a non-ironic utterance (Hypothesis H<sub>A-2</sub>).

Our second conjecture concerns the at-issueness of the two types of evaluative content expressed with an ironic utterance. Specifically, ironic praise could be assumed to be more at issue than ironic criticism, see section 2.1., due to the assumption that the former is subject to stronger use restrictions than ironic criticism, see Wilson (2013), and that it is also less frequent than the latter, implying a higher markedness of ironic-praise utterances, cf. Bruntsch & Ruch (2017). As markedness, in general, can be assumed to give rise to

higher informational salience, our second hypothesis states a positive speaker's evaluation expressed with an ironic utterance to be more prone to figure as at-issue content than a negative speaker's evaluation (Hypothesis H<sub>B</sub>). To test these two hypotheses, we devised a rating study, which we will now present.

### 3.3. Experimental study

**Method.** *Participants.* 62 German native speakers participated in the experiment, 46 of which were female and 16 of which were male. The majority of participants was aged between 20 and 30. Only one subject was younger than 20, and 25 participants were older than 30 years. Participants were not paid.

*Materials and design.* To identify the informational status of the two meaning components of ironic utterances, i.e., the utterance's non-literal content and the speaker's evaluation (both positive and negative), three different ironic conditions were tested based on Hypotheses H<sub>A-1</sub> and H<sub>B</sub>. As a fourth condition, non-ironic utterances were included, which served as a baseline to be able to compare the informational status of an ironic utterance's non-literal content with the informational status of the content entailed in a non-ironic utterance (Hypothesis H<sub>A-2</sub>). Therefore, four different conditions, i.e., (i) an ironic utterance's non-literal content (NLC), (ii) negative speaker evaluation (NegEval), (iii) positive speaker evaluation (PosEval), and (iv) a non-ironic utterance's entailed content (EC), were tested in the experiment. Each condition was represented by ten experimental items. The participants thus saw a total of 40 items throughout the experiment.

The entire experiment was conducted in German. Designing the items, we followed the experimental studies conducted by Syrett & Koev (2015) as well as Härtl & Seeliger (2019). All experimental items had analogous structures and took the form of dialogues between two speakers. The dialogues were embedded in a specific situation, as illustrated in (18), which is an example of an experimental item including an ironic utterance with a non-literal meaning and thus aiming at testing the NLC condition.

- (18) Amelie und Chris stehen an der Kasse in einem Einrichtungshaus. Die beiden möchten ihr frisch saniertes Bad neu einrichten. Chris hatte die Aufgabe, blaue Badteppiche zu besorgen. Amelie bemerkt, dass die Badteppiche grau sind, als sie einen Blick in den Einkaufswagen wirft.  
 'Amelie and Chris are waiting in line at the cashier in a furniture store. The two want to furnish their newly renovated bathroom. Chris had the task to get blue bathmats. Amelie recognizes that the bathmats are gray as she is throwing a glance at the shopping cart.'

- a. Amelie: *Die Badteppiche sind ja echt blau ...*  
the bathroom carpets are PRT really blue  
'Well, the bathmats are really blue ...'
- b. Chris: *Das ist nicht wahr, die sind schon blau.*  
'That's not true, they are blue.'
- b.' Chris: *Moment, die sind schon blau.*  
'One moment, they are blue.'

As the example shows, all items start off with the description of a specific situation. The description is then followed by a small dialogue, starting with the critical utterance ((18)a), which is ironic in three out of the four conditions, i.e., NLC, NegEval, and PosEval, and non-ironic in the condition testing entailed content. The last part of all items offers two utterances representing possible rejections of the critical (ironic) utterance. While ((18)b) is a direct rejection of the critical utterance and therefore represents an at-issue rejection, ((18)b') contains an indirect rejection aiming at the not-at-issue content of the utterance it refers to. Participants were asked to decide which rejection they perceived as more appropriate. To do this, they could rate the rejections on a 5-point Likert scale, with value 1 representing the at-issue rejection on the left side of the scale and indicating a clear preference for the direct rejection, and value 5 representing the not-at-issue rejection on the right side, indicating a preference for the indirect rejection. Participants were able to rate both rejections as equally (in)appropriate by choosing the mid value. Moreover, they could rate one rejection as more appropriate than the other by using the values in between, without being forced to indicate a clear preference towards one option.

According to our hypotheses, we expected the participants to give all three conditions including components of ironic utterances, i.e., NLC, NegEval, and PosEval, high rankings leaning towards the right of the scale. Based on Hypothesis  $H_{A-1}$ , we anticipated the NLC conditions' results to show a stronger tendency towards the mid values than the results of the two Eval conditions. According to Hypothesis  $H_B$ , we expected the highest results on the 5-point scale in the NegEval condition. In turn, the EC conditions' results were expected to have low values, following our Hypothesis  $H_{A-2}$ .

In order to ensure the items' comparability, a total of ten substantially different but standardized model situations were operationalized in the material. Specifically, we used similar situations for every condition's first item, second item, etc. For example, in the second item of all four conditions, there are two people dealing with a certain type of school task: In NegEval item 2, it is Felix and Monica 'chatting' about a vocabulary test; in PosEval item 2, Tom and Paulina 'talk' about a homework; NLC item 2 deals with Thomas and Yvonne 'having a conversation' about a marketplace task, and in EC item 2, Tobias and Svenja 'discuss' a presentation's deadline. Accordingly, all items 1, 3, 4,

etc. describe comparable situations and, at the same time, we varied formulations as well as particular contents to mask the items' resemblance.

To maintain concentration and compensate for individual preferences w.r.t. certain linguistic expressions, a variety of discourse-interrupting phrases (*Wart mal* ('Wait'), *Sekunde*, ('Wait a second') and *Moment* ('One moment')) was used for the not-at-issue rejections, and as direct negations, *Das ist nicht wahr* ('That's not true'), *Das stimmt nicht* ('That's not correct'), *Gar nicht wahr* ('Not true at all'), and *Das ist falsch* ('That's wrong') were used for the at-issue rejections.

To signal ironic utterances, different means were utilized. As first marker, suspension points were attached to all ironic utterances.<sup>6</sup> Further, we included lexical means that were supposed to signal irony in the items' critical utterances. We used both modal particles and evaluative lexical material by varying their integration and at the same time distributing them evenly across the conditions. In particular, all items 1 of the four conditions, for instance, involve a critical ironic utterance with the particles *Na*, *ja*, and *wirklich*, as for example in NegEval item 1's ironic utterance, which is displayed in example ((19)a).

- (19) Tim und Anna kommen aus der Oper. Die beiden haben morgens noch in der Zeitung gelesen, dass die Aufführung, für die sie Karten reserviert hatten, gut sei und vor allem die Opernsänger beeindruckend wären. Tim findet aber, dass der Sopran eine sehr schlechte Performance abgeliefert hat.  
 'Tim and Anna leave the opera. In the morning, both of them read in the newspaper that the performance for which they had reserved tickets was good and that the opera singers in particular were impressive. However, Tim finds that the soprano has delivered a very bad performance.'
- a. Tim: *Na, das war ja wirklich eine tolle Performance ...*  
 PRT, that was PRT PRT a great performance  
 'Well, that was a really great performance ...'
- b. Anna: *Das ist nicht wahr, ich fand sie eigentlich ganz gut.*  
 'That's not true, I found it quite good actually.'
- b.' Anna: *Wart mal, ich fand sie eigentlich ganz gut.*  
 'Wait, I found it quite good actually.'

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<sup>6</sup> The suspension points were used as a symbol of 'leaving room for interpretation', and consequently also as a stimulus to look for the alternate, non-literal meaning present in an ironic utterance, see section 2.1 above.

In contrast to this, all four items 10, for example, do not include particles. Instead, only a degree adverb is used in the ironic utterances of the items 10, as ((20)a) from PosEval item 10 shows with the use of *totally*.

- (20) Robin und Andreas steigen aus der Geisterbahn aus, mit der sie soeben gefahren sind. Robins Augen sind weit aufgerissen und er sieht begeistert aus. Andreas möchte wissen, wie er die Fahrt fand.  
 ‘Robin and Andreas are exiting the ghost ride they just rode with. Robin’s eyes are wide open, and he looks enthusiastic. Andreas wants to know how he found the ride.’
- a. Robin: *Sie war total langweilig ...*  
 it was totally boring  
 ‘It was totally boring ...’
- b. Andreas: *Das stimmt nicht, ich fand die Fahrt eigentlich schon langweilig.*  
 ‘That’s not correct, I found the ride quite boring actually.’
- b.’ Andreas: *Wart mal, ich fand die Fahrt eigentlich schon langweilig.*  
 ‘Wait, I found the ride quite boring actually.’

Verbal irony, and especially ironic criticism, can be realized in a number of ways. Due to the normative bias, however, certain types of irony are subject to stronger use restrictions. As stated in section 2.1., this is the case with ironic praise since ironically praising utterances standardly refer to preceding assertions. While most of the NegEval items could have been understood without a description of a specific situation as well, this would not have been the case with the PosEval items, which is why the latter was contextualized in more specific ways. Thus, as can be seen in (20), all items included a detailed description of a situation, which comprises a preceding assertion the critical utterance can refer to.

Apart from having analogous structures, the items of the four different conditions needed to differ from each other significantly as well. As explained above, the items’ critical utterances differed w.r.t. whether they were ironic or not. This can easily be noticed when comparing the examples (18) and (21), the latter of which illustrates EC item 7.

- (21) Stefan hat Marina und Laura zum Grillen eingeladen. Da die beiden Mädchen Vegetarierinnen sind, hat er ihnen versprochen, auch etwas Vegetarisches vorzubereiten. Als die beiden am Tisch auf ihr Essen warten, stellt Stefan einen Salat mit Putenstreifen vor sie.

‘Stefan has invited Marina and Laura to a barbecue. Since the two girls are vegetarians, he promised them to prepare something vegetarian as well. As both of them are sitting at the table, waiting for their food, Stefan puts a salad with turkey breast on the table, right in front of them.’

- a. Stefan: *Hier ist der vegetarische Salat für euch.*  
here is the vegetarian salad for you.  
‘Here, that’s the vegetarian salad for you.’
- b. Marina: *Gar nicht wahr, das ist kein vegetarischer Salat.*  
‘Not true at all, that’s not a vegetarian salad.’
- b.’ Marina: *Wart mal, das ist kein vegetarischer Salat.*  
‘Wait, that’s not a vegetarian salad.’

Besides this apparent distinction between items with non-ironic and ironic utterances, less obvious differences were included as well. As the comparison of the examples (19) and (20) with example (18) reveals, the difference between the Eval conditions and the NLC condition materializes on the lexical level. In the two Eval conditions, the key verbs used are evaluative verbs while in the NLC condition, assertive verbs are involved. Particularly, example (18), illustrating a NLC item, contains the verb *bemerken* (‘recognize’), which suggests an objective observation. Both corresponding rejections and the ironic utterance, moreover, include the verb *sein* (‘be’), which emphasizes objectivity and thus underlines the neutral content of the item. We separated the two components of ironic utterances, i.e., a non-literal meaning and a speaker’s evaluation, as far as possible by focusing on the neutrality and objectivity connected to the non-literal meaning component on the one hand, and by emphasizing the highly evaluative and expressive elements of the evaluative component on the other. For the NLC items, we varied the assertive verbs *bemerken* (‘recognize’), *feststellen* (‘state’), and *behaupten* (‘claim’). In opposition to these, we alternated the evaluative verbs *wahrnehmen* (‘perceive’), *empfinden* (‘sense’), *finden* (‘find’), and *halten* (‘find’) in the NegEval and PosEval items, particularly with a focus on the rejections. In addition to those verbs, some evaluation items comprise supplementary expressive lexical material. (20), for example, involves the evaluative adjective *begeistert* (‘enthusiastic’) and the verb form *fund* (‘found’) while example (19) contains *beeindruckend* (‘impressive’) and the verb forms *findet* / *fund* (‘finds’ / ‘found’). Finally, and in contrast to this, we implemented the distinction between the two Eval conditions w.r.t. content



rather than lexical material. Specifically, the speakers uttering something ironically literally say something positive in order to express something negative in the NegEval items and vice versa in the PosEval items.

*Procedure.* Participants were asked to go through the 40 experimental items in an online questionnaire on SoSci Survey.<sup>7</sup> The items appeared in a random order for every participant. At the beginning of the experiment, there was a short training period with two test items. The first item was similar to a NegEval item and thus ironic, whereas the second one illustrated an example of an EC item with a non-ironic utterance. The two examples were used to guide the participants towards the distinction between truth-conditional and non-truth-conditional content, suggesting to them that in the first test item, the rejection on the right side of the scale would probably be more appropriate, and that in the second test item, the rejection on the left could most likely be considered as more suitable. Prior to the two test items, we explained (in German) that the purpose of our study was to “find out how certain statements can be rejected”. Moreover, the participants were prepared that the test would contain ironic utterances and we explained that “it is not easy to understand ironic utterances since they contain a personal evaluation and often mean the opposite of what is literally said”. After that, the first ironic test item was presented.

**Results.** Only the questionnaires in which all items were rated were included in our statistical analysis. Based on pre-testing, a threshold was set so that reading and understanding an item as well as choosing a preferred rejection would take at least 12 seconds. All items that were answered in under 12 seconds were therefore excluded from the analysis. Also, items that were answered after more than five minutes were excluded. The upper time limit was set less strictly as participants could not pause the questionnaire, and since a short break was considered plausible w.r.t. the number of items and beneficial for the participants’ concentration. Participants who answered too fast on more than eight items, i.e., 20 per cent of the questionnaire, were excluded from our analysis, just like participants that were no native speakers of German. All in all, 62 from initially 89 questionnaires were included in our statistical analysis. The following box plots give an overview of the ratings within each condition.

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<sup>7</sup> [www.soscisurvey.de](http://www.soscisurvey.de)

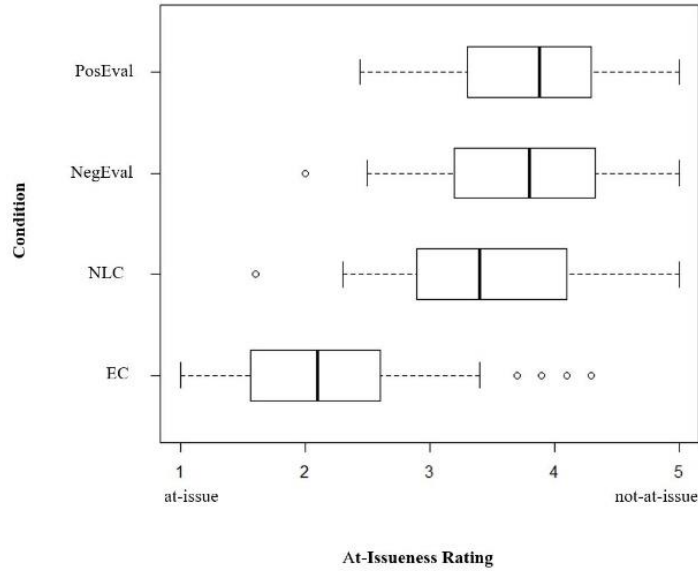


Figure 1: Median ratings across conditions

As can be seen, participants showed a preference towards the direct rejections on the left side of the 5-point scale in the entailment condition just as expected. In all three other conditions, i.e., the non-literal meaning and the two evaluation conditions, which are at the center of this examination, participants preferred the indirect rejections on the right side of the scale. Therefore, the components of ironic utterances belonging to the three central conditions can be classified as being not at issue, whereas entailments can be allocated to at-issue contents. Table 1 summarizes the mean ratings for each condition.

Condition	Mean rating
Entailed content (EC)	2.21
Non-literal content (NLC)	3.46
Negative evaluation (NegEval)	3.79
Positive evaluation (PosEval)	3.75

Table 1: Mean ratings

The statistical analysis was conducted using the MINITAB software package. A 1 x 4 repeated-measures variance analysis (General Linear Model) by sub-

ject was conducted for the dependent variable (Rating). The independent variable (Content Type) was included as a fixed (within-subject) factor. The factor Subject was treated as random. The analysis revealed a highly significant difference,  $F(3, 61) = 59.68, p < .001$ , for the mean ratings of the four content types. In planned post-hoc comparisons (Fisher LSD), a highly significant difference,  $t(61) = 9.21, p < .001$ , was found between ratings for entailed content (EC) and non-literal content (NLC). Crucially, the differences between the NLC ratings, on the one hand, and the NegEval ratings,  $t(61) = -2.39, p = .017$ , and, respectively, the PosEval ratings,  $t(61) = 2.11, p = .036$ , were also found to be significant. The comparison of the NegEval and the PosEval ratings, in turn, showed no significant difference. To check robustness, we identified statistical outliers and tests were repeated with the outliers being excluded. No deviation from our original results was found.

**Discussion.** The experiment's results lead us to accept Hypotheses  $H_{A-1}$  and  $H_{A-2}$ . The evaluative content – be it positive or negative – of ironic utterances is less prone to figure as at-issue content in comparison with the utterance's non-literal content, which in turn figures as less at issue than the content entailed in a non-ironic utterance. Consequently, when a speaker utters something ironically in a conversation, the hearer perceives the non-literal meaning component of her utterance as more in the foreground than the evaluative component. Thus, the speaker evaluation is the meaning component of ironic utterances that is most difficult to dissent with directly. However, this does not mean that the non-literal meaning component of ironic utterances is easy to dissent with directly. An indirect rejection is preferred here as well, even though a direct denial is not as inappropriate as is the case with evaluative components. This result supports our view of (not-)at-issueness being a gradual feature. All ironic meaning components are therefore more on the not-at-issue side of the spectrum.

With respect to Hypothesis  $H_B$ , we fail to reject the null hypothesis. A positive speaker's evaluation expressed with an ironic utterance does not have a higher tendency to figure as at-issue content than a negative speaker's evaluation. Therefore, neither the use restrictions nor the lower frequency of ironic praise, implying a higher markedness, seem to affect the informational status of ironically praising utterances in comparison with ironic criticism.

Entailed content represents at-issue information of an utterance. How, then, can we explain that the mean rating for our EC condition is 2.21 in the results and does not reach value 1? As an explanation, the factor of politeness comes into play when statements have to be judged as (in)appropriate. As an illustration, consider example (21). In the example, Stefan offers a vegetarian salad to Marina and Laura. The salad, however, contains turkey breast and should therefore not be called a 'vegetarian' salad. Hence, Stefan's statement is plainly wrong and should thus be rejected in a direct way. Nevertheless, the

use of an indirect rejection is plausible as well since it makes Stefan aware of his mistake in a more polite way. Due to the fact that indirect rejections are often perceived as more polite than direct rejections, the participants' preference of the former in a few individual items was thus expectable. While the use of an at-issue rejection for not-at-issue content is not appropriate, it is possible to reject at-issue content with not-at-issue rejections since they are considered as more polite in conversations. Consequently, politeness is a factor that cannot be ignored in experiments involving ratings of the appropriateness of dissenting responses.

#### 4 Conclusion

The current paper focused on the question how contents conveyed by an ironic utterance blend into the spectrum between at-issue and not-at-issue content. Based on experimental data, ironic, non-literally asserted content was found to be less at issue than non-ironic, literally asserted content. Furthermore, non-literally asserted content was found to be more at issue than attitudinal content expressed with an ironic utterance. Last, no difference w.r.t. at-issueness was detected between the two types of attitudinal contents involved in ironic utterances, i.e., ironic criticism and ironic praise. We interpret these effects to be rooted in the specific pragmatic status of ironic contents, which figure as implicatures in a conversational exchange and, thus, are less prone to directly contribute to the question under discussion, see, e.g., Potts (2015). While the different ironic contents were found to generally figure as not-at-issue content, our findings also show that the attitudinal content expressed with an ironic utterance is treated as less primary than the utterance's non-literal content. This outcome can be explained through the fact that content expressed non-literally in an ironic utterance relates to a (negated) version of the truth-conditional content which is asserted with the utterance's non-ironic form. We conclude that ironically asserted content is not non-truth-conditional in the strict sense but only not truth-conditional as an ironic interpretation entails some negated version of the truth-conditional content of the non-ironic alternate. In contrast, an ironic utterance's attitudinal content is non-truth-conditional *par excellence*, which, at the same time, can be used to explain its stronger not-at-issueness observed in our data. Finally, while our findings are compatible with a graded understanding of at-issueness, we conclude that the different types of ironic attitudinal content are treated as not-at-issue to equal extents.

#### References

- AnderBois, Scott; Brasoveanu, Adrian; Henderson, Robert (2015): At-issue proposals and appositive impositions in discourse. In: *Journal of Semantics* 32 (1), pp. 93–138.

- Attardo, Salvatore (2000): Irony as relevant inappropriateness. In: *Journal of Pragmatics* 32 (6), pp. 793–826.
- Attardo, Salvatore; Eisterhol, Jodi; Hay, Jennifer; Poggi, Isabella (2003): Multimodal markers of irony and sarcasm. In: *Humor* 16 (2), pp. 243–260.
- Bruntsch, Richard; Ruch, Willibald (2017): Studying irony detection beyond ironic criticism. Let's include ironic praise. In: *Frontiers in Psychology* 8, pp. 75–89.
- Carrus, Simone (2017): Slurs. At-issueness and semantic normativity. In: *Phenomenology & Mind* 12, pp. 84–97.
- Dews, Shelly; Kaplan, Joan; Winner, Ellen (1995): Why not say it directly? The social functions of irony. In: *Discourse Processes* 19, pp. 347–367.
- Dews, Shelly; Winner, Ellen (1999): Obligatory processing of literal and non-literal meanings in verbal irony. In: *Journal of Pragmatics* 31, pp. 1579–1599.
- Diewald, Gabriele; Fischer, Kerstin (1998): Zur diskursiven und modalen Funktion der Partikeln 'aber', 'auch', 'doch' und 'ja' in Instruktionsdialogen. In: *Linguistica* 38 (1), pp. 75–99.
- Fintel, Kai von (2004): Would you believe it? The king of France is back! Presuppositions and truth-value intuitions. In: Marga Reimer & Anne Bezuidenhout (Eds.): *Descriptions and beyond*. Oxford: Oxford University Press, pp. 315–341.
- Gibbs, Raymond W.; Colston, Herbert L. (2007): *Irony in Language and Thought. A Cognitive Science Reader*. New York, London: Lawrence Erlbaum Associates.
- Giora, Rachel (1995): On irony and negation. In: *Discourse Processes* 19, pp. 239–264.
- Grice, H. P. (1975): Logic and conversation. In: Peter Cole & Jerry L. Morgan (Eds.): *Syntax and Semantics – vol. 3*. New York: Academic Press, pp. 41–58.
- Gutzmann, Daniel (2015): *Use-Conditional Meaning. Studies in Multi-Dimensional Semantics*. Oxford: Oxford University Press.
- Gutzmann, Daniel; Turgay, Katharina (2019): Secondary content. A short introduction. In: Daniel Gutzmann & Katharina Turgay (Eds.): *Secondary Content: The Linguistics of Side Issues*. Leiden: Brill (Current Research in the Semantics / Pragmatics Interface), pp. 1–25.
- Härtl, Holden (2018): Name-informing and distancing 'sogenannt' ('so-called'). Name mentioning and the lexicon-pragmatics interface. In: *Zeitschrift für Sprachwissenschaft* 37 (2), pp. 139–169.
- Härtl, Holden; Seeliger, Heiko (2019): Is a so-called “beach” a beach? An empirically based analysis of secondary content induced by ironic name use. In: Daniel Gutzmann & Katharina Turgay (Ed.): *Secondary Content: The Linguistics of Side Issues*. Leiden: Brill (Current Research in the Semantics / Pragmatics Interface), pp. 200–221.

- Jorgensen, Julia; Miller, George; Sperber, Dan (1984): Test of the mention theory of irony. In: *Journal of Experimental Psychology: General* 113 (1), pp. 112–120.
- Kaplan, David (1999): The meaning of Ouch and Oops. Explorations in the theory of meaning as use. Unpublished ms. University of California. Los Angeles.
- Karagjosova, Elena (2003): Modal particles and the common ground. Meaning and functions of German 'ja', 'doch', 'eben'/'halt' and 'auch'. In: Peter Kühnlein, Hannes Rieser & Henk Zeevat (Eds.): *Perspectives on Dialogue in the New Millennium*. Amsterdam: Benjamins, pp. 335–349.
- Kreuz, Roger; Glucksberg, Sam (1989): How to be sarcastic. The echoic reminder theory of verbal irony. In: *Journal of Experimental Psychology: General* 118 (4), pp. 364–386.
- Kreuz, Roger; Link, Kristen (2002): Asymmetries in the use of verbal irony. In: *Journal of Language and Social Psychology* 21, pp. 127–143.
- Lewis, David (1979): Scorekeeping in a language game. In: *Journal of Philosophical Logic* 8, pp. 339–359.
- McCready, Elin (2010): Varieties of conventional implicature. In: *Semantics & Pragmatics* 3, pp. 1–57.
- Meibauer, Jörg (2007): Syngropheme als pragmatische Indikatoren: Anführung und Auslassung. In: Sandra Döring & Jochen Geilfuß-Wolfgang (Eds.): *Von der Pragmatik zur Grammatik*. Leipzig: Universitätsverlag, pp. 21–37.
- Möllering, Martina (2004): *The Acquisition of German Modal Particles. A Corpus-Based Approach* (Linguistic Insights / Studies in Language and Communication 10) Bern: Peter Lang.
- Mroczynski, Robert (2012): *Grammatikalisierung und Pragmatisierung. Zur Herausbildung der Diskursmarker 'wobei', 'weil' und 'ja' im gesprochenen Deutsch*. Tübingen: Narr.
- Potts, Christopher (2005): *The Logic of Conventional Implicatures*. Oxford: Oxford University Press.
- Potts, Christopher (2007): The expressive dimension. In: *Theoretical Linguistics* 33 (2), pp. 165–197.
- Potts, Christopher (2015): Presupposition and implicature. In: Shalom Lappin & Chris Fox (Eds.): *The Handbook of Contemporary Semantic Theory*. Wiley-Blackwell, pp. 168–202.
- Predelli, Stefano (2003): Scare quotes and their relation to other semantic issues. In: *Linguistics and Philosophy* 26 (1), pp. 1–28.
- Quine, Willard Orman (1981): *Mathematical Logic (Revised Edition)*. Harvard: Harvard University Press.
- Repp, Sophie (2013): Common ground management. Modal particles, illocutionary negation and VERUM. In: Daniel Gutzmann & Hans-Martin Gärtner (Eds.): *Beyond Expressives. Explorations in Use-Conditional Meaning*.

- Leiden: Brill (Current Research in the Semantics / Pragmatics Interface, 28), pp. 231–274.
- Rockwell, Patricia (2000): Lower, slower, louder: Vocal cues of sarcasm. In: *Journal of Psycholinguistic Research*, 29 (5) 483–495.
- Schlechtweg, Marcel; Härtl, Holden (2019): Do we pronounce quotation? An analysis of name-informing and non-name-informing contexts. In: *Language and Speech* [Online first 2019/12/23].
- Schmidt, Stephen R. (1996): Category typicality effects in episodic memory. Testing models of distinctiveness. In: *Memory & Cognition* 24, pp. 595–607.
- Simons, Mandy (2005): Presupposition and Relevance. In: Zoltan Gendler Szabó (Ed.): *Semantics versus Pragmatics*. Oxford: Clarendon Press, pp. 329–355.
- Smith, Allyn E.; Hall, Kathleen (2011): Projection diversity: Experimental evidence. In: *Proceedings of the ESSLLI 2011 Workshop on Projective Meaning*. Ljubljana, Slovenia.
- Sperber, Dan; Wilson, Deirdre (1981): Irony and the use-mention distinction. In: Peter Cole (Ed.): *Radical Pragmatics*. New York: Academic Press, pp. 295–318.
- Stalnaker, Robert C. (1974/1999): *Context and Content. Essays on Intentionality in Speech and Thought*. Oxford: Oxford University Press.
- Syrett, Kristen; Koev, Todor (2015): Experimental evidence for the truth conditional contribution and shifting information status of appositives. In: *Journal of Semantics* 32, pp. 525–577.
- Tonhauser, Judith (2012): Diagnosing (not-)at-issue content. In: Hannah Greene (Ed.): *Proceedings of Semantics of Under-represented Languages of the Americas (SULA)*. Amherst: UMass; GLSA, pp. 239–254.
- Viesel, Yvonne (2015): Discourse structure and syntactic embedding. The German discourse particle 'ja'. In: Thomas Brochhagen, Floris Roelofsen & Nadine Theiler (Eds.): *Proceedings of the 20th Amsterdam Colloquium*. Amsterdam: ILLC.
- Viesel, Yvonne (2016): Discourse particles “embedded”. German *ja* in adjectival phrases. In: Josef Bayer & Volker Struckmeier (Eds.): *Discourse Particles. Formal Approaches to their Syntax and Semantics*. Berlin, Boston: de Gruyter (Linguistische Arbeiten, 564), pp. 173–202.
- Wilson, Deirdre (2006): The pragmatics of verbal irony. Echo or pretence? In: *Lingua* 116 (10), pp. 1722–1743.
- Wilson, Deirdre (2013): Irony comprehension. A developmental perspective. In: *Journal of Pragmatics* 59, pp. 40–56.
- Wilson, Deirdre; Sperber, Dan (1992): On verbal irony. In: *Lingua* 87 (1), pp. 53–76.