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Is a so-called "beach" a beach? An empirically based analysis of secondary content induced by ironic name use[*]

Abstract

This paper investigates the source and status of contents involved in ironic utterances which contain the name-mentioning modifier *so-called* as in *The so-called "beach" was a thin strip of black volcanic grit*. Based on two experimental studies, we argue that the head nominal's non-literalness implicated in constructions of this sort is at-issue "the most", while the speaker's attitude to evaluate the head's denotatum negatively is treated as at-issue the least. It is further reasoned that the meaning that the head nominal's denotatum has been called by the quoted name tends to figure as a presupposition, which is compatible with an echo approach towards verbal irony. 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.

1   Introduction

Investigations of the boundary between primary and secondary content of an utterance typically consider meanings that are literal. The characterization of contents involving non-literal meanings, as is the case with idiomatic language or verbal irony, is complicated by the fact that the expressions' non-literalness seems to critically supplement the main point of the utterance. Consider the following examples of verbal irony:

(1)   a.   [After an awful performance]
             The lead singer did a really great job!
       b.   [It is raining heavily]
             What a wonderful weather for a picnic!

As their primary content, the utterances in (1) convey assertions which denote the opposite of the expressions' literal meaning. At the same time, by saying something positive, the speaker expresses a negative attitude towards the corresponding denotata, i.e., the lead singer's performance in ((1)a) and the weather conditions in ((1)b). An attitude of this sort, which materializes as negative criticism in our examples, has been argued to be a key component of

verbal irony, see Dews & Winner (1999), Kreuz & Glucksberg (1989), Wilson (2006). But what exactly is the informational status of the speaker's attitude conveyed by an ironic utterance? Is it perhaps also part of its primary content?

The current paper 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. In our investigation, we will focus on quotational constructions that involve the name-mentioning modifier *so-called* as in, e.g., *so-called "thyroid inferno"*. Depending on the context, a *so-called*-construction adopts an ironic, modalizing interpretation as in, for example, *The so-called "beach" was a thin strip of black volcanic grit*. Specifically, we seek to determine the source, i.e., the presuppositionality of the contents involved in ironic utterances of the sort in question as well as the contents' status concerning their at-issueness. It will be reasoned on the basis of two experimental studies that the implication that the head nominal's denotatum, i.e., the thin strip of black volcanic grit in the above example, has been called *beach* before tends to figure as a presupposition. This finding is compatible with an echo approach towards verbal irony, which states that an ironic utterance is recognizable as such if it can be identified to be an echo of some other utterance. Furthermore, we will argue that the implicated meaning that the head nominal's meaning is not used literally represents the content which is at-issue "the most" in the construction. The speaker's attitude to (negatively) evaluate the head's denotatum will turn out to be treated as at-issue the least and, at the same time, to exhibit the highest tendency to figure as an implicature. Crucially, we assume (not-)at-issueness to be a graded notion. The results of our study indicate, for example, that the contents involved in an ironic use of the *so-called*-construction are less at-issue than contents involved in an appositive. In our analysis, we will attribute this finding to the attributive nature of the modifier embedded inside a DP.

The structure of this paper is as follows. In section 2, the semantic and pragmatic properties of *so-called* in its two distinct readings are explored. In section 3, we determine the contents involved in the construction's ironic use and analyze their source and status based on two experimental studies. Section 4 concludes our investigation.

2 Semantics and pragmatics of *so-called*

Quotational constructions containing the modifier *so-called* adopt two distinct interpretations. With the first variety – which we assume to be the semantic default – the quoted material is a neologism or a low-frequent expression,

where *so-called* indicates the expression's status as a conventionalized name. Consider the examples in (2):

> Type 1: name-informing
>
> (2) The so-called "thyroid inferno" […] can be found in thyroiditis and in solid tumors.[1]

The second variety of *so-called* has a distancing function. In this modalizing use, *so-called* gives rise to an ironic or sarcastic reading of the nominal expression. Consider the quotational construction in (3) below. It conveys the information (i) that the name *beach* is in fact a misnomer for the denotatum in question, (ii) that the speaker evaluates the denotatum negatively to a certain extent, and (iii) that the name *beach* has been previously used by someone to refer to the corresponding denotatum.

> Type 2: modalizing
>
> (3) The so-called "beach" was a thin strip of black volcanic grit around the rocky edge of the pool.[2]

Here, *so-called* is semantically related to the meaning of intensional, privative attributes like *pretend* or *fake*, which enforce a shift from the literal denotation of a noun they modify, see, e.g., Schumacher et al. (2016).

2.1 Lexical-semantic format

In this section, we will inspect the lexical-semantic properties of the construction *so-called y* in its name-informing use. The expression *y* involved in constructions of this type is "mentioned" rather than used denotationally, see, among others, Quine (1981: 23–26). Quotation marks, which are often found around mentioned expressions, are a metalinguistic tool that is used to draw the addressee's attention to the expression's linguistic side. For instance, with an assertion like *"Paris" has five letters*, in contrast to *Paris has a subway system*, the graphemic makeup of the word *Paris* is described and the quotes around *Paris* indicate this use.

The verbal root *call-* of *so-called*, as used in constructions like *One calls this disease arthritis*, involves three thematic arguments: an agent *x* (*one*), a theme *y* (*this disease*) as well as the name *z* (*arthritis*) of the theme *y*. In (4), we represent the name as an argument of a relational function:[3]

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[1] www.kurzlink.de/zbwoTVKZf
  Access: May 29, 2017

[2] www.kurzlink.de/AZGj1cXr7
  Access: May 29, 2017

[3] See Härtl (2016a) and Härtl (2016b) for detailed analyses.

(4) *x call- y z*

   ∃e [CALL(e) & AGENT(x, e) & THEME(y, e) & NAME(z, y, e)]

With the participle form *so-called* as used in (5)*,* the name argument *z* of *call-* is bound by *so* anaphorically, which points to the head noun of the object DP of the sentence in this case. Thus, here, *arthritis* is mentioned and used denotationally at one and the same time.

(5) The doctor diagnosed a so-called arthritis.

According to Umbach & Gust (2014), *so*, as a demonstrative anaphor, introduces a similarity relation:[4]

(6) $[[so]] = SIM(n, n_{target}, f)$

German adnominal *so* as in *So ein Auto hat Anna auch* ('such a car has Anna too', *Anna owns a car like this, too*), based on features of comparison *f*, implies a similarity between an individual car, i.e., a token as the target of the demonstration, and a certain type of car, say, a vintage car. In the case of *so* in *so-called*, the similarity relation holds between two instances of a sign.[5] Here, the *so* points to an individual occurrence of a linguistic form in an utterance, i.e., the word token *arthritis* in (5), which has the same shape as the conventionalized linguistic representation for the concept ARTHRITIS as it is stored in our mental lexicon.

   A demonstration-based analysis of quotational *so* has a natural fit with Davidson's Demonstrative Theory of quotation (Davidson 1979). Its central claim is that quotation is an operation through which a linguistic shape is referred to by pointing to something that has this shape. Thus, an utterance like *"Paris" has five letters* semantically paraphrases as *Paris*ᵢ. *The expression of which this*ᵢ *is a token has five letters*, see Davidson (1979: 38–39). Quotations of this type, by which we denote linguistic objects and put the shape of an expression on display, are commonly referred to as pure quotation in the literature, see, among others, Maier (2014).[6] Ginzburg & Cooper (2014) state that instances of pure quotation are rule-like statements about types of expressions. Accordingly, we propose to treat name-informing constructions as they are involved in *One calls this disease arthritis* or *The doctor diagnosed a so-called arthritis*, see above, as cases of pure quotation as well.

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[4] We use a slightly modified version of the semantic representation Umbach and Gust suggest in their analysis for *so*.

[5] See Ginzburg & Cooper (2014) for a related approach for direct quotation.

[6] Other types of quotation are *direct quotation* (*Greta Garbo said, "I want to be alone!"*), *mixed quotation* (*Max believes that the Pope "has God on speed dial"*), and *scare quotation* (*We arrived at the "hotel"*), see Cappelen & Lepore (1997).

2.2 Pragmatic implementation

Observe that modalizing name-mentioning does not fulfill a name-informing function.[7] With an example as in (3) above, the addressee is not informed about the status of *beach* as a term commonly used for a landform along a body of water. Instead, the mentioned material adopts a non-literal, ironic interpretation. Härtl (2016b) argues that the non-literal interpretation arises with commonly conventionalized nouns, like *beach*, involved in *so-called*-constructions as the result of a relevance-based implicature (Grice 1975, Horn 1984). With conventionalized nouns, a name-informing *so-called* is irrelevant and, in avoidance of an R-principle violation, the non-literal interpretation emerges. In Härtl (2016b), the lexical frequency of a noun is taken as a measure for its degree of conventionalization, which, in turn, can be used as a factor determining the different readings. This assumption is corroborated by results from a large-scale corpus study reported in Schrader (2017) for German. The data indicate that the interpretation of constructions involving *sogenannt* ('so-called') as either name-informing or modalizing indeed interacts systematically with the head's lexical frequency: The higher the lexical frequency of the head nominal, the higher is the probability for the construction to adopt a modalizing function.

Pragmatic analyses of quotation marks hold that they are used as a means to create markedness of the expression and to indicate a deviation from the linguistic norm, see Meibauer (2007a), Klockow (1978). Correspondingly, Gutzmann & Stei (2011) as well as Finkbeiner (2015) implement quotes as pragmatic markers that give rise to a non-stereotypical interpretation of the expression in quotes. In the case of name-mentioning constructions, the deviation lies in the mentioning use of the expression as compared to its canonical, denotational use, and, thus, quotes are commonly used in environments of this sort. Crucially, a pragmatic account can be argued to cover both name-informing and modalizing name-mentioning, see Härtl (2016b). In a name-informing construction, quotes highlight the use of the expression as a name as well as its status as a conventionalized name, and in a modalizing construction, quotes[8] indicate a departure from the standard meaning of the quoted material and express a specific speaker modality implying a reservation w.r.t. the semantic appropriateness of the expression.

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[7] We leave open what specific type of quotation is involved in modalizing name-mentioning. One may speculate that it is in fact a combination of direct and scare quotation.

[8] This type of quotes has commonly been characterized as scare quotes in the literature, see, among others, Predelli (2003).

An open question concerns the source as well as the status of the different contents involved in modalizing constructions of the sort under discussion in the current paper. Do we have reason to analyze, for example, the non-literalness of the quoted expression's meaning as part of the conventional meaning in contrast to, say, the evaluative component, which one may hypothesize to be pragmatically implicated? This matter will be discussed in the next section, aiming at a careful classification of the contents involved in modalizing name-mentioning based on empirical data.

3   Source and status of contents in modalizing name-mentioning

For the purpose of our analysis, we refer by *source* to the difference between presuppositional content, on the one hand, and implicated content, on the other. We speak of presuppositions as semantic presuppositions, which are part of the conventional semantic properties of sentences and their truth-conditional content, see, e.g., Potts (2015). In contrast, implicated content is content which is not said explicitly but communicated in compliance with Gricean principles of conversation (Grice 1975). Further, we refer by *status* 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 sensitive 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   Interplay between presuppositionality and at-issueness

Presuppositions and implicatures are commonly taken to represent content that is not at issue, see Potts (2005). This assumption, however, does not imply that these contents cannot be treated as salient 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. This is illustrated in the following example from Simons (2005):

(7)   Ann: The new guy is very attractive.
        Bud: Yes, and his wife is lovely too.

By definition, the at-issue content in Bud's utterance is associated with the information that the new guy's wife is as good-looking as he himself. At the same time, however, the information that the new guy is married is expressed, and we can reason this to be the utterance's actual main point communicated to Ann. The example illustrates that content which is presented as presupposed can be perceived as more on the at-issue side despite the fact that it formally figures as not-at-issue content. Concerning Bud's reply in (7), the latter is reflected by the fact that the information that the new guy is married cannot be easily rejected by means of a direct negation, cf. ??*No, that's not true – he is not married.* 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 easily 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,[9] i.e., an anchor that can be used to determine the scope of the negative operator. The contrast between ((8)b) and ((8)c), both with the intended meaning that Kim does not live in Berlin, illustrates this:

(8) a.   Kim, who lives in Berlin, fascinates Joan.
     b.   ??*No, that is not true.*
     c.   No, Kim lives in Rome.

In addition, the acceptability of the denial depends on whether a sentential anaphor is present in the negating construction, i.e., *that* in ((8)b). It has the matrix clause as its antecedent, which is, thus, what the negative operator can scope over. Consequently, if the anaphor is absent, as in ((8)c), a denial of appositive content is more acceptable. As we can see, the relation between presuppositionality and at-issueness is not homomorphic. In certain configurations, presupposed content can gain main point status and, thus, be adapted to be more at issue. As a reflector of this, experimental results reported in the literature indicate dependencies on configurational variables, and show a considerable amount of variation in general. Syrett & Koev (2015), for example, report the sentential position (sentence-medial vs. sentence-final) of an appositive relative clause to have an effect on the proportion of *No*-rejections, i.e., rejections that target at-issue content. What is striking in this respect is that a substantial amount (21.1 per cent) of the *No*-rejections are still judged to target appositives even when they occur in sentence-medial position.

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[9]   We wish to thank Craige Roberts for pointing this out to us.

To conclude, content that is formally presupposed and figures as not-at-issue can, in fact, be taken to contribute at-issue content. Presuppositionality of contents, on the one hand, and at-issueness, on the other, we assume, ought to be investigated separately. Furthermore, we suppose at-issueness to be a gradual feature and to be present to certain degrees. Based on this notion, we hypothesize graded at-issueness for contents involved, for example, in complex assertions like *Kim, who lives in Berlin, a great city, has finally arrived* to be reflected in supposedly graded acceptabilities of the different denial options such that *No, she hasn't > No, she doesn't > No, it isn't.*[10]

3.2 Hypothesized types of contents in ironic *so-called*-constructions

We assume the contents involved in *so-called*-constructions (though to different degrees) to be all not-at-issue due to the attributive nature of *so-called* embedded within a DP. This is indicated by the observation that a direct rejection of content associated with *so-called* is clearly marked as opposed to entailed content. Observe the contrast between ((9)b) and ((9)b'):

(9) a.   The doctor diagnosed a so-called "sepsis".
     b.   *No, that is not true, blood poisoning is called septicemia, in fact.
     b.'   No, that is not true, the doctor diagnosed a lymphangitis, in fact.

Only when *call-* is the main predicate, the corresponding direct rejection is unmarked:

(10) a.   "Sepsis" – blood poisoning is called so.
      b.   No, that is not true, blood poisoning is called septicemia, in fact.

We conclude that the contents associated with attributive *so-called* do not address the question under discussion to the same extent as root clause content addresses it. Recall, however, the notion discussed in the previous section that certain contents can gain salience under specific circumstances and, thus, be treated as more at-issue to a significant extent. Consider, for instance, the example in (11), which can easily be understood as intended to inform the addressee that the named individuals are not real friends and that the name is in fact a misnomer.

(11) None of these so-called friends ever offered to help.

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[10] Our assumption that at-issueness is a gradual feature is also 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.

The non-literalness of the meaning of the expression is the central feature of ironic and sarcastic language, see, e.g., Wilson & Sperber (1992). From a semantic viewpoint, irony has been described to involve a form of (indirect) negation, see Giora (1995), in contrast to pragmatic approaches, which view the notion of contextual inappropriateness of the mentioned expression as central in modelling ironic speech acts, see Attardo (2000). Whichever approach is preferable, the expression's non-literalness is constitutive for verbal irony; which is why we hypothesize that content related to the head's non-literalness in a *so-called*-construction is prone to be treated as more at-issue to a significant extent.

Another content involved in verbal irony is associated with the speaker's intention to produce a comment which can be recognized as an echo of another utterance, see Wilson (2006). For example, with an utterance like *The so-called "hotel" turned out to be a run-down dump*, the speaker communicates that somebody, perhaps a travel agent, has used the label *hotel* for the corresponding denotatum, which would better be described as *run-down dump*. At the same time, the speaker expresses a negative evaluation of the respective denotatum. The evaluative tone, which can be negative or positive, see Dews & Winner (1999), is the third feature of verbal irony that we postulate for the construction under discussion. We assume the non-literalness of the head nominal's meaning as well as the evaluative component to result from the echoic use of the mentioned name as it was employed in some previous utterance: By explicitly marking the utterance as an echo through the use of *so-called*, the speaker produces a comment implicating that she says something contrary to what she means, and that she evaluates the denotatum in a certain way. Importantly, we hypothesize the speaker's evaluation as well as the previous name use to be less prone to figure as at-issue content in comparison to the non-literalness of the meaning of the head nominal in an ironic *so-called*-construction (Hypothesis H_A).

As concerns the source of the contents involved in ironic *so-called*-construction, we hypothesize the previous name use of the mentioned expression to figure more as a presupposition as compared to the speaker's evaluation and the non-literalness of the name's meaning, which we both assume to be treated more as implicatures (Hypothesis H_B). Our assumption is motivated through the fact that the verbal root involves the predicate CALL as part of its truth-conditional content, see (4), and we suppose the predicate's event variable to provide the semantic anchor for the echoic meaning component, see Härtl 2016b) for details. Our tentative categorization is supported by the examples below. They show that the negative evaluation and non-literalness components, see ((12)a) and ((12)b), are easily cancellable by the speaker, which supports the implicature status of these components, while an attempt to cancel

the previous name use component results in infelicity ((12)c), which suggests that this component is a presupposition of *so-called.*

(12) a. We have been staying for a week in the so-called hotel – I don't want to say I do not like it there, it's just that it is a B&B rather than a hotel.

b. We have been staying for a week in the so-called hotel – I don't want to say it's not a real hotel, I just find it terrible.

c. We have been staying for a week in the so-called hotel – #I don't want to say someone has called it that, I just find it terrible.

To test the two hypotheses, we devised two rating studies. The first study investigates Hypothesis H_B; the second study investigates H_A. We now present these in turn.

3.2.1 Study 1

Method. *Participants*. 66 first-year students of the English Language department of the Universität Kassel participated in the experiment. All of them were native speakers of German. Participants were not paid.

Materials and design. The entire experiment was conducted in German. The experimental items took the form of dialogs between two speakers. Speaker A used *sogenannt* (the German translation of *so-called*) in her first contribution, modifying a noun that was preceded by an unmodified noun that referred to the same denotatum. The unmodified noun was less specific than the modified noun. Speaker B then asked a question initiated by (the German equivalent of) *Wait a minute* that asked for a clarification of the speaker's intention in using *so-called*. Speaker A finished the dialog by denying that she had asserted the prejacent of Speaker B's question. This denial is predicted to be incoherent if the prejacent of the question represents a presupposition of Speaker A's first utterance, and coherent if it represents an implicature – since implicatures can be denied or canceled.

(13) gives an example for an experimental item. The first and third sentences of the dialog were the same in all three conditions. Only the question used by Speaker B to target the contribution of *so-called* differed between conditions. ((13)a) illustrates negative evaluation, ((13)b) illustrates non-literal meaning, and ((13)c) illustrates previous name use. Since we propose that previous name use is part of the lexical meaning of *so-called*, we predict a difference in acceptability between ((13)c) and the other two conditions.

(13) A: Wir   hatten   letzte   Woche   im
we   had   last   week   in.the
Gewächshaus   eine   teure   Pflanze   bestellt.
greenhouse   an   expensive   plant   ordered

Gestern	nun	wurde	der	sogenannte	Busch
yesterday	now	was	the	so-called	bush
schließlich	angeliefert.				
finally	delivered				

"A: Last week, we ordered an expensive plant from the greenhouse. Yesterday, the so-called bush was finally delivered."

a.
B:	Sekunde,	willst	du	sagen,	dass	dir	der
	second	want	you	say	that	you	the
	Busch	nicht	gefällt?				
	bush	not	pleases				

"B: Wait a second, do you mean that you don't like the bush?"

A:	Das	habe	ich	doch	gar	nicht	gesagt!
	that	have	I	MP	at.all	not	said

"A: I didn't say that at all!"

b.
B:	Sekunde,	willst	du	sagen,	dass	das
	second	want	you	say	that	that
	kein	richtiger	Busch	ist?		
	no	real	bush	is		

"B: Wait a second, do you mean that it's not a real bush?"

A: Das habe ich doch gar nicht gesagt!

c.
B:	Sekunde,	willst	du	sagen,	dass
	second	want	you	say	that
	die	Pflanze	als	Busch	bezeichnet	wurde?
	the	plant	as	bush	named	was

"B: Wait a second, do you mean that the plant has been called a bush?"

A: Das habe ich doch gar nicht gesagt!

The experiment consisted of nine such critical items and a total of 12 fillers that did not contain *so-called*. Participants only saw one condition of each item, but every filler. The fillers were further subdivided into true fillers (in which Speaker A gives an affirmative answer to Speaker B's clarification question), and two groups of controls: in one group, Speaker B's question targeted an entailment of Speaker A's first utterance; in the other group, Speaker B's question targeted an implicature of Speaker A's first utterance. In both cases,

Speaker A denied having made the questioned contribution.[11] Since entailments are not cancelable, these controls should receive relatively low ratings, while the denial of implicatures should receive relatively high ratings, implicatures being cancelable. There were four true fillers and four each of the control items, for a total of 21 ratings per participant.

The nouns in the critical items were controlled for frequency – using the Wortschatz corpus of the Universität Leipzig,[12] we balanced both the noun modified by *so-called* and the alternative name (i.e., *plant* and *bush* in the example in (13)) around a median frequency class of 11.[13] Frequency classes ranged from 8 to 16. We also conducted a pre-test in which a non-participant in the actual study judged all items and fillers for plausibility and coherence.

Procedure. Participants were asked to rate the coherence of Speaker B's second utterance (i.e., usually a denial, except in the fillers) on a 5-point scale (1: completely incoherent; 5: completely coherent). All items were presented visually, using SoSci Survey.[14] At the beginning of the experiment, there was a short training period of two test items, which were accompanied by more elaborate instructions on how to decide on a rating. A high rating was explicitly suggested for the first training item and a low rating for the second. We excluded four participants who gave a low rating for the first and a high rating for the second training item from the statistical analysis.

Results. Figure 1 gives an overview of the mean ratings within each critical condition, as well as within each category of filler/control. As can be seen, the controls patterned as expected: denying an entailment of an utterance one has made is judged as pragmatically infelicitous, while denying an implicature is judged as pragmatically acceptable. The fillers, in which nothing was denied, were judged as perfectly acceptable. The critical conditions fell in between the

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[11] Example of an entailment control item:

(i) A: Just imagine, our cat got a bad infection and died of heart failure last week.
B: Wait a second, are you saying that your cat is no longer alive?
A: I didn't say that at all!

Example of an implicature control item:

(ii) A: Max dropped by yesterday. He gave flowers to my flat mate for the third time already.
B: Wait a second, are you saying that Max is in love with her?
A: I didn't say that at all!

[12] www.corpora.uni-leipzig.de

[13] Frequency classes express how much more frequent the most frequent word in the corpus is relative to a given word.

[14] www.soscisurvey.de

controls – in all three conditions, the denial of one of the contents of *so-called* was judged as more acceptable than denying an entailment, but less acceptable than denying an implicature. Table 1 summarizes the mean ratings in each condition.

Condition	Mean rating
Entailment	1.53
Previous mention	2.25
Non-literal meaning	2.45
Negative evaluation	2.73
Implicature	3.59
Filler	4.43

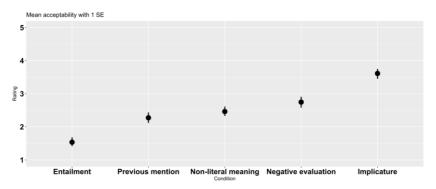*Table 1: Mean ratings in Study 1*

Figure 1: Mean ratings across conditions in Study 1

The statistical analysis was conducted using cumulative link mixed models (R package ordinal, Christensen 2015). The model treated the non-literal meaning condition as the baseline of comparison, and included random intercepts for participants and items. The differences in ratings between the conditions turned out to be significant. Previous mention was rated significantly worse than non-literal meaning; $z = -2.2$, $p = .03$. Similarly, negative evaluation was rated significantly better than non-literal meaning; $z = 2.3$, $p = .02$. Comparing the critical conditions to the two control conditions, we find that the means of every comparison differ significantly.

Discussion. The results lead us to accept Hypothesis H_B: Previous mention is the meaning component of *so-called* that is most difficult to dissent with,

followed by non-literal meaning and then negative evaluation. All three meaning components are more difficult to deny than implicatures. We take this to be evidence that, in the spectrum between entailed and implicated content, previous name mention shows the strongest tendency to cluster with entailed content, as compared to non-literal meaning and negative evaluation, which are each closer to clustering with implicated content.

3.2.2   Study 2

Method. *Participants*. 55 first-year students of the English Language department of the Universität Kassel participated in the experiment. There was no overlap in participants between the two studies. Again, all participants were native speakers of German.

Materials and design. The experimental items again took the form of a dialog between two speakers, with one turn per speaker. Speaker A begins the dialog with a coordinated pair of claims about a third person. The second conjunct contains a noun modified by (the German equivalent of) *so-called*, while the first conjunct contains the more general alternative name. Speaker B's contribution was always a rejection, specifically of one of the contents of *so-called*. There were two forms of this rejection to choose from in each critical condition: one where the rejection is initiated by a sentence like *That's not true* and one in which the rejection is initiated by an interjection like *Wait a minute*. (14) illustrates the experimental design for one item.

(14)   A: Meine   Nachbarn   haben   letzte   Woche   eine
my   neighbors   have   last   week   a
Pflanze   für   ihren   Garten   gekauft   und   jetzt
plant   for   their   garden   bought   and   now
ist   der   sogenannte   Busch   auch   schon
is   the   so-called   bush   MP   already
angeliefert.
delivered
"A: My neighbors ordered a plant for their garden last week, and now the so-called bush has already been planted."

a.   B: Das   stimmt   nicht,   niemand   hatte   die
that   is.right   not   nobody   had   the
Pflanze   als   Busch   bezeichnet.
plant   as   bush   named
"B: That's not true, nobody had called the plant a bush."
B':   Moment, niemand hatte die Pflanze als Busch bezeichnet.
"B': Wait a moment, nobody had called the plant a bush."

b.   B: Das   ist   nicht   wahr   der   Busch   ist   doch
that   is   not   true   the   bush   is   MP

eigentlich ganz schön
actually quite pretty

"B: That's not true, the bush is actually quite pretty."

B': Wart mal, der Busch ist doch eigentlich ganz schön.

"B': Wait, the bush is actually quite pretty."

c.   B: Das   ist   falsch,   das   ist   schon   ein
           that   is   false   that   is   MP   a
           richtiger   Busch.
           real   bush

"B: That's false, that's a real bush."

B': Sekunde, das ist schon ein richtiger Busch.

"B': Wait a second, that's a real bush."

There were 12 critical items – nine of the paired nouns were re-used from the first study, although the frame stories were changed, as indicated by the contrast between (13) and (14). Three new pairs of nouns were chosen in such a way that the frequency classes of the nouns followed the pattern established in the first study. In addition to the critical items, there were two sets of eight control items and one set of six fillers. The control items involved rejections of plainly at-issue content, on the one hand, and rejections of the content of appositives – which we take to be not-at-issue – on the other hand. The at-issue rejections were reactions to contributions by Speaker A that were initiated by hedge markers like *I think that p*, which were supposed to indicate that Speaker A considers the proposition *p* to be at-issue. The fillers involved rejections of the first conjunct of Speaker A's turn, with no indication of what is at-issue and what is not.[15] Thus, every participant rated a total of 34 rejections.

    We varied the initiating phrases of both types of rejection, i.e., *Moment*, *Wart mal*, and *Sekunde* (*Wait a moment*, *Wait*, and *Wait a second*, respectively) in the B' sentences in (14). This was done in order to conceal the true purpose

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[15]   Example of an at-issue control item:

(i)   A: Yesterday, someone new moved into the apartment below us and
         I think that the new tenant is a musician.
         B: Wait a minute/that's not true, he's an actor.

Example of a not-at-issue control item:

(ii)   A: Yesterday, someone new moved into the apartment below us and
         I think that the new tenant, a musician, is from Hamburg.
         B: Wait a minute/that's not true, he's an actor.

of the experiment. Finally, the number of training sentences was increased to three.

Procedure. Participants were asked to choose between the two rejections, again using a 5-point scale. Numerically low ratings indicate a preference for rejections initiated by phrases like *That's not true*, while numerically high ratings indicate a preference for *Wait a minute* rejections. A rating of 3 indicated no preference either way, while ratings of 2 and 4 could be used to indicate weak preferences for one of the two rejections. No participants were excluded on the basis of the training ratings in this study, because *Wait a minute* rejections can be used to reject both at-issue and not-at-issue content, i.e., high ratings were principally always possible.

Results. Figure 2 gives a graphical representation of the experimental results. Rejections of at-issue content showed a preference for *That's not true*, as predicted. The rejections of not-at-issue content gravitated more towards *Wait a minute*. Turning to the critical conditions, we find that all three showed a preference for *Wait a minute*. If we take the *Wait a minute* test to diagnose (not-)at-issueness, then all three meaning components of *so-called* are less at-issue than the contents of an appositive.

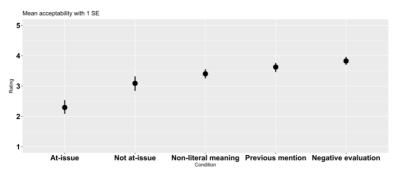| Condition	Mean rating
At-issue rejection	2.29
Filler	2.98
Not-at-issue rejection	3.09
Non-literal meaning	3.40
Previous mention	3.63
Negative evaluation	3.83

Table 2: Mean rating in Study 2

Figure 2: Mean ratings across conditions in Study 2. High ratings indicate preference for "Wait a minute"

The statistical analysis was again conducted using cumulative link mixed models, in which the previous mention condition was treated as the baseline of comparison, and random intercepts were included for participants and items. The differences in ratings between the critical conditions turned out to be significant; non-literal meaning vs. previous mention: $z = -2.4$, $p = .02$, and negative evaluation vs. previous mention: $z = 2.3$, $p = .02$. Comparing the critical conditions to the two control conditions, we find that the means of every comparison again differ significantly.

Discussion. The results lead us to partially accept Hypothesis H_A: As predicted, the non-literalness component shows the strongest tendency to figure as at-issue content in comparison to previous mention and negative evaluation. We take this to be a reflector of the fact that the expression's non-literalness is a key property of verbal irony. All three *so-called*-contents taken together, however, turned out to be less at issue than our not-at-issue content, i.e., the appositive. We believe this result to be rooted in two factors. On the one hand, due to the attributive nature of *so-called* and its embedding inside a DP, the contents linked to the modifier are even more difficult to access directly than the contents of appositives, which (presumably) are adjoined at the sentential level. On the other, appositives provide explicit antecedents for lexical tags that improve direct rejections of the sort we used in the experiment (cf. example (8) in section 3.1), while *so-called* does not provide any such antecedents.

To conclude, the second experiment has two main findings. First, (not-)at-issueness is a graded notion – the three meaning components of *so-called* are less at-issue than the content of an appositive. The second main finding is that the three meaning components of *so-called* differ in terms of their at-issueness. The non-literal meaning component is perceived as the most at-issue out of the three, followed by previous mention. The speaker's negative evaluation is the least at-issue of the three meaning components.

4   Conclusion

The current paper focused on the questions if contents conveyed by an ironic *so-called*-construction differ in their (not-)at-issueness, and what empirical evidence we can use to determine their position on the spectrum between primary and secondary content. Furthermore, our analysis aimed at finding the source of the corresponding contents. The results of Study 1 indicate that the three contents we have proposed to be involved in an ironic *so-called*-construction are more difficult to dissent with than standard implicatures; but the content relating to the previous mention of the quoted name turned out to be the most difficult to deny, followed by the non-literalness of the name's meaning and then the denotatum's negative evaluation by the speaker. We conclude that the previous mention of the name, as compared to the other two contents, has the strongest inclination towards figuring as presupposed content. We interpret

this result to reflect the fact that the verbal root of *so-called* contains, as part of its truth-conditional content, the predicate CALL. Its event variable provides the semantic anchor for the construction's interpretation as an echo, which we have assumed to be a central characteristic of verbal irony.

In Study 2, we examined the (not-)at-issueness of said contents. The results suggest that the non-literalness of the quoted name's meaning is treated as at-issue the most, followed by the previous mention content and negative evaluation. We take this to reflect the fact that the non-literalness of the expression is central for ironic utterances and, thus, critically supplements the main point of the assertion. Interestingly, in the studies we conducted, the negative evaluation component figured as the content with the weakest tendency to be presupposed and, respectively, the weakest tendency to be at-issue. In light of the assumption that an evaluation bias is also key in ironic utterances, see Dews & Winner (1999), Wilson (2006), this content can be concluded to be situated outside the narrow interpretational core of ironic *so-called*-constructions.

As concerns the lexical-semantic format of *so-called*, we proposed a unitary analysis, which uses a single underspecified semantic representation, with pragmatic factors determining the construction's interpretation as either name-informing or ironic. Furthermore, our findings support the notion of at-issueness as a graded criterion. Crucially, all three contents conveyed in the ironic use of the construction proved to be less at-issue than the contents of appositives. As the main reason, we assume that this effect is rooted in the attributive nature of *so-called*, impeding access for direct denial to a stronger extent as compared to appositive content. At the same time, however, our findings tell us that verbal irony in general seems to be difficult to reject directly from the addressee's side and, thus, be made at-issue. How far this insight can be generalized by extending it to other instances of verbal irony remains a subject for future investigation.

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