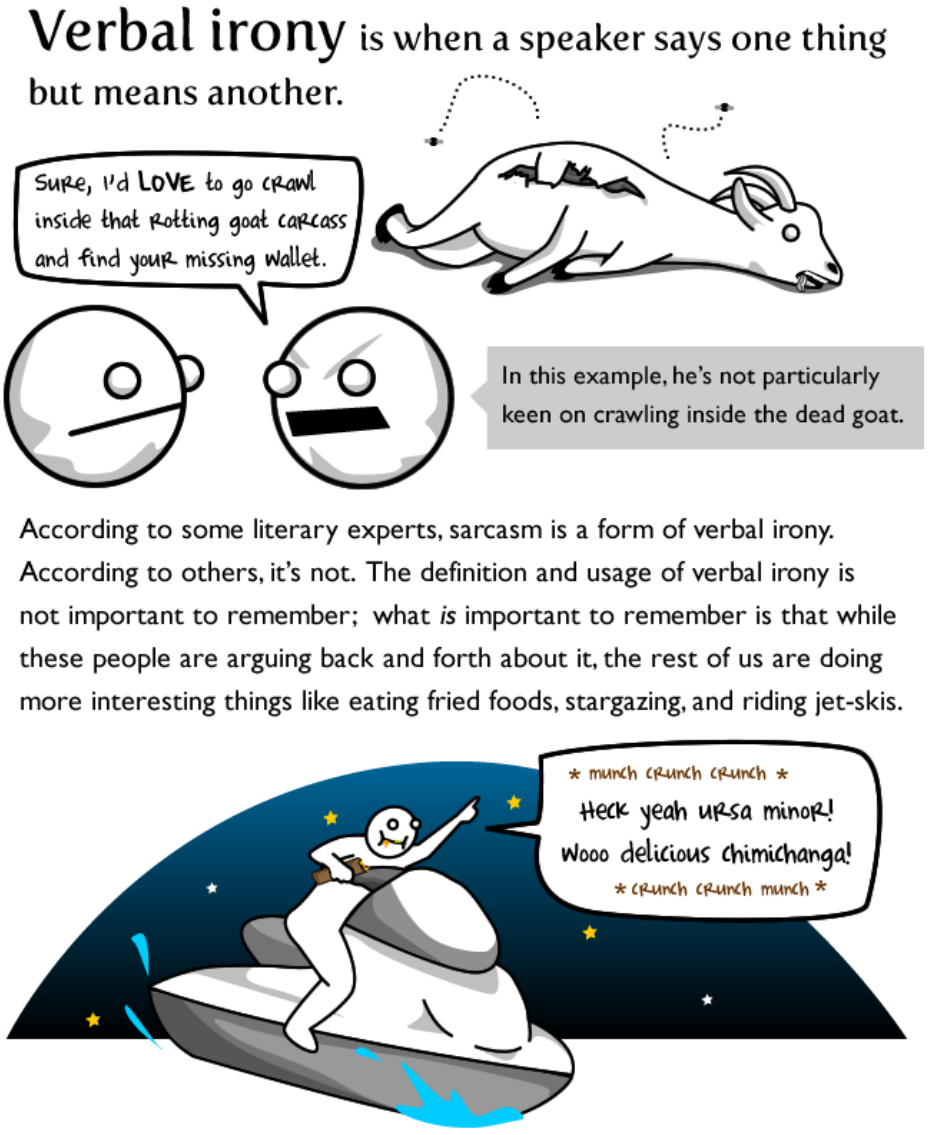
Yeah right!? Is this a default ironic construction?

An analysis of English ironic constructions on Twitter



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[1] The illustration on the title page is part of a blog post called 'The three most common uses of irony', which I retrieved from http://theoatmeal.com/comics/irony on November 30, 2018.

Abstract

Verbal irony has been a topic of study for several decades and conclusive answers to what it is and how language users correctly understand each other's ironic expressions are difficult to provide. Saying the opposite of what you actually mean does not seem the most effective way of communicating at first sight, but it has proven to be used over and over again without much misunderstanding. Several theories have been proposed in the past few decades that try to explain the concept of verbal irony (among others Grice 1975; Wilson & Sperber 1992; Giora 1997; Tobin & Israel 2012). Most theories on verbal irony share the idea that irony is best defined as an utterance with a literal evaluation that is implicitly opposite to its intended evaluation (Burgers & Van Mulken 2013: 184).

According to Giora and others (see for example Giora, Drucker & Fein 2014), constructions (form-meaning pairs) can even be interpreted ironically by default, when the interpretation that springs to mind first is the ironic interpretation, whether presented in isolation or in a context biasing towards that ironic interpretation. This claim is based solely on experimental research with constructed examples (among others Giora et al. 2015; Giora, Givoni & Fein 2015; Giora et al. 2018). However, to support the claim of default ironic interpretation actual language data should be involved, but such corpus studies on ironic constructions are rare. This study builds on two previous studies investigating Dutch ironic constructions on Twitter (Walles 2016; Stevens 2018), and it extends the scope to ironic constructions in English. By comparing three corpora each containing 2,000 tweets with one of the three hashtags *#irony*, *#not*, and *#sarcasm* with a corpus containing 15,000 general English tweets, 30 words and 22 phrases appeared to occur significantly more often in the ironic tweets. These words and phrases were used to compile a new corpus, containing one hundred tweets for each word or phrase. An analysis of the tweets showed that only four were used ironically significantly more often, namely *classy*, *I'm shocked*, *what a surprise*, and *yeah right*.

Exploring the ironic meaning of these four constructions from a constructionist point of view is fruitful, since their ironic meaning can be better understood as these constructions are considered as one unit to which the ironic meaning is assigned. These constructions underwent subjectification: its ironic evaluation has become part of the conventional meaning of the construction and the usage of the construction is expanded to a wider range of communicative contexts in which it conveys an ironic attitude (Verhagen 2000). This gradual conventionalization of the ironic evaluation explains why certain constructions are used more frequently with an ironic intent than others: those constructions have progressed further in the conventionalization process and the ironic meaning has become more closely attached to the construction (Claridge 2011). Nevertheless, the four ironic constructions in the Twitter corpus could not be classified as *default* ironic constructions, as there are still cases in which they are used literally. The notion of default ironic interpretation is problematic, as the analysis of actual language data do not support the view that one particular construction is always and only used ironically.

1. Introduction

Irony and human communication go hand in hand. Humans seem to be well able to distinguish literal and ironic language use from each other. Features like frowned eyebrows and a rising intonation help us detect irony in spoken discourse, but written discourse does not provide us with such detecting devices. We cannot see whether the writer was frowning her eyebrows when she wrote down her ironic comment.[1] Even though it seems so easy to understand each other's ironic expressions, it becomes way more complicated when we try to grasp it in a big corpus. Well, nothing is too hard to handle, so with this thesis, I try to solve this seemingly insoluble problem… or am I being ironic here?

Several theories on verbal irony have been proposed in the past few decades (among others Grice 1975; Wilson & Sperber 1992; Giora 1997; Tobin & Israel 2013). Although these different studies share some important characteristics when it comes to defining what verbal irony actually is, they offer different perspectives on how language users process and understand an ironic utterance. What it all boils down to is that a speaker is saying something, while the evaluation of the utterance is the opposite of what she literally says. This important idea runs as a thread through almost all studies on verbal irony, and serves as a starting point for my analysis of default ironic constructions. These ironic constructions are a special type of verbal irony: as the name suggests, such constructions would be interpreted ironically by default. Do such constructions exist in the English language? And if they exist, how do we find them? This might be an even more complex question. Defining verbal irony is already a difficult task, but finding verbal irony might be even more complicated. What are the basic characteristics of an ironic expression? Which words, phrases, or even punctuation marks are markers of irony? And how would these be applied on corpus data? These methodological issues are the main focus of this thesis, in which I propose a method that is applicable for systematically collecting ironic utterances in a Twitter corpus.

Verbal irony is not only an interesting subject matter from a methodological point of view, but also from a more theoretical perspective. If certain words or phrases are frequently used ironically, this ironic interpretation must have become part of the meaning of the construction as a whole. How does such an ironic meaning come about? In this thesis, I explore the ironic meaning of the constructions from a constructionist point of view, as such an approach contributes to a better understanding of the interpretation process of ironic expressions.

Verbal irony has been a widely discussed research subject, but studies specifically focusing on default ironic constructions are, to my knowledge, rare. The notion of default ironic interpretation is proposed by Giora (1997; 2003), who primarily focuses on the theoretical implications of adopting an approach of default ironic interpretation. She supports her ideas with experimental research in which subjects evaluate cases of default ironic constructions, but corpus data are not a major part of her studies. Nevertheless, investigating the usage of ironic constructions in corpus data is crucial as to how we understand default irony. If we want to learn how verbal irony in human communication works, we must analyze the actual language use of these humans. Without doing this, understanding how verbal irony is produced, processed, and understood is even more complicated. With this study, I try to offer new insights into the interpretation of ironic constructions, by which understanding what verbal irony constitutes becomes slightly less complicated.

This study builds on two previous corpus studies investigating default ironic constructions. Both studies (Walles 2016; Stevens 2018) make use of tweets as corpus data. Twitter is a social media platform on which users can share thoughts about anything that is important to them, and many tweets contain evaluative language use, as Twitter users frequently express their opinions on different topics. Such a corpus is therefore particularly useful, as ironic utterances always contain an evaluation of a certain situation. Walles (2016) investigated whether Dutch tweets contain default ironic constructions. An example of a Dutch construction she categorized as ironic by default is *lekker* Adj (e.g. *Lekker bezig*

[1] I adopt the practice of referring to the speaker/writer with feminine pronominal forms and the hearer/reader with masculine pronominal forms.

'Doing good') (Walles 2016: 37). In a previous study (Stevens 2018), I analyzed the Dutch *altijd* X construction ('always X'), in which the intensifier *altijd* is combined with a positive evaluative word. I collected tweets containing different variants of the construction (e.g. *altijd leuk* 'always nice' and *altijd feest* 'always party') and I compared their ironic use to the ironic use of the same words used in isolation. I applied a collostructional analysis (see Stefanowitsch & Gries 2003 for an elaborate discussion of this analysis), but on a far smaller scale than is usually done. Nevertheless, the corpus analysis revealed that the combination of *altijd* with a positive evaluative word is significantly more often interpreted ironically than the usage of *altijd* or the positive evaluative words in isolation. The ironic meaning is non-compositional, i.e. it cannot be derived from the meanings of the individual words only.

This thesis extends the scope of corpus studies on default ironic constructions to English and proposes the constructionist perspective on language use as a key instrument for the explanation of the ironic meaning in the ironic constructions. All these endeavors are pursued to answer the following research question, which is twofold: how can default ironic constructions in a Twitter corpus be detected and how does a constructionist approach contribute to a better understanding of those constructions? The answer to these questions can be found in the following chapters. Chapter 2 sets out the theoretical framework adopted to explain ironic constructions. In Chapter 3 and 4, I explain how I carried out the corpus analysis and which results that produced. In Chapter 5, I discuss the notion of defaultness and whether this idea can be applied to ironic constructions. Moreover, I review the method I used to collect and analyze the tweets. The final section in this chapter is devoted to a discussion of the conventionalization of the ironic meaning in the constructions. The final chapter provides the conclusion.

2. Theoretical framework

2.1. Verbal irony

Verbal irony has been a topic of study for many years now and it still seems to be a phenomenon in language that is somehow difficult to grasp. How come that we immediately recognize an utterance like *What a nice weather!*, uttered on a rainy day, as ironic? What is it that we do not get confused when we hear someone saying this? Ironic utterances could cause confusion between a speaker and a hearer, but this happens not that regularly.[1] Why is that? In this section, I focus on the different theories proposed in the past forty years which try to explain the phenomenon of verbal irony. Other forms of irony, such as dramatic or situational irony, are not addressed in this thesis. In the latter part of Section 2.1, I narrow the discussion on verbal irony down to verbal irony use on Twitter, the social media platform I used for compiling my corpus.

2.1.1. Definition

Several attempts have been made to define verbal irony. I discuss the most important theories that have been proposed in the past few decades. The studies by Grice (1975; 1978) are a good starting point: he separates the literal and intended meaning of an utterance. When the literal meaning of an utterance does not coincide with the situation to which the utterance refers (such as saying *You're are amazing!* when someone fails to pass an easy test), the hearer needs to reinterpret the message and has to come to an opposite interpretation of the literal meaning (*You're amazing!* means *You're a complete failure!*). According to Grice (1975: 46, 53), the maxim of quality is violated in such a case, as the literal meaning is, strictly speaking, not true and the maxim of quality dictates that the speaker should not say something that she believes to be false. At the same time, the speaker should also adhere to the cooperative principle, saying that a speaker should '[m]ake [her] conversational contribution such as is required, at the stage at which it occurs, by the accepted purpose of direction of the talk exchange in which [she is] engaged' (Grice 1975: 45). The hearer assumes both that the speaker is adhering to the cooperative principle and that she is not violating the maxim of quality and thus comes to an alternative interpretation of the ironic utterance (the non-literal interpretation). The intended meaning is, what Grice calls is, a particularized conversational implicature (1975: 56).

Wilson and Sperber (1992: 59) interpret verbal irony as a form of echoic mention: an ironic utterance repeats or echoes the message uttered by another speaker and comments on that message at the same time. Verbal irony is thus a combination of a report of what someone else said and an expression of the speaker's attitude towards what has been said. According to Wilson and Sperber, both the literal and the intended meaning are retained in an ironic utterance and by assuming this, they adopt a different theory than Grice does.[2] Whereas both meanings are present according to Wilson and Sperber, Grice interprets the literal meaning of an utterance as a violation of the maxim of quality and dismisses it as untrue.

Another theory on verbal irony comes from Giora (1997; 2003), explaining the phenomenon of verbal irony by proposing the *Graded Salience Hypothesis*. Some meanings of words, phrases or other expressions are more salient than others. Think of homonyms: words that are both spelled and pronounced the same as each other, yet have different meanings. An example is the word *pen*. Which meaning springs to mind first? Most likely, the writing instrument you probably use on a daily basis. If you are a farmer, you might have first thought of a small enclosure to keep sheep, pigs, or other animals. For most people, the first meaning of *pen* is the most prominent one: the salient meaning. According to

[1] I refer here to 'speaker' and 'hearer', but 'writer' and 'reader' could be used here, and in the remainder of this thesis, interchangeably.

[2] The theory Wilson and Sperber propose resembles the way Ariel (2016) explains irony in her typology of pragmatic interpretations. According to Ariel (2016: 16), all cases of irony consists of two tiers: the first, explicated tier ('what is said') and the second, intended tier ('what is meant'). These two tiers together constitute the ironic meaning of the expression. Ariel considers the first tier the provisional explicature and the second tier the strong particularized conversational implicature.

Giora (2003: 10), the salient meaning is the meaning of a lexical item that is foremost in our mind due to conventionality, frequency, familiarity, or prototypicality. Those meanings are accessed faster than less salient meaning of the same lexical item. Salient and less salient meanings can be hierarchically ordered: the most salient and the least salient meanings are at the ends of a scale. Salience can be understood as a gradable phenomenon, hence the name *Graded Salience Hypothesis* (Grice 2003: 18).

We can apply the hypothesis on verbal irony, assuming that there is a difference in salience between the literal and intended meaning. A non-ironic utterance is interpreted without much effort, as only the literal meaning springs to mind without interference of a non-literal meaning, but this does not go for ironic utterances. In such cases, there are two meanings that could both be the intended one, the literal and the figurative meaning. Giora, Drucker, and Fein (2014: 6) state that the two meanings coexist, but that the meanings are not equally salient. When the literal meaning does not coincide with the situation to which the utterance refers, the hearer will immediately shift towards the non-literal interpretation, which is usually non-salient but salient in an ironic context. Some expressions are almost always interpreted ironically: Giora, Drucker, and Fein go so far as to say that default non-literal interpretation exists. Such an interpretation has to meet certain criteria to count as ironic by default. First of all, the utterance should be interpreted sarcastically when presented in isolation.[3] The utterance should also be processed faster in contexts biasing towards the non-salient sarcastic interpretation than towards the salience-based literal interpretation.[4] Finally, when such an utterance occurs in natural discourse, it conveys a non-salient interpretation more often than a salience-based literal interpretation (Giora, Drucker & Fein 2014: 14). An exact percentage of what 'more often' means is not provided. Nevertheless, according to this theory, ironic utterances convey both a literal and an ironic interpretation, which is the salient interpretation that springs to mind first when an ironic expression is uttered. The question whether default ironic interpretation occurs in actual language use is the topic of consideration of this thesis. I return to the topic of default irony in Section 2.2.

Another explanation of verbal irony comes from Tobin and Israel, who consider irony as the effect of the coexistence of two perspectives on the same object of conceptualization. According to them, understanding irony boils down to the following: the meaning of an ironic utterance is accessed from one, ironized, viewpoint (the literal meaning) and simultaneously reaccessed from a higher, ironic, viewpoint (the intended meaning) (Tobin & Israel 2012: 27-28). Both interpretations are relevant for a proper understanding, which is graphically portrayed in Figure 2.1. Space M is the ironized viewpoint, the literal meaning of the utterance *What a lovely weather!*, uttered on a rainy day. Space M-1 is the second viewpoint, in this case the interpretation that the weather is not lovely at all, i.e. the ironic interpretation of the utterance. Again, Tobin and Israel, like others, acknowledge the coexistence of two interpretations in one ironic expression. Moreover, they link it to the notion of subjectivity, saying that every

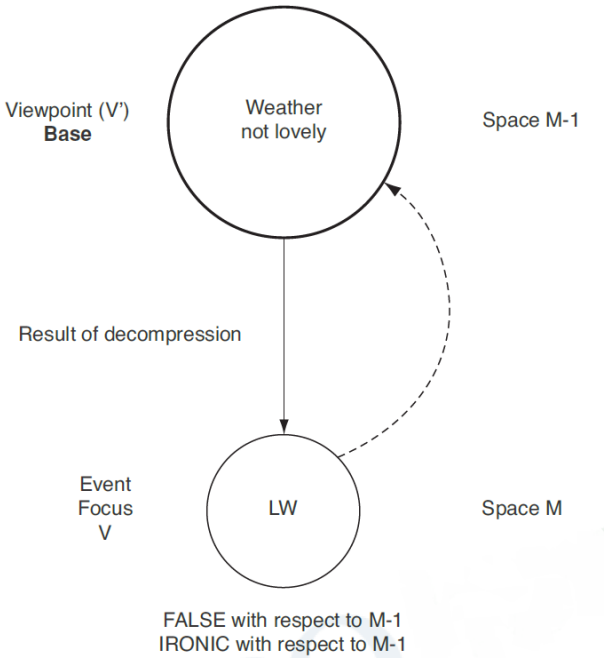

Figure 2.1 Verbal irony as a viewpoint phenomenon (Tobin & Israel 2012: 33)

[3] Giora, Drucker and Fein (2014: 4) consider 'sarcasm' and 'verbal irony' as the same concept. Similarly, I treat them as one concept. In all cases where I mention 'irony', 'sarcasm' can be read there instead.

[4] A non-salient interpretation is novel or derived, and not coded in the mental lexicon. A salience-based interpretation, on the other hand, is coded in the mental lexicon but not as frequent, familiar, or prototypical as the salient (most prominent) interpretation of the same construction (Fein, Yeari & Giora 2015: 3).

situation we encounter is subject to interpretation and everything we say, including ironic statements, is subjective (Tobin & Israel 2012: 44). This notion will become important in the remainder of the chapter and will be further discussed in Section 2.2.

Other studies on verbal irony include the question whether using verbal irony is a deliberate act or not and how irony relates to other categories of non-literal language use, such a metaphors and hyperboles. Gibbs, Bryant, and Colston (2014: 584) emphasize the deliberate nature of ironic expressions: a speaker has to be mindful of the fact that she is conveying an ironic message and wants the hearer to interpret the message likewise. Simply saying the opposite of what would be congruent in a given situation is not enough for an ironic interpretation to arise, but a speaker has to plan it deliberately to get her ironic message across. This interpretation differs from Grice's theory, who views irony as the incongruity between what is literally said and what is pragmatically implied without incorporating the intentional act of uttering an ironic utterance rather than the literal opposite (Gibbs, Bryant & Colston 2014: 568). In the next section, the intentional use of verbal irony is linked to the argumentative nature of ironic expressions.

The notion of argumentativity links to the function of using verbal irony and other non-literal language in daily conversations. Figurative language use, such as irony, hyperboles, and metaphors, is marked and is used to catch the hearer's attention more effectively than simply saying what is the case in the most literal way possible. The speaker tries to persuade the hearer with a more convincing argument and ironic language use thus expresses emotional involvement with the topic of discussion (Claridge 2011: 9, 78). The question why ironic language use is always argumentative and how the use of ironic constructions in particular relates to this is further explored in Section 2.2.

Before delving into the topic of default irony and its relation to conventionalization of meaning, I first need a working definition of verbal irony that I use throughout my study. In their overview study, Burgers and Van Mulken (2013) provide a useful definition in which they incorporate several theories that are discussed above. They define verbal irony as an utterance with a literal evaluation that is implicitly opposite to the intended evaluation (Burgers & Van Mulken 2013: 184). Their emphasis on the fact that there are two interpretations present that are each other's opposites is especially important for the way I analyze my corpus data.

2.1.2. Verbal irony on Twitter

Spotting irony in spoken communication is usually not a difficult task, as special intonation patterns often give away that the speaker intended her message ironically. Finding ironic expressions in written discourse is more challenging without any intonation patterns to rely upon. Several studies try to find other irony markers instead that could be used for detecting irony in all kinds of text genres. Burgers, Van Mulken, and Schellens (2012: 295) distinguish four types of irony markers, namely:

1. schemes and tropes, such as metaphors, hyperboles, understatements, and rhetorical questions;
2. schematic markers based on repetition, such as ironic repetition and ironic echo;
3. morpho-syntactic markers, such as diminutives, exclamations, interjections, and tag questions;
4. typographic markers, such as quotation marks, capitalization, and emoticons.

Finding such irony markers is an indication that ironic language use is to be found, but it is still difficult to spot ironic expressions as many other utterances might as well contain, for instance, a hyperbole or a diminutive. And more importantly, not all irony markers, mentioned above, can be easily detected by using specific search terms. For example, how would you ever find a hyperbole in a large text corpus? These are methodological challenges, which might not be solved in similar ways for each text genre.

Let's now narrow it down to the language use on social media and, more specifically, on Twitter. These new text genres differ in several ways from more traditional texts, such as newspapers and novels. Language use on social media can be placed somewhere in between written and spoken discourse, as it shares characteristics with both. On the one hand, it is written language, but on the other hand, language on social media usually displays a wide range of emotive expressions, from anger and disgust to joy and

euphoria, by which it resembles spoken language. Studies using blogs as corpus data show that blogs display a strong presence of emotion (Whalen et al. 2013: 561). The study by Whalen et al. focused on the use of verbal irony, which turned out to be frequently displayed in the blog entries under investigation: 72.78% of all blog entries contained instances of verbal irony (2013: 564). The forms of the ironic expressions that were analyzed were jocularity, sarcasm, lexicalized and novel hyperboles, understatements, and rhetorical questions, which were in almost all cases used to convey negative emotion (Whalen et al. 2013: 567). Of these six types of verbal irony, the two most commons forms used in these blogs were hyperboles and understatements (Whalen et al. 2013: 566).

It is likely that Twitter users apply similar forms of verbal irony in their tweets, but finding these is as if one is trying to find a needle in a haystack. Fortunately, Twitter offers a neat solution to this problem. Twitter users can annotate their own tweets by adding certain hashtags to their messages, such as adding the hashtag *#irony* to indicate that the tweet is intended as an ironic message. Searching for these hashtags is quite simple compared to finding hyperbolic language use in a corpus that expands with 6,000 tweets every single second.[5] Furthermore, using hashtags rather than the irony markers Burgers, Van Mulken, and Schellens (2012: 295) list is preferable, because Twitter users are their own best judges regarding their ironic language use. We can be pretty sure that a tweet containing the hashtag *#irony* was indeed meant as such, but another person evaluating ironic tweets might not always succeed due to the lack of context and the brevity of the messages (González-Ibáñez, Muresan & Wacholder 2011: 585).

A number of studies adopt the practice of using hashtags as markers of irony and compile a large corpus of tweets, in which special characteristics of ironic language use are detected. Kunneman et al. (2015: 501) make use of four hashtags: *#irony*, *#sarcasm*, *#cynicism*, and *#not*. In their corpus containing these hashtags, they find that intensifiers, such as Dutch *geweldig* ('amazing'), and positive adverbs and adjectives, such as *interessant* ('interesting'), occur frequently and are thus predictors of ironic language use (Kunneman et al. 2015: 506). Other hashtags signaling ironic language use are *#humor*, *#LOL*, and *#joke* (Liebrecht, Kunneman & Van den Bosch 2013: 34). In the two studies by Kunneman et al. (2015) and Liebrecht, Kunneman, and Van den Bosch (2013), the hashtags *#irony* and *#sarcasm* are used interchangeably, whereas other studies signal that tweets annotated with these two hashtags are not exactly the same. Sulis et al. (2016: 136-137) indicate that tweets with *#sarcasm* show a different use of emotion words than tweets with *#irony*, and that tweets with *#irony* convey more implicit emotions than tweets with *#sarcasm*, which are far more explicit. Tweets with *#not* show more similarities with tweets with *#sarcasm* than tweets with *#irony*. The difference between sarcastic and ironic tweets is also endorsed by Reyes, Rosso, and Buscaldi (2012: 5).

Based on the findings by the studies using tweets as corpus data, I decided to compile a corpus with ironic tweets along the same lines as they did. For the preliminary analysis, I made use of a corpus containing the hashtags *#irony*, *#not*, and *#sarcasm*. I chose these three hashtags, because these would yield enough results for the first stage of my study. By using these hashtags rather than any other search terms, I made sure that the Twitter users were their own judges without relying on my own evaluation for the selection of ironic tweets. Since some studies signal a difference in use of the three hashtags, I had to bear in mind that the three sub corpora might contain tweets portraying different types of verbal irony.

2.2. Default ironic constructions

In Section 2.1.1, I briefly discussed the notion of default ironic interpretation: some expressions are immediately interpreted ironically, whether presented in isolation or used in a communicative context biasing towards that ironic interpretation. In this section, I discuss Giora's studies on default ironic constructions in more detail, but first of all, I try to answer the question what a construction actually is, according to Construction Grammar.

[5] See http://www.internetlivestats.com/twitter-statistics/ for current data on the number of tweets sent each second, day, or year.

2.2.1. What is a construction?

Several linguistic theories have tried to explain how linguistic knowledge is cognitively represented: how do people remember a language and keep using the same structures to refer to events in the real world? Many theorists agree on the conventionality of language, which means that language users agree on word-meaning pairs as to ease communication. The word *banana* will therefore always refer to that specific yellow long-shaped and slightly curved piece of fruit, just to make sure that communication goes smoothly. How words and sentences structures are stored and accessed is still a subject of debate. According to Cognitive Grammar, words and phrases are stored as constructions that carry meaning (Goldberg 1995: 1). Those constructions are units of linguistic knowledge that constitute a fixed combination of form and meaning (Hilpert 2014: 2). Those combinations could be made of just one word (*banana*), more than one word (*banana republic*: this is not a republic where bananas live but a small state whose economy heavily relies on the production and export of just one product), or even less than one word (*un-* in *untrue*: this prefix always means *not* and is attached to adjectives). As you can see, a construction does not necessarily contain a fixed number of words.

According to constructionists, there is no strict division between lexicon and grammar, since a construction can be both a lexical and a grammatical item at the same time (e.g. *to go bananas* 'become mad'). In this regard, Construction Grammar is different from Generative Grammar, but these conflicting theories also have some characteristics in common: both agree on the fact that language is a cognitive system and that structures (whether these are constructions or lexical items connected with grammar rules) can be combined to form novel utterances (Goldberg 2003: 219). But there are some characteristics Construction Grammar attributes to constructions that Generative Grammar does not share. According to constructionists, all linguistic knowledge is stored in the mental network, irrespective of the length of the construction or the degree to which the construction is dependent on grammar rules. Some constructions that are stored are fully fixed (*Times flies when you're having fun*), while others are only fixed to some degree (*Clara makes her way through the crowd* = NP – *make* – DP – *way* PP).

There are a number of criteria a combination of lexical items has to meet in order to be called a construction in the constructionist framework. First of all, the construction has to be unpredictable, whether that be the form or the meaning of the construction (Hilpert 2014: 10). For instance, in the expression *Time flies when you're having fun*, there is no actual time flying around because time cannot fly. In this specific combination of words, however, we know that *times flies* means that time goes by quickly; the meaning of *times flies* is unpredictable. The meaning is non-compositional as well, which is the second criterion for a combination of lexical elements to be called a construction. This means that the meaning of the whole cannot be derived from the meanings of the parts alone, but the construction conveys an additional meaning (Hilpert 2014: 14). The meaning of the expression *Time flies when you're having fun* is not merely the sum of the meanings of the seven words that constitute the construction, but we stored the meaning of the construction as one unit in our mental lexicon. A third criterion is the idiosyncratic constraints a construction may have (Hilpert 2014: 18). An example of an idiosyncratic constraint is the use of a DP in the *way*-construction: it has to correspond to the NP, the subject of the construction (e.g. *Clara makes her way through the crowd* vs. **Clara makes your way through the crowd*). The final criterion is the collocational preferences of a construction. If some words tend to occur in a specific context relatively frequently, this suggests that we are dealing with a construction. The Dutch ironic *altijd* X construction ('always X') only occurs with positive evaluative words, such as *altijd leuk* ('always nice'), *altijd feest* ('always party'), and *altijd positief* ('always positive'), hence giving it its ironic meaning that something is actually not positively evaluated at all. The other way around, i.e. *altijd* combined with a negative evaluative word, meaning that something is in fact positive, does not occur in the corpus under investigation (Stevens 2018: 376). These four criteria – unpredictability, non-compositionality, idiosyncratic constraints, and collocational preferences – are a good tool for detecting novel constructions in a corpus.

2.2.2. Giora's default ironic interpretation

In previous sections, I referred to Giora's idea of defaultness and ironic constructions. Let's now discuss this notion in more detail. According to Giora and others, some constructions – specific combinations of words – can be interpreted ironically by default. Her prime example of such a construction is X *is not her/her forte* (*Punctuality is not her forte*) (Giora et al. 2015: 177). For such a construction to count as ironic by default, it should meet three conditions. It should be a novel, unfamiliar expression to avoid salient non-literal or collocational meanings (e.g. familiar idioms and metaphors), as should be the counterpart (*Punctuality is her forte*) (Condition A), it should be potentially ambiguous between the literal and the non-literal interpretation (Condition B), and it should be interpreted as an ironic utterance when presented in isolation or in a neutral non-spoken discourse (Condition C) (Giora, Givoni & Fein 2015: 295).[6] For these three conditions to be met, there are three other criteria that need to be fulfilled too: the construction should not include any constituents with a salient (coded) non-literal meaning (such as metaphors and sarcasms) (Criterion 1) or any semantic anomalies or internal incongruencies to allow for both literal and nonliteral interpretation (Criterion 2), and biasing contextual information (for either the literal or nonliteral interpretation) should not be involved (Criterion 3) (Giora et al. 2015: 177-178).

To test whether a construction is a real example of a default ironic construction, Giora and others conduct experiments in which subjects read text passages which contain the potentially ironic construction (X *is not his/her forte*) or its affirmative counterpart (X *is his/her forte*). The context in which this construction occurs is either biasing towards the ironic or towards the literal interpretation. An example of such a text passage is given below.

> Shay had to take his father to the dentist. Although his father reminded him time and again that he must be there at precisely 10:00 because he hates being late, Shay was half an hour late, arriving at 10:30. Later, while having dinner, Shay's father complained to his wife about Shay's behavior, embarrassing him in front of the dentist. "Well, what did you expect?" answered his wife disparagingly, "we know him well enough, don't we? And this is not the first time he has given you a lift. **Punctuality is not his forte.** He has lived in a very lenient discipline climate as a child." (Giora et al. 2015: 184)

This text passage is a clear example of a potentially ironic construction (boldface) presented in a context biasing towards its ironic interpretation. Most of the experiments Giora and others conduct contain these constructed examples that subjects have to evaluate as being either ironic or literal. A number of such default ironic constructions have been tested so far; Giora et al. (2015: 177, 179, 180, 200) list the following:

(1) X is not his/her forte.
(2) X is not his/her most distinctive feature.
(3) X is not his/her best attribute.
(4) X is not his/her strong point.
(5) X is not his/her outstanding trait.
(6) X is not his/her most prominent strength.
(7) X is not his/her area of area of expertise.
(8) X is not his/her most noticeable endowment.
(9) X is not his/her most outstanding capability.

[6] If a construction is interpreted ironically by default, the ironic meaning of the construction could be classified as a generalized conversation implicature, and no longer as merely a particularized conversational implicature (cf. Grice 1975; Ariel 2016). The ironic meaning is conventionalized to such an extent that it has become generalized. We could even go so far as to say that such constructions are cases of conventional implicatures, but in that case, the literal meaning should have disappeared completely. If such examples exist and if we could still call them ironic (the opposition between a literal and intended evaluation is no longer present), is further addressed in Section 5.1.

(10) X is not his/her greatest talent.
(11) X is not his/her effective faculty.
(12) X is not his/her most pronounced characteristic.
(13) X is not his/her most impressive quality.
(14) X is not what best characterizes hem/her.
(15) X is not what s/he excels at.
(16) X s/he is not.
(17) X is not particularly Y.
(18) X? I don't think so.

This list does not show much variation, since most constructions take on the form X *is not his/her* Y (constructions (1) to (13)). Another similarity between all eighteen constructions is the fact that all of them contain the word *not*. The default ironic constructions Giora studies are all negative constructions, without any exception. The experiments show that these negative sarcastic items are faster to process than the negative literal counterparts, and that the default ironic interpretation of the negative constructions is non-salient (Giora, Givoni & Fein 2015: 300, 305). Why is negation linked to ironic language use? According to Giora et al. (2013: 92), 'negation generates figurativeness via highlighting some low-salience nonliteral features of the concept it rejects, while rendering its defining, literal features pragmatically irrelevant, regardless of whether they are true of false.' Negation tends to trigger the figurative, ironic, reading of the construction, and in contexts biasing towards the non-literal interpretation, the constructions are read faster. This all speaks for the fact that default ironic constructions, which are coded in the mental lexicon and thus processed automatically, do exist, although many scholars assume that negative utterances are more difficult to process than affirmative counterparts. Giora and others contradict that assumption by adopting the Defaultness Hypothesis, that states that is it not affirmation that eases processing, but that it is defaultness that positively affects processing (Giora et al. 2017; 2018).

There are a few problems with the theory of default ironic constructions and especially with the examples Giora and others use for their experiments. First of all, they are all constructed examples, such as the text passage on the previous page which was part of one of the experiments. Do such constructions also occur in actual language use? Why do Giora and others not make use of corpus data? What would be the outcomes of the experiments if they were to use real examples? Furthermore, the examples they use are not ironic utterances in the strictest sense of the word. Burgers and Van Mulken (2013: 184) incorporate different theories on verbal irony in their definition and consider the opposition between a literal and an intended (ironic) evaluation as a key characteristic of verbal irony. According to this definition, the eighteen examples given above are not ironic all together, as the literal and the intended interpretation are not each other's opposites. If I say that punctuality is not my forte, I then do not just mean that it is not one of my best qualities, but in fact that it is my worst characteristic. By saying that punctuality is not my best quality but meaning it far worse, I am not contradicting myself in the literal sense, but I am rather making an understatement. The intended negative meaning is stronger than what is literally said; all understatements Giora et. al (2015) give contain such a negative aspect. The so-called default ironic constructions Giora and others mention are all of this type and are, in my view, not prototypical examples of verbal irony.

Another point of consideration is the line Giora and other draw between a default ironic construction and "normal" ironic language use. The three criteria Giora et al. (2015: 177-178) formulate are difficult to apply on actual language use: how can it be objectively decided whether there is no biasing contextual information involved, or when the construction does not contain any metaphors? Giora and others do not comment on this problem explicitly, but they do argue that some constructions are ironic by default by presenting results from different but related experiments. In one of the experiments, novel negative utterances, when presented in isolation, were rated by the subjects with a mean score of 6.02 on a seven-point scale (a score of 7 indicates the highest degree of irony), whereas novel affirmative counterparts were rated with a mean score of 2.69, which is significantly lower. Giora

et al. (2015: 183) then go on to conclude that negation thus induces ironic interpretation by default. Although these results are significant, drawing a line at a certain score on a seven-point scale will always be arbitrary. Moreover, Giora and others keep repeating similar experiments with the same constructed examples, that prove their hypothesis over and over again. The question whether they would find similar results using actual language data remains unanswered.

Studies trying to find default ironic constructions in real language data are, to my knowledge, rare. One of the few studies on this matter is an analysis of Dutch ironic constructions by Walles (2016), using in a corpus of tweets containing the hashtag *#not*. Burgers and Steen (2017: 100) list a few constructions they believe to be ironic by default, namely *wise guy*, *smart alec*, *God's gift*, *tell me about it*, and *a likely story*. Hilpert and Bourgeois (in prep.) discuss the *sarcastic much?* construction, which appears to be used ironically in cases such as *broken record much?* or *angry much?* Another ironic construction is examined by Michaelis and Feng (2015): *what is this,* X*?* is quite frequently used ironically. Examples are *What is this, Spain?* or *What is this, a kindergarten?* Besides these studies, not many corpus studies on ironic constructions have been done so far.

2.3. A constructionist approach

From a constructionist point of view, the ironic reading of an ironic construction is an important part of the meaning of the construction as a whole. How does this ironic interpretation become part of the meaning of such a construction? One answer to this question is a process that is called conventionalization of meaning, where a meaning becomes connected to a particular form (i.e. a word, phrase, or even a whole sentence). Before discussing how this exactly works, I need to clarify why I apply a constructionist approach to explain default ironic interpretation. As we saw so far, many examples of ironic utterances consist of more than one word, whereas the ironic meaning is usually attributed to the utterance as a whole. It is not merely one word in the utterance that accounts for the ironic reading, but it is the specific combination of the words, uttered in a certain context, that establishes the ironic interpretation. A generative approach with a strict division between words (lexicon) and grammatical structures (syntax) would not provide the best explanation for the interpretation process of ironic constructions, but a constructionist perspective is more fruitful, as it considers linguistic knowledge to be stored in a network of constructions, a constructicon (Goldberg 2003: 219). Let's first discuss the notion of conventionalization and how it relates to ironic constructions.

If a word or a phrase is used ironically, this ironic, intended meaning is usually not literally there, since the opposite meaning is explicitly uttered by the speaker (*Oh, what a nice weather!* uttered on a rainy day). According to Grice, the intended meaning is a particularized conversational implicature (1975: 56). When the same ironic meaning is connected multiple times to that specific word or phrase, it may become part of the conventional meaning of that word or phrase. This process of conventionalization of an ironic interpretation can be schematized as follows.

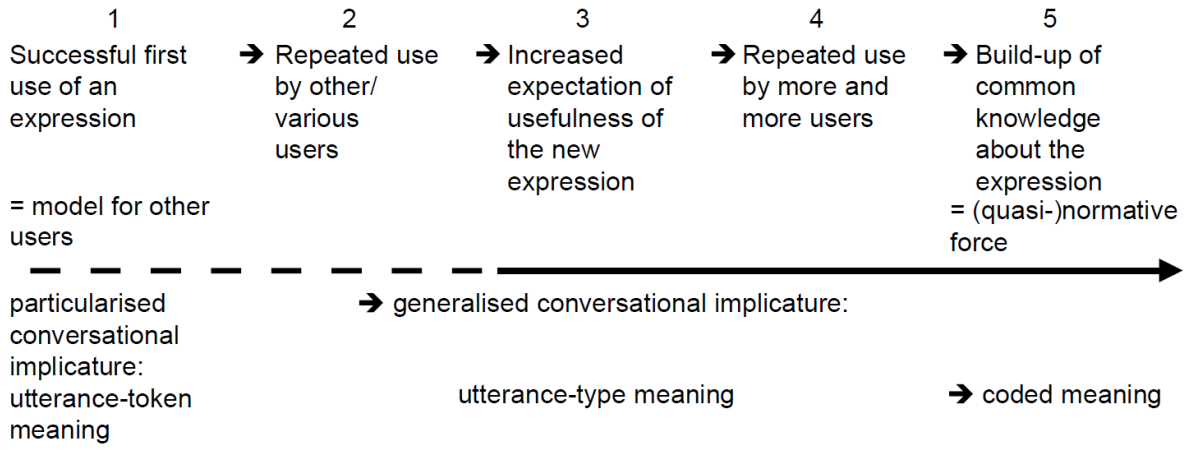

Figure 2.2 Conventionalization (Claridge 2011: 178)

Over time and after repeated use, a new meaning can be ascribed to the conventional meaning of an utterance. The particularized conversational implicature becomes a generalized conversational implicature and in the case of ironic constructions, the ironic meaning becomes part of the coded meaning of the constructions. Default ironic constructions, if they occur in actual language use, have reached the final stage of constructionalization (step 5 in Figure 2.2). From a constructionist point of view, the ironic meaning has then been stored in the mental lexicon as an inseparable part of the meaning of the construction. This process of forming new constructions is called constructionalization, which is described by Traugott and Trousdale.

> Constructionalization is the creation of $form_{new}$-$meaning_{new}$ (combinations of) signs. It forms new type nodes, which have new syntax or morphology and new coded meaning, in the linguistic network of a population of speakers. It is accompanied by changes in degree of schematicity, productivity, and compositionality. The constructionalization of schemas always results from a succession of micro-steps and is therefore gradual. New micro-constructions may likewise be created gradually, but they may also be instantaneous. (Traugott & Trousdale 2013: 22)

The new coded meaning of an ironic construction is the ironic meaning, which could either be gradually or instantaneously established as part of the construction, as Traugott and Trousdale (2013) point out. These ironic constructions may have idiosyncratic syntax or morphology, which would not be grammatical in other contexts. An example of such is the construction *sarcastic much?* (Hilpert & Bourgeois in prep.), which will be discussed at the end of this section. Before discussing specific ironic constructions, I delve into the issue of the argumentative evaluation and how it helps to explains the interpretation process of ironic constructions.

Without any doubt, ironic constructions are not merely informative, but the speaker expresses a certain evaluation about something or the other. Expressing an ironic evaluation is rather subjective, because the speaker expresses her opinion that the weather, for example, is horrible (*It's such extremely nice weather!*). Other might disagree with her, which makes an informative reading of her statement impossible. The idea of subjectivity in language use relates to argumentativity, i.e. the idea that all language is argumentative, as a speaker always considers event or states from her own, subjective perspective (Anscombre and Ducrot 1989). The most important issue with regards to ironic constructions is the fact that they always express a subjective reading about something or the other (Verhagen 2002; 2005). According to Verhagen (2000: 197), constructions bearing an evaluative (e.g. ironic) meaning underwent subjectification: these constructions lost their objective content and only the intersubjective features remained. Intersubjectivity refers to the mutually shared conventions a speaker and a hearer agree upon to solve problems that may arise in communication (Verhagen 2008: 307). In the case of ironic constructions, language users conventionally shared the idea that the opposite evaluation of what is literally said is the interpretation which is true. Such mutually shared conventions ease communication, as the hearer no longer has to put much effort into interpreting each single ironic expression correctly. Instead, it goes rather automatically, especially when a speaker uses constructions that are being associated with irony.

We may understand the interpretation process of ironic constructions even better when we take the argumentative orientation and the argumentative evaluation of such expressions into consideration. Let's first discuss an example that neatly explains the difference between the two concepts. The two Dutch verbs *beloven* 'to promise' and *dreigen* 'to threaten' might seem each other's opposites at first sight, but their argumentative orientations are in fact the same. Both direct the hearer's interpretation into a positive orientation: there is a promise when I use the verb *beloven* and there is a threat when I use the verb *dreigen.* Argumentative orientation merely refers to the question 'yes or no?', without looking at how the utterance is perceived. It is the argumentative evaluation that considers whether hearers evaluate an expression positively or negatively. The argumentative evaluation of *beloven* is positive ('Don't worry'), whereas *dreigen* has a negative argumentative evaluation ('Be prepared')

(Verhagen 2000: 200, 202). Although an ironic utterance like *You're amazing!*, uttered to someone who, for example, completely failed a very easy exam, seems to be positive at first sight, it is in fact extremely negative. The argumentative evaluation of such an ironic utterance is negative, because the evaluation points towards a negative conclusion. The other way around, ironic utterances that seem negative at first sight, but are meant positively, have a positive argumentative evaluation. By looking at the argumentative evaluation of an ironic utterance ('good or bad?', 'pleasant or unpleasant?') and comparing it to its opposing literal interpretation, we can detect ironic expressions.

The argumentative evaluation of ironic expressions may differ in strength: an utterance scoring high on argumentative strength is more easily interpreted as either having a positive or a negative argumentative evaluation (Verhagen 2000: 200). When an utterance is incidentally used ironically, and is only understood correctly in that one specific context in which it was uttered, the argumentative strength of the ironic evaluation is low, because it takes more effort to interpret this utterance correctly compared to its literal counterpart. Constructions in which the ironic interpretation has become part of the conventional meaning of the construction as a whole (a generalized conversation implicature) score higher on argumentative strength, as it has become easier to detect the irony. Speakers then get their messages across more effectively, as hearers are able to solve the puzzle rather quickly. When a hearer solves the puzzle and both speaker and hearer agree on the ironic interpretation, they share this understanding which gives both a good feeling, because the communication was successful. Establishing such a bond is important enough for a speaker to risk misunderstanding by the hearer. When an ironic interpretation becomes part of the conventional meaning of a construction, the risk of misunderstanding gradually decreases. Especially Twitter is a good source for finding constructions that have a mutually shared ironic meaning, as groups of Twitter users who frequently interact with each other form some sort of online community in which establishing bonds, for instance, through using mutually shared conventions on language use seems important. A corpus study investigating if Twitter users apply certain ironic constructions on a regular basis could reveal why verbal irony is such an effective means of communication.

There are a few corpus studies on ironic constructions that analyze them from a constructionist point of view. Michaelis and Feng (2015) investigated the ironic use of the split interrogative, e.g. *What are you, a senior?* or *What is this, a party?* This ironic construction has some idiosyncratic properties which distinguishes it from other questions. The interrogative *what* can not only refer to inanimate subjects, but also to animate subjects, such as in the example *What are you, a senior?* A second idiosyncratic property is the intonation pattern of the ironic split interrogative with two accentual peaks on the interrogative (*what*) and the interrogative tag (*senior*) (Michaelis & Feng 2015: 162, 163). The ironic meaning of the construction is provoked by either the interrogative body (*What is this*), which creates pretense, and the interrogative tag, which is figurative and not literally true (Michaelis & Feng 2015: 173, 174). By saying *What are you, sixteen again?* the speaker does not literally mean that the addressee is really sixteen years old, but is ironically saying that the addressee is behaving as if he is much younger than he actually is. Based on the combination of both the idiosyncratic properties and the ironic meaning of the construction, Michaelis and Feng (2015: 177) conclude that this split interrogative is a construction in the sense that the meaning of the whole is non-compositional, and that the ironic meaning is conventionally attached to it.

Another construction in which conventionalization of the ironic meaning took place is the *sarcastic much?* construction which conveys a critical or sarcastic meaning that is non-compositional (Hilpert & Bourgeois in prep.). The construction also has some peculiar idiosyncratic properties, because it does not follow the rules of English grammar. Examples such as *angry much?* of *stereotype much?* would not be grammatical outside this construction, but used as such they mean something like *very angry?* of *an extreme stereotype?* The critical attitude expressed by the speaker has been conventionalized and the subjective interpretation is now part of the pragmatic implicature of the construction. Due to this conventionalization, the meanings of *much* have been extended to cases in which it does not have a scalar meaning anymore, like in *stereotype much?* Moreover, the construction developed from an expression directly addressed at the hearer to a new usage in which the negative

attitude is directed to someone or something that is no longer present. The negative attitude expressed is conventionalized to such an extent that the construction is also used with words that are not inherently negative, such as in *Dumbledore much?* which the speaker used to express criticism about a person who, according to her, resembles Dumbledore too much (Hilpert & Bourgeois in prep.). Apparently, the negative argumentative evaluation of the construction is conventionalized to such an extent that even without inherently negative words used the construction is still interpreted ironically. In Section 5.3, the conventionalization of the ironic meaning, found in the ironic constructions on Twitter, is further discussed.

3. Methodology

3.1. Preliminary analysis

It is not an easy task to find verbal irony in a corpus of actual language use, as it is rather impossible for one person to search for ironic utterances by using the irony markers that, for instance, Burgers, Van Mulken, and Schellens (2012: 295) list. Finding ironic utterances in most corpora is like trying to find a needle in a haystack. In this chapter, I explain how I tried to solve this problem and how I compiled a corpus with tweets in which I could search for default ironic constructions.

3.1.1. Twitter and hashtags

The only corpus that contains explicit markers of irony is Twitter: Twitter users can add specific hashtags to their messages. Several studies on irony make use of these hashtags to compile a corpus with ironic utterances (among others Reyes, Rosso & Buscaldi 2012; Kunneman et al. 2015; Sulis et al. 2016; Walles 2016). Some of the hashtags are only used when the writer of the message wants to convey an ironic meaning, namely *#not*, *#irony*, and *#sarcasm*. Reyes, Rosso, and Buscaldi (2012: 6) indicate that the advantage of using these hashtags is that it enables the researcher to retrieve examples of irony that were indicated as such by the writer herself and that are not based on any personal judgments of the researcher. A disadvantage is signaled by Kunneman et al. (2015: 506): if tweets contain explicit hashtags, there is less necessity to include other types of irony markers. This raises the question if the results that are found by using this method can be considered prototypical examples of verbal irony. Nonetheless, by applying this method, I was able to retrieve a large number of ironic tweets, which would have been almost impossible if I had gathered them manually. Moreover, I did not use these tweets for the actual analysis of ironic constructions, but I only used these to find words or combinations of words that were often used ironically.

I retrieved English tweets from Twitter in the period from May 27, 2018 to August 1, 2018.[1] These tweets had to contain one of these three hashtags: #irony, #not, or #sarcasm. Twitter only allows you to select a language, but not a specific region or variety of that language. This means that the tweets I collected could be written by any speaker of English (either mother tongue speakers or foreign language learners), from all parts of the world. The corpus I compiled by retrieving tweets with the three hashtags was of a large size. However, not all these tweets are useful for my analysis. Following Kunneman et al. (2015: 53), I applied a few selection criteria. These were:

1. The hashtag should appear at the end of the tweet or should only be followed by an URL. Hashtags in the beginning or middle of the tweet are more likely to be a grammatical part of the message rather than a comment on it and may refer to only a part of the sentence. I only wanted to include tweets in which the hashtag comments of the message as a whole.
2. The corpus cannot contain retweets, as a single tweet appearing over and over again would influence the results. A specific word pattern could be marked as typical for verbal irony, even though this may just be a word pattern occurring in a tweet that is retweeted several times. As users of Twitter tend to interact with each other and retweet each other messages, more than half of the tweets are retweets.

After filtering, I collected 2,378 tweets with *#irony*, 2,052 tweets with *#not*, and 5,462 tweets with *#sarcasm* (this hashtag is used more than twice as often as the other two). For each hashtag, I randomly selected 2,000 tweets, which I used for the next step of my analysis.

3.1.2. KeyWords Analysis

In the second phase of my analysis, I compared each of the three ironic sub corpora to three different reference corpora. I used two large reference corpora, containing millions of words. These corpora are

[1] Many thanks to Alex Reuneker and Naor Scheinowitz for helping me out with collecting and selecting all tweets.

the British National Corpus (BNC) and the Open American National Corpus (OANC). The BNC is a text corpus of written and spoken British English, covering a wide range of genres from the 1980s and 1990s. It contains a hundred million words. The OANC is fairly smaller, but still contains fifteen million words. It includes written as well as spoken American English, produced from 1990 onwards. Although these two corpora differ in size as well as the time period they cover, they still reflect the language use of American and British English speakers and the frequency lists that can be retrieved from them serve the purpose of my analysis. Besides comparing my data to BNC and OANC, I added another reference corpus that contains 15,000 English tweets, which I collected between July 26 and August 17, 2018. Using a corpus of English tweets (which could both be ironic and non-ironic) is insightful, as it enabled me to filter out all words that are only key in the ironic sub corpora in comparison to BNC and OANC. These two corpora contain a large sample of English texts, but do not contain tweets. The results from a KeyWords Analysis could then well reflect the particularity of Twitter language in general, but not necessarily the language of ironic tweets more specifically. Comparing the results of the KeyWords Analysis with BNC and OANC as reference corpora to the results of the analysis with the 15,000 general tweets also says something about how language use on Twitter differs from language use in other text genres.

I used frequency lists of BNC and OANC and I made my own frequency lists for the three ironic sub corpora as well as the reference corpus with 15,000 tweets. I compared the three frequency lists of the three reference corpora to the frequency lists of my three sub corpora – the tweets containing *#irony*, *#not*, and *#sarcasm*. I conducted these comparisons by using the KeyWords Analysis of WordSmith Tools. After that, I filtered the keywords that came out of this analysis. Not all keywords were useful for further analysis, as they would most likely not lead to any ironic constructions or ironic language use. I filtered out a number of keywords, such as the three hashtags themselves, that appear in every tweet, names, words referring to Twitter, tweets, trending, hashtag etc., auxiliary verbs such as *didn't*, *don't*, and *am*, and a few words that did not fall in any of these five categories. In Table 3.1 below, the labels that I used for filtering the results are given.

Labels for filters	**Description**
HT	hashtags (the word itself and the three words used after #)
NAME	names of or abbreviations referring to persons, countries, sport teams, institutions, TV programs, or (social) media
TW	words referring to Twitter or tweets
AUX	auxiliary verbs
COMP	computer language (*amp*, *https*, *co*)
OTHER	*maga* (Make America Great Again), *Brexit*, XD (emoticon), (*world)cup*, *itscominghome*, *shesaidyes*, *fortnitegame*, *ur* (you're)

Table 3.1 Labels for filters

The results of the KeyWords Analysis are presented in Section 4.1.

3.2. Compiling an irony corpus

Based on the results of the KeyWords Analysis, I decided to use the Twitter corpus containing 15,000 tweets as the only reference corpus. Many words that came out of the comparison between the three ironic sub corpora and BNC and OANC were more likely indicators of language use on Twitter in general than of ironic language use in particular. The keywords that remained after filtering were used as a starting point for the next step of my analysis, as I used these to compile a corpus which might contain default ironic constructions (the irony corpus).

3.2.1. Concordance search

By only using single keywords for the compilation of the irony corpus, I would only find single words that are often used ironically. Finding ironic constructions, however, would be more difficult this way. Therefore, I traced potential ironic constructions by carrying out a concordance search for each of the

three ironic sub corpora, by using WordSmith Tools again. This enabled me to search for words that are often used in combination with the keywords I found. I used the keywords to search for these concordances. In the results of this analysis, I looked for clusters consisting of at least two words. I left out clusters in which the keyword co-occurs with a verb. Although these clusters occur quite frequently, especially with auxiliary verbs, they do not necessarily form a combination, but are rather accidentally placed together in a sentence. In addition, I left out clusters in which the keyword is combined with an article. This left me with a list of 83 clusters. Due to the limited scope of this thesis, I decided to limit the results to clusters occurring at least four times (22 clusters remained).

Based on the list of keywords and clusters, I compiled a new corpus. Firstly, I slightly adjusted the list. I left out *humor*, as this was only used as *#humor* and was never part of the actual tweet. I took the words *customer* and *service* together, as they were used as a compound noun in almost all tweets. Both *I'm shocked* and *I am shocked* were a cluster, but I decided to use *I'm shocked* only, as this one occurred more often and using only one would yield enough results for the purpose of this analysis. The keywords and clusters that make up the new corpus are presented in Section 4.1.2. For each word or phrase, I collected one hundred English tweets. These tweets were posted on Twitter between August 30 and September 10. For some words and phrases, it took longer to collect the tweets than for others. I made sure that the hundred tweets for each keyword did not contain a phrase that was also one of the search terms. For example, the hundred tweets with *such* did not contain instances of *such as*.

3.2.2. Detecting verbal irony

I manually coded the 5,200 tweets as either ironic, non-ironic, or unclear.[2] For most tweets, deciding whether the keyword or phrase was ironic or not was easy, as for most tweets I could immediately see whether it was ironic or not. An example of such an obviously ironic tweet is the following.

(1) @realDonaldTrump @CNN Wow, very classy. #ImpeachTrumpNow (August 30)

Although writing 'very classy', this Twitter user clearly thinks that Trump is not classy at all, given the hashtag that follows her message. When it was more difficult to decide whether the tweet was meant ironically or not, I applied the Verbal Irony Procedure (Burgers, Van Mulken & Schellens 2011) to decide whether the keyword or phrase was ironic or not. In Figure 3.1, the procedure is displayed step by step.

[2] Usually, more than one person would evaluate the tweets. As I carried out this study by myself, there were no other people available to help me with evaluating the corpus data. If any further research is carried out on this topic, more people should be involved when corpus data are analyzed.

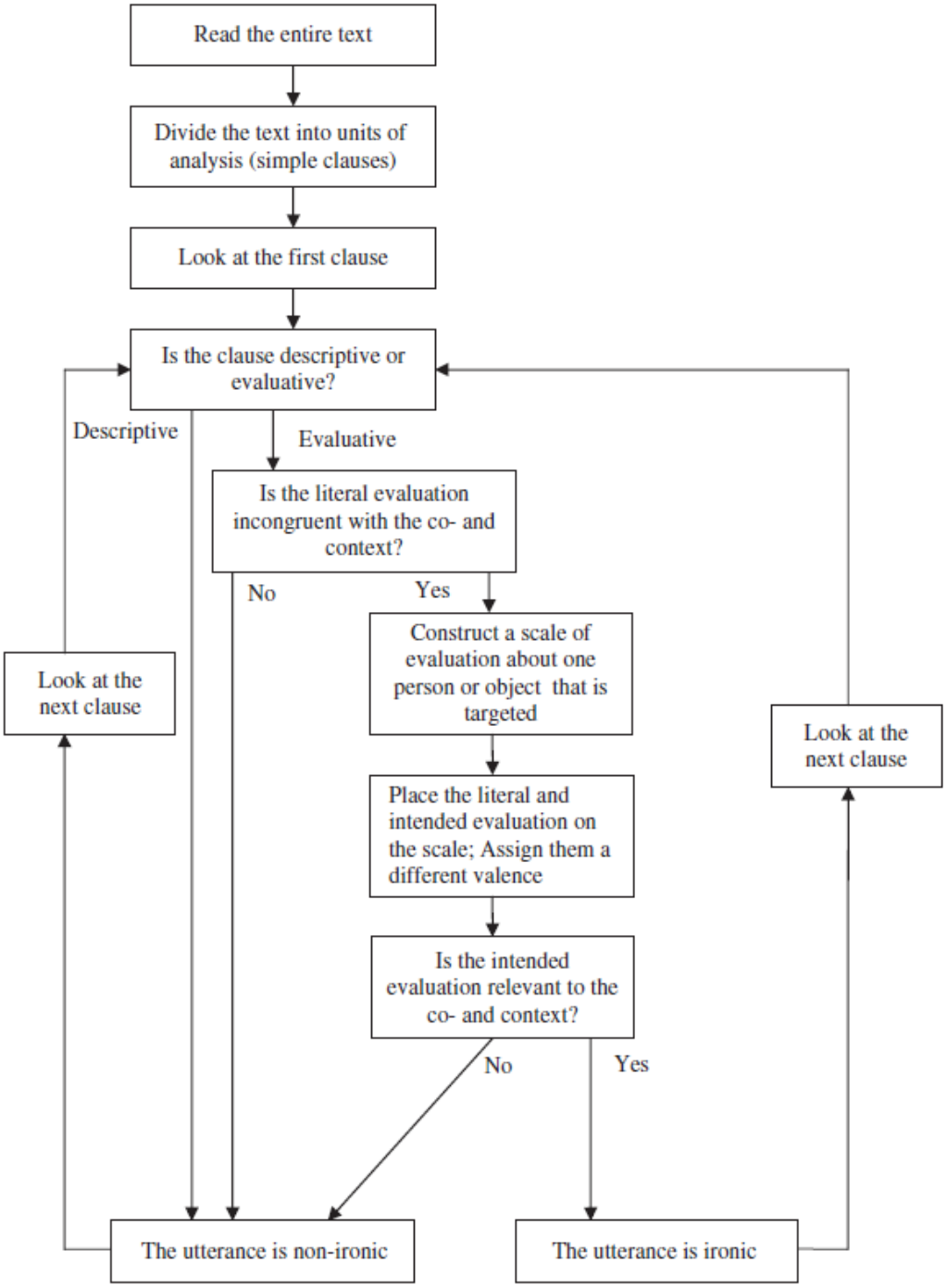

Figure 3.3 Verbal Irony Procedure (Burgers, Van Mulken & Schellens 2011: 195)

One important step to decide whether an utterance is ironic or not is including the co-text and context in the analysis, hence the question in step 5 of the figure above: 'Is the literal evaluation incongruent with the co-text and context?' The co-text is the surrounding text, in my case other words or emoticons in the same tweet. If including the co-text does not lead to a sufficient answer, the context has to be included as well. In the case of tweets, the context includes preceding and following tweets in a string of tweets belonging together, images, or links to, for example, news websites or YouTube movies. An example of how I applied the procedure is the following example containing the phrase *yeah right*.

(2) The first tweet in a string of tweets is a link to a news article on SBS news (an Australian news broadcaster) with the title 'Was sexism behind penalties given to Serena Williams at US Open finals?' (September 9)

Reply #1: @user Sexism? Was she playing against a man? (September 9)[3]

Reply #2: @user @user That was my initial reaction too. It is something along the lines of 'A man wouldn't have gotten this behavior called against them,' but we would need to find a man acting the way that Serena was, and with the same umpire in a match with the same setup. (September 9)

Reply #3: @user @user yeah right... (The tweet is accompanied by an image of the tennis player John McEnroe having an emotional outburst on the tennis court.) (September 10)

For deciding whether the last tweet (reply #3) should be interpreted ironically or not, I made use of the context in which this tweet was posted. The tweet is part of a string of tweets commenting on the event that Serena Williams was given a penalty for emotionally charged behavior on the tennis court, which she thought to be an act of sexism. According to her, men showing similar behavior would not get the same penalty as she got. The first and third reply come from the same Twitter user, who questions whether this was really an act of sexism. The second reply, by another Twitter user, comments on it along the same lines. The final tweet comments on the alleged sexism by saying *yeah right…* Not only the three dots at the end of the tweet make clear that this message is meant ironically, but it is especially the image of John McEnroe that turns this comment into an ironic expression.[4] The image of John McEnroe showing his emotional behavior ridicules Serena Williams' behavior on the tennis court, and accompanying such a picture with the expression *yeah right…* is a fairly clear indication that this Twitter user did not consider the penalties Serena Williams got as an act of sexism and that the tweet was meant ironically. This ironic utterance is concluding the conversation and is referring back to the first tweet (the post of the newspaper article). In most doubtful cases, applying the VIP was sufficient to decide whether the keyword and phrase was meant ironically or not. Tweets that still remained unclear were marked as such. The outcomes of the analysis are presented in Section 4.2.

[3] For the sake of clarity, I indicate account names as @user. Only names that are of any relevance for the interpretation of the tweet remain unchanged.

[4] See https://twitter.com/1984News_/status/1039065741687894016 for a link to the initial newspaper article and the tweets commenting on it (including the image of John McEnroe).

4. Results

4.1. Keywords

For compiling an irony corpus, I needed search terms – words and phrases – that are quite often used ironically, and that may even be cases of default ironic constructions. I therefore searched for words that were key in a corpus containing tweets with the hashtags *#irony*, *#not*, and *#sarcasm* in comparison to two large reference corpora, containing either American English or British English texts, and to a Twitter reference corpus, containing 15,000 tweets which were randomly selected. The results of these analyses are presented in the following sub sections.

4.1.1. A comparison with BNC and OANC

I compared each of the three ironic sub corpora (2,000 tweets containing either *#not*, *#irony*, or *#sarcasm*) to BNC and OANC. I made separate frequency lists for each sub corpus and compared those to the frequency lists of BNC and OANC. By comparing the frequency lists of the three ironic sub corpora to the reference corpora, the words that occur significantly more often in the three sub corpora with ironic tweets are detected. The words that came out as key are presented in Tables 4.1, 4.2, and 4.3, after they were filtered (see Table 3.1 in Section 3.1.1 for the labels used for filtering). Each table presents the results of the comparison between one sub corpus and BNC (left column) and OANC (right column) respectively.

BNC		**OANC**	
accusing	*kinda*	*accusing*	*love*
amwriting	*literally*	*advert*	*mansplaining*
anti	*lmao*	*amwriting*	*me*
ass	*lol*	*bot*	*my*
bio	*love*	*bro*	*pic*
bot	*mansplaining*	*calling*	*plastic*
bro	*media*	*complain*	*ppl*
calling	*my*	*complaining*	*racist*
complain	*news*	*crypto*	*realise*
complaining	*people*	*facist*	*same*
cops	*pic*	*fake*	*says*
crypto	*plastic*	*fakenews*	*shit*
dude	*posted*	*fascist*	*slagging*
email	*ppl*	*funny*	*sleep*
facist	*quote*	*gmb*	*snowflake*
fake	*racist*	*guy*	*snowflakes*
fakenews	*says*	*gym*	*socialism*
fan	*shit*	*ha*	*someone*
fascist	*snowflake*	*haha*	*song*
favorite	*someone*	*hahaha*	*spell*
flag	*spell*	*hate*	*stop*
funny	*stop*	*hilarious*	*sweet*
guess	*sucks*	*hmmm*	*talking*
guy	*sweet*	*idiot*	*telling*
guys	*talking*	*illegals*	*trying*
gym	*telling*	*ironic*	*vegan*
haha	*today*	*ironically*	*wait*
hahaha	*traveling*	*kinda*	*watching*
hate	*trending*	*literally*	*wtf*
hey	*trying*	*lmao*	*yet*
hilarious	*u*	*lol*	*your*
hmmm	*vegan*		

humor	*wait*	
idiot	*watching*	
illegals	*website*	
immigrants	*wow*	
impeach	*wtf*	
internet	*y'all*	
ironic	*yet*	
ironically		

Table 4.1 Keywords in the sub corpus with #irony

BNC		**OANC**	
adulting	*loving*	*adulting*	*meh*
allcaps	*maybe*	*allcaps*	*missed*
amwriting	*meh*	*amwriting*	*mondaymotivation*
ass	*mom*	*awesome*	*morning*
awesome	*mondaymotivation*	*awwww*	*my*
awwww	*my*	*bet*	*nice*
baseball	*nice*	*classy*	*omg*
bet	*oh*	*cool*	*ppl*
classy	*omg*	*count*	*proud*
color	*ppl*	*crying*	*sad*
comcast	*prepping*	*customer*	*same*
cool	*proud*	*damn*	*scared*
customer	*real*	*day*	*shit*
cute	*really*	*douche*	*shocked*
day	*sad*	*emoji*	*shocker*
douche	*scared*	*excited*	*shocking*
email	*shesaidyes*	*fans*	*sooo*
emoji	*shit*	*feel*	*soooo*
excited	*shocked*	*football*	*sooooo*
fans	*shocker*	*fucking*	*sorry*
favorite	*shocking*	*fun*	*stablegenius*
feel	*so*	*funny*	*super*
fun	*sooo*	*game*	*sure*
funny	*soooo*	*getonthebandwagon*	*surprise*
game	*sooooo*	*glad*	*thank*
getonthebandwagon	*sorry*	*good*	*thanks*
glad	*stablegenius*	*great*	*thx*
good	*super*	*guys*	*today*
gotta	*sure*	*ha*	*tomorrow*
great	*surprise*	*haha*	*tonight*
guess	*suv*	*hahaha*	*totally*
guy	*thank*	*hey*	*wait*
guys	*thanks*	*interiordetailing*	*waking*
ha	*thx*	*legit*	*watch*
haha	*today*	*lmao*	*watching*
hahaha	*tonight*	*lol*	*winner*
happy	*totally*	*looks*	*winning*
hey	*u*	*love*	*wow*
hilarious	*wait*	*lovely*	*ya*
interiordetailing	*waking*	*loving*	*yay*
kids	*watch*	*man*	*yea*
legit	*watching*	*me*	*your*
lmao	*wow*		
lol	*ya*		

looks	*yay*	
love	*yea*	

Table 4.2 Keywords in the sub corpus with #not

BNC		**OANC**	
amazing	*math*	*awesome*	*lovely*
awesome	*msm*	*bullpen*	*msm*
basketball	*nice*	*champions*	*need*
bullpen	*non*	*classy*	*ok*
cant	*nope*	*coming*	*omg*
classy	*oh*	*cuz*	*oops*
color	*ok*	*damn*	*phew*
cuz	*omg*	*dare*	*politico*
damn	*oops*	*duh*	*punny*
dare	*phew*	*ever*	*racist*
duh	*politico*	*everyone*	*same*
emails	*punny*	*excited*	*sarcasmicsarcastic*
ever	*racist*	*fake*	*shame*
everyone	*really*	*fakenews*	*shocked*
excited	*sarcasmicsarcastic*	*fine*	*shocker*
fake	*shame*	*forgot*	*shocking*
fakenews	*shocked*	*fuck*	*snark*
fan	*shocker*	*fucking*	*someone*
favorite	*shocking*	*funny*	*sooo*
fuck	*smart*	*game*	*soooo*
funny	*snark*	*glad*	*sure*
game	*so*	*god*	*thank*
glad	*someone*	*great*	*thanks*
good	*sooo*	*guy*	*totally*
great	*soooo*	*guys*	*wait*
guess	*sooooo*	*hey*	*welp*
guy	*sucks*	*humor*	*whoa*
guys	*sure*	*legit*	*why*
hate	*thanks*	*lied*	*wow*
hey	*thing*	*lmao*	*ya*
huh	*today*	*lol*	*yay*
humor	*totally*	*look*	*yea*
internet	*trash*	*looks*	*yes*
just	*wait*	*love*	*yup*
kidding	*welp*		
kkk	*whoa*		
legit	*why*		
lied	*wow*		
lmao	*yay*		
lol	*yea*		
looks	*yup*		
love			

Table 4.3 Keywords in the sub corpus with #sarcasm

As some words might be used in other tweets, without one of the three hashtags, it is interesting to compare the three ironic sub corpora to a reference corpus containing English tweets.

4.1.2. A comparison with a Twitter reference corpus

For the Twitter reference corpus, 15,000 general English tweets were randomly selected. Again, I compared the frequency list of the three ironic sub corpora to the frequency list of the reference corpus. In Table 4.4 below, the keywords that occur significantly more often in the three ironic sub corpora compared to the corpus contain 15,000 English tweets are presented. Again, these are the results after filtering the keywords (see Table 3.1 in Section 3.1.1 again for the labels used for filtering).

Hashtag	**Twitter reference corpus**			
#irony	*complain*	*oh*	*spell*	*while*
	funny	*plastic*	*themselves*	*yet*
	ironic	*says*		
#not	*classy*	*oh*	*shocker*	*well*
	customer[1]	*seems*	*shocking*	*wow*
	fun	*service*	*surprise*	*yay*
	great	*shocked*	*thanks*	*yeah*
	nice			
#sarcasm	*glad*	*shocker*	*those*	*wow*
	humor[2]	*such*	*totally*	*yay*
	oh	*sure*	*well*	*yeah*
	shocked			

Table 4.4 Keywords in the ironic sub corpora compared to the Twitter reference corpus

The results of the KeyWords Analysis comparing the three ironic sub corpora to the reference corpus containing 15,000 English tweets (see Table 4.4) indicate that most keywords found in the comparisons with the BNC and OANC are more likely indicators of Twitter language in general than of ironic language use in particular. The comparison between the three ironic sub corpora and the reference corpus shows that there are in fact a few words that appear significantly more often in tweets containing an ironic hashtag than in general English tweets. I used these words to compile an irony corpus. Some of them have an ironic meaning more obviously than others: I assume that words such as *shocking* and *surprise* are more often used in an ironic way than words such as *plastic* and *themselves*. Nevertheless, they are still keywords in the ironic tweets, so I use them as search terms for the compilation of the irony corpus. Moreover, I traced ironic constructions by carrying out a concordance search for each of the three ironic sub corpora with WordSmith Tools. This enabled me to search for words that were often used in combination with the keywords I found. This resulted in a list of 30 single words and 22 phrases, which is presented below in Table 4.5.

Keywords	**Phrases**
classy	
complain	
customer service	
fun	so much fun, super fun
funny	
glad	so glad
great	great idea
ironic	
nice	
oh	oh my, oh no, oh so, oh the irony, oh well

[1] I took the words *customer* and *service* together as one single search term for the irony corpus, as they were used as a compound noun in almost all tweets.

[2] I left out *humor* as keyword in the irony corpus, as this was only used as *#humor* and was never part of the actual tweet.

plastic	
says	
seems	seems like a
shocked	I'm shocked, so shocked
shocker	
shocking	
spell	
such	such a
sure	I'm sure
surprise	what a surprise
thanks	
themselves	
those	all those
totally	
well	really well, well done, well then
while	
wow	wow what
yay	
yeah	oh yeah, yeah right
yet	

Table 4.5 Keywords and phrases in the new corpus

For each search term, I collected one hundred tweets, which formed a corpus of 5,200 tweets in total. I coded each tweet as ironic, non-ironic, or unclear. The results of this analysis are presented in the next section.

4.2. Irony corpus

In Table 4.6 below, the outcomes of the analysis of 5,200 tweets are given. I indicated the number of tweets interpreted ironically, non-ironically, or unclear, as well as in which sub corpus (*#not*, *#irony*, *#sarcasm*) I initially found the keyword.

	Keyword	**Phrase**	**Hashtag**	**Ironic**	**Non-ironic**	**Unclear**
1	classy		#not	15	85	0
2	complain		#irony	1	98	1
3	customer service		#not	0	100	0
4	fun		#not	0	100	0
5		so much fun		1	99	0
6		super fun		1	98	1
7	funny		#irony	4	96	0
8	glad		#sarcasm	0	100	0
9		so glad		0	100	0
10	great		#not	0	99	1
11		great idea		2	97	1
12	ironic		#irony	0	100	0
13	nice		#not	1	99	0
14	oh		#irony, #not, #sarcasm	0	100	0
15		oh my		0	100	0

16		oh no		0	100	0
17		oh so		0	100	0
18		oh the irony		0	100	0
19		oh well		0	100	0
20	plastic		#irony	0	100	0
21	says		#irony	0	100	0
22	seems		#not	0	100	0
23		seems like a		0	100	0
24	shocked		#not, #sarcasm	3	97	0
25		I'm shocked		32	67	1
26		so shocked		2	95	3
27	shocker		#not, #sarcasm	1	97	2
28	shocking		#not	1	99	0
29	spell		#irony	0	100	0
30	such		#sarcasm	0	100	0
31		such a		0	100	0
32	sure		#sarcasm	0	100	0
33		I'm sure		1	99	0
34	surprise		#not	1	99	0
35		what a surprise		68	31	1
36	thanks		#not	0	100	0
37	themselves		#irony	0	100	0
38	those		#sarcasm	0	100	0
39		all those		0	100	0
40	totally		#sarcasm	1	99	0
41	well		#not, #sarcasm	2	96	2
42		really well		0	100	0
43		well done		0	100	0
44		well then		4	95	1
45	while		#irony	0	100	0
46	wow		#not, #sarcasm	0	100	0
47		wow what		0	100	0
48	yay		#not, #sarcasm	2	98	0
49	yeah		#not, #sarcasm	3	97	0
50		oh yeah		1	98	1
51		yeah right		81	9	10
52	yet		#irony	0	100	0
	Total			**227**	**4948**	**25**

Table 4.6 Ironic and non-ironic tweets in the irony corpus

As the results in Table 4.6 show, most keywords and phrases, at least in this corpus, are never or almost never used ironically. There are only one keyword and three phrases that stand out as particularly ironic, namely *classy* (#1), *I'm shocked* (#25), *what a surprise* (#35), and *yeah right* (#51). The four tweets below illustrate the ironic use for each of them.

(1) very classy. i have had a headache for 6 hours and barely rested (August 30)

(2) @user I'm shocked to hear her say this.... SHOCKED!! (September 7)

(3) @zomatocare @ZomatoIN Wow what a surprise I didn't get a call...it shows how you people are working #Shame_on_you_Zomato (August 31)[3]

(4) @user @user Nobody is tougher on Russia than trump 😂😂😂yeah right... 😂😂#PutinsPutos (August 31)

The results show that only four out of 52 keywords and phrases are used ironically in at least fifteen percent of the cases. The other 48 keywords and phrases are only used ironically in no or only a few cases. Furthermore, some words or phrases might come across as ironic, although the analysis proves they are not. This especially counts for *ironic* and *oh the irony*. Although they refer to some ironic situation or event or another, they are merely descriptive. Ironic utterances are always evaluative, so *ironic* and *oh the irony* are not ironic in that sense.

The most interesting finding is the fact that the three ironic phrases, *I'm shocked*, *what a surprise*, and *yeah right*, are used ironically far more often that the single keywords in the phrases (*shocked*, *surprise*, and *yeah*). By using the Fisher exact test, I determined that the difference between the results of the phrase as compared to the corresponding keyword is significant by a p-value of 0.05 ($p < 0.00001$).[4] This means that the combination of the two words could be considered a construction, as the meaning of the whole, at least the ironic sense of it, is not similar to the meaning of the individual words in the phrase, as these are used ironically far less often than the phrases. *Classy* cannot be compared to a corresponding keyword as it is the keyword itself, but comparing it to other keywords which were not used ironically as often as *classy* results in a significant result.

Another interesting finding is the use of hashtags relating to these four ironic constructions. *Classy* and *what a surprise* were used in the original tweets with *#not* and *I'm shocked* and *yeah right* in tweets with both *#not* and *#sarcasm*. These findings correspond to those of Sulis et al. (2016: 136). They found that tweets with *#not* and *#sarcasm* overlap with respect to the use of emotion words, while tweets with *#irony* show a different distribution of words indicating anger, anticipation, disgust, fear, joy, sadness, surprise, and trust. By using an ironic expression, speakers or writers express an emotive state and, in this regard, it is interesting to see that the four ironic constructions originally occurred in tweets with hashtags that overlap in the use of these emotion words.

The question whether the four ironic constructions could be considered default ironic constructions will be addressed in Section 5.1. In the same chapter, I evaluate the method used to find these ironic constructions (Section 5.2) as well as the issue of conventionalization of the ironic meaning in these ironic constructions (Section 5.3).

[3] Zomato is a website on which restaurants all over the world can be reviewed.

[4] Comparing the nineteen other phrases to their corresponding keyword does not lead to significant results. The three phrases that are used significantly more ironic than their corresponding keywords remain significant after applying the Bonferroni correction ($\alpha = 0.05/22 \approx 0.00227$). The Bonferroni correction is a method used to correct for the problem of multiple comparisons.

5. Discussion

5.1. Default ironic constructions?

For this study, I analyzed 52 different word and phrases to find out whether these have a default ironic interpretation. The analysis revealed that most did not even come close to having such an ironic interpretation by default. In fact, 48 of these 52 words and phrases were interpreted ironically in zero to four percent of the cases. These would never be considered default ironic constructions. The other four were used ironically in at least fifteen percent of the cases. What does this tell us about default ironic interpretation in actual language use? First of all, considering that the corpus contained only tweets, we have to bear in mind that all conclusions can only be applied to language use on Twitter. Outcomes of an analysis with another corpus, whether that contains other text genres or even other forms of social media, could be completely different and thus lead to a different interpretation.

Nevertheless, the analysis of these ironic constructions on Twitter shows that most words and phrases are used ironically once in a while, but not very frequently. The four words and phrases that were used ironically rather frequently were still not used ironically in all cases. For instance, *classy* was used ironically in fifteen percent of the cases. That is more frequent than for most other words and phrases, but I would not go on to say that *classy* comes close to what Giora and others define as a default ironic construction. Moreover, *I'm shocked* was used ironically more than twice as much, 32 percent to be precisely, but still not even in half of the cases. There were just two phrases that were used ironically in more than fifty percent of the cases: *what a surprise* (68 percent) and *yeah right* (81 percent). Although these were used ironically quite often, there is a difference between the ironic and the non-ironic tweets in which these phrases occur. The ironic ones are quite frequently accompanied by emoticons or images that direct the interpretation towards an ironic reading. A frequently used emoticon is the one portraying a face that is crying and laughing at the same time (see example (4) in Section 4.2 on page 28). Such an emoticon immediately turns the tweet into an ironic tweet and makes it rather easy to interpret it correctly. At the same time, non-ironic tweets are obviously non-ironic as well, given the example of the construction *what a surprise* below.

(1) @user @user Omfg awe he's so cute!!!  thank you so much for this, what a surprise, I didn't even ask for it  I'm so happy!!! (September 7)

Nothing in this tweet does even suggest that we should interpret it ironically. The Twitter user is commenting on a short movie that someone else sent to her in which he says hallo to her in a very friendly way. The absence of a context with which this message would be incongruent, and the absence of ironic emoticons or other indicators of irony make clear that the Twitter user is really surprised. We then cannot say that such a construction, even though it is used ironically in more than half of the cases in my corpus, is an example of a default ironic construction. There is always an alternative, literal, interpretation possible, as in example (1). We could even question whether default ironic constructions, if they exist, are actually ironic, as the intended meaning would be the only meaning that springs to the hearer's mind. Is there still a literal evaluation available if the construction is always interpreted ironically? And what if this literal evaluation *is* absent? Do such ironic construction still meet that one important criterion of an opposition between a literal and intended evaluation? Are these then still ironic constructions? For an expression to be truly ironic, this tension between a literal and ironic reading should be present.

Moreover, default ironic constructions, as Giora, Givoni, and Fein (2015: 295) define them, should be interpreted ironically when presented in isolation or in a neutral non-spoken discourse. But what is the case with actual language use, whether it occurs on Twitter or elsewhere? Indeed, it is never presented in isolation. Language use is communicative: people interact via spoken or written discourse. A tweet always reacts to something or the other, which may be another tweet, a news event, an image, etc. The contexts in which the ironic constructions were used in my corpus were also never completely

neutral. Most Twitter users, especially by using emotive language of which these constructions are examples, express their opinions, which range from sheer happiness to bitter anger. Finding ironic constructions in isolation or in neutral contexts is therefore extremely difficult, at least when using a corpus with emotionally charged language as Twitter is.

I did not find constructions that met all criteria Giora and others formulate for a construction to have a default ironic interpretation, but I also did not find the constructions Giora and others categorized as such. The three ironic sub corpora I used for the preliminary analysis did not contain constructions as X *is not his/her forte*, X *is not what s/he excels at*, and X *s/he is not*, or they did not come out as keywords in the KeyWords Analysis. Taking a closer look at these constructions, it appears that they would probably not co-occur with the three hashtags I used to compile the three ironic sub corpora.

(2) # Punctuality is not his forte #irony

(3) # Straightforwardness is not what she excels at #not

(4) # Organized she is not #sarcasm

These three examples combining the default ironic constructions with the three hashtags are all pragmatically odd. This might have to do with the following: we already saw that the examples Giora and others give are understatements rather than ironic statements in the strictest sense of the word. The literal and ironic evaluation of these constructions are strictly speaking not each other's opposites. It is then odd to mention explicitly that the utterance is ironic by using *#irony, #not*, or *#sarcasm*, as the Twitter user would explicitly draw attention to the fact that there is a certain opposition going on, which is, strictly speaking, not present. Another explanation is that these three constructions are immediately recognized as ironic constructions, which makes the use of an explicit irony marker (the hashtag) redundant.

There were more ironic constructions that I discussed in Section 2.3, but these did not occur in the corpus. These were the *sarcastic much?* construction (Hilpert & Bourgeois in prep.) and the split interrogative (Michaelis & Feng 2015). A shared characteristic of these constructions is their productivity: both constructions could be used with a number of different words, such as *angry much?*, *stereotype much?*, *What is this, Spain?*, and *What are you, a senior?* Due to the variables in these constructions, the constructions occur in many different forms, which make them more difficult to find in a corpus by searching for keywords. Similarly, the default ironic constructions of Giora and others are productive, whereas the four constructions I found (*classy*, *I'm shocked*, *what a surprise*, and *yeah right*) all come in just one form. This brings me to the question whether my methodology was sufficient to attain the goal I had in mind. I turn to this question in the next section.

5.2. Reviewing the methodology

One of the disadvantages of the method I applied was the fact that the constructions I found were all fully fixed patterns. Other ironic constructions with one or more variables, such as the *sarcastic much?* construction and the split interrogative, appear in different forms; the options are in fact manifold. Finding these constructions is more difficult, as the same words could occur in other tweets as well. If the word *much* is just a frequently used word on Twitter, it would not come out as key when a corpus with ironic tweets is compared to a reference corpus containing general tweets. Finding examples of the *sarcastic much?* construction is then almost impossible. This might explain why I did not find the constructions Giora et al. (2015), Michaelis and Feng (2015), and Hilpert and Bourgeois (in prep.) investigated. Even more remarkable is the fact that I also did not find the fully fixed patterns Burgers and Van Steen (2017: 100) mark as default ironic constructions. These would be easier to find by applying a KeyWords Analysis, because they always take on the same form. The constructions *wise guy*, *smart alec*, *God's gift*, *tell me about it*, and *a likely story* were all not part of the results of the KeyWords Analysis, which was something I did expect to happen, at least for some of these five

constructions. Again, these might not combine with the hashtags *#irony*, *#not*, and *#sarcasm* that easily, like X *is not his/her forte*. Nonetheless, the three sub corpora and the reference corpus containing general tweets were all fairly small compared to other studies using Twitter for corpus analysis (among others Reyes, Rosso & Buscaldi 2012; Sulis et al. 2016). If my corpora were larger, it might have included more tweets that potentially contained ironic constructions.

Only relying on a corpus containing tweets with one of the three ironic hashtags is a disadvantage, but was at the same time the only way to compile a corpus containing ironic tweets based on the Twitter user's own judgment. I wanted to prevent my own evaluation of the tweet from interfering with the selection of the tweets for the preliminary analysis. Although the disadvantage of filtering out constructions that do not go together with *#irony*, *#not*, or *#sarcasm* is a shortcoming of my approach, the method I adopted was the best way to tackle the needle-in-a-haystack problem, given the limited time span of this study. I did not use the three ironic sub corpora for the actual analysis of the ironic constructions, but I merely used them to compile a new corpus with general tweets, which was not biased towards ironic language use in any case. Even though there are some shortcomings to the method I applied, the analysis did have some interesting outcomes. I did find four constructions that are more often used ironically than expected. These four constructions – *classy*, *I'm shocked*, *what a surprise*, and *yeah right* – were, as far as I know, not discussed in any other studies on ironic constructions. Exploring the ironic interpretation of these four constructions leads to valuable insights as to how the conventionalization of the ironic meaning in these constructions comes about and how this process relates to the notion of argumentative evaluation. These issues are examined in the next section.

5.3. Conventionalization of ironic meaning

In Section 2.3, we saw that a speaker tries to orient the interpretation of each utterance towards either a positive or a negative conclusion (Verhagen 2000; 2008). Ironic language use is peculiar, since its argumentative evaluation at first sight seems to be opposite to what the utterance really means. Cases of ironic praise, where the literal evaluation is positive, have a negative argumentative evaluation because of the intended evaluation which is negative. The four constructions that were more often used ironically than the other 48 words and phrases under investigation all have a negative argumentative evaluation, which is illustrated below with examples (1), (2), (3), and (4) from Section 4.2 on page 27 and 28 (repeated here as (5), (6), (7), and (8)).

(5) very classy. i have had a headache for 6 hours and barely rested (August 30)

> Argumentative evaluation: Having a headache is not classy, but very unpleasant instead.

(6) @user I'm shocked to hear her say this.... SHOCKED!! (September 7)

> Argumentative evaluation: I'm not shocked at all to hear her say that.

(7) @zomatocare @ZomatoIN Wow what a surprise I didn't get a call...it shows how you people are working #Shame_on_you_Zomato (August 31)

> Argumentative evaluation: It comes as no surprise that Zomato did not give a call.

(8) @user @user Nobody is tougher on Russia than trump 😂😂😂yeah right... 😂😂#PutinsPutos (August 31)

Argumentative evaluation: Trump is not tough at all on Russia.

As these examples show, the argumentative evaluation of each of these four constructions is negative. Although they seem positive at first sight, there is an opposing evaluation, the ironic one, which is negative. Although the percentages of ironic instances of these four constructions were higher than for all other words and phrases that were analyzed, there were still cases in which these constructions were used literally. The following four tweets are examples of the literal use of the four constructions.

(9) My new copy of The Stand arrived complete with classy bookmark... (August 30)

Argumentative evaluation: The bookmark that comes with the new copy of *The Stand* is classy.

(10) @user I'm shocked and sad to hear that it has come that far by now. ☹ (August 31)

Argumentative evaluation: It is shocking that some passport applicants are being jailed in immigration detention centers.

(11) @user Ooooh I didn't know ! Waouh what a surprise ! :o (September 7)

Argumentative evaluation: It is a surprise to me.

(12) @user @user yeah right, he's so simple, yet proffesional. and all the time I wondered how considered he is! read all the comments,even apologised for not understanding English (September 9)

Argumentative evaluation: I agree with what you say.

Tweet (9) is accompanied by a picture of the bookmark that the Twitter users considers classy. The adjective *classy* directly comments on the bookmark, as it is placed before the noun, as part of the noun phrase. In most non-ironic tweets, *classy* is used as such. This usage differs from the ironic use of *classy*, as can be seen in example (5). Here, and most other ironic tweets, *classy* comments on the tweet as a whole, and not just on one noun. When *classy* is used on its own and not as part of a noun phrase, it tends be interpreted ironically more often. This isolated use of *classy* in ironic utterance could thus be considered an idiosyncratic property of *classy* as an ironic construction, which distinguishes it from the non-ironic use of *classy*. The results for the other three constructions do not show such idiosyncratic properties, and are used similarly in ironic and non-ironic contexts. Tweet (10) comments on a post of an article from Washington Post reporting on the event that some passport applicants living in South Texas are being jailed in immigration detention centers and entered into deportation proceedings, even though they have official birth certificates from the United States. The Twitter user is actually shocked that this is happening, so the argumentative evaluation of this utterance is positive. The same counts for the other three tweets, which all have a positive argumentative evaluation, saying that an event or situation is really classy, surprising, or right.

The four constructions can all be used literally and ironically, so both meanings are conventional to some extent. Going back to the process of conventionalization, discussed in Section 2.3, and more

specifically to Figure 2.2, here repeated as Figure 5.1, we can see how the conventional ironic meaning of the constructions above comes about.

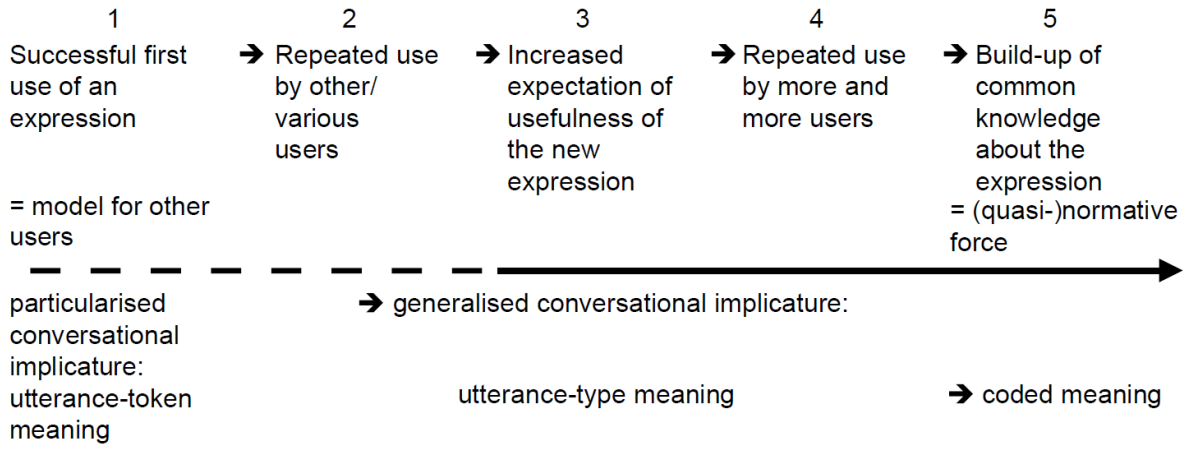

Figure 5.4 Conventionalization (Claridge 2011: 178)

The four constructions that stood out in the analysis were not equally used ironically, and would not have reached the same stages in the conventionalization process as figured above. The least ironic one of the four construction was *classy* (15 percent) and the most ironic one was *yeah right* (81 percent). Based on these results, the ironic interpretation of the four constructions could be placed on a scale, ranging from least conventionalized to most conventionalized. Such a scale would look like Figure 5.2 below.

classy (15%)	*I'm shocked* (32%)	*what a surprise* (68%)	*yeah right* (81%)

least conventionalized — most conventionalized

Figure 5.5 Conventionalization of the four ironic constructions

Comparing Figure 5.2 to Figure 5.1, the least conventionalized ironic meaning, of *classy*, would have approximately reached stage 2 of the conventionalization process, whereas the most conventionalized ironic meaning, of *yeah right*, might have reached stage 4, or even stage 5. The ironic use of *yeah right*, especially when the speaker utters it with frowned eyebrows and a special ironic intonation pattern (a written alternative would be the emoticon of a face that is crying and laughing at the same time), may already have become part of the coded meaning of the phrase.

If the coded meaning of a construction contains ironic properties, the meaning is no longer merely objective, but it underwent subjectification, which means that the use of the construction has been expanded to communicative contexts in which it conveys an ironic or critical attitude (Verhagen 2000: 197, 198; Hilpert & Bourgeois in prep.). The function of ironic constructions is no longer informing the hearer about a state of events, but their function is reduced to expressing a certain evaluation, and this evaluative function has become conventionally attached to the construction. The process of the formation of a new form-meaning pair is called constructionalization (Traugott & Trousdale 2013:22): the ironic meaning has gradually become a new coded meaning (and went through the different stages of conventionalization, as formulated by Claridge 2011), which is no longer compositional. The four constructions, *classy*, *I'm shocked*, *what a surprise*, and *yeah right*, may all have a similar coded ironic meaning, especially used in a context biasing towards the ironic interpretation, but these ironic meanings are not equally salient, in the words of Giora (2003). The ironic evaluation of *yeah right* is more prominent in the mental lexicon of a language user, and thus scores higher on salience then the other three constructions. We must bear in mind that these hypotheses are based on an analysis of a fairly small corpus, which consists of only one, very specific, text genre. It is rather difficult to apply this analysis to ironic constructions used in other, written or spoken, discourse.

Nonetheless, the analysis of ironic constructions in a corpus containing English tweets revealed that finding ironic language use is challenging, but that, at the same time, the results found offer interesting insights in how people interpret such utterances. Linking argumentative evaluation to conventionalization, we can see that the ironic evaluation of utterances, such as *yeah right* and *what a surprise*, have gradually become conventionally attached to the constructions. Conventionalization explains why people interpret the ironic, non-compositional, interpretation of ironic constructions correctly and without much effort.

6. Conclusion

The aim of this study was twofold: I explored the notion of default ironic constructions from two different perspectives, i.e. a methodological and a theoretical perspective, to get a better understanding of the practical problems that arise when one tries to detect ironic constructions in a corpus and how these problems should be solved, and to get a better understanding of the conventional ironic meaning that is attached to these constructions. The research question that catches these two issues was the following: how can default ironic constructions in a Twitter corpus be detected and how does a constructionist approach contribute to a better understanding of those constructions?

The answer to the first part was elaborately discussed in Chapter 3, in which I explained how I collected the corpus data. It was a deliberate choice to select tweets with one of the three hashtags *#not*, *#irony*, and *#sarcasm*. By selecting 2,000 tweets per hashtags, I was able to confine my search for ironic utterances on Twitter, as this corpus as a whole is massive and, besides language choice, does not allow for many search restrictions. Another advantage of this approach was the fact the Twitter users themselves decide that their utterances were meant ironically rather than that I had to do this. This approach differs from the one Giora and others apply, who merely rely on their own constructed examples (e.g. X *is not his/her forte*) and do not use actual language data for their experimental research. Using actual language data has proven successful, as I encountered four new ironic constructions that were used ironically significantly more often than the other words and phrases that were included in the analysis. The corpus contains several tweets in which the constructions *classy*, *I'm shocked*, *what a surprise*, and *yeah right* are interpreted ironically. However, the corpus did not contain the ironic constructions that were studied by others (Giora et al. 2015; Michaelis & Feng 2015; Burgers & Steen 2017; Hilpert & Bourgeois in prep.). In the previous chapter, I discussed that this might have to do with the first selection of tweets with one of the three hashtags. The constructions that were studied by others do not go together that well with one of the three hashtags and were, as a result, not included in the corpus. Another explanation is the fact that most of these constructions are productive and appear in different forms, which make them stand out less in a corpus, especially in comparison to a reference corpus containing tweets in which the same words frequently occur.

Exploring the ironic meaning of the four constructions I found in the analysis from a constructionist point of view has been fruitful, since their ironic meaning can be better understood as these constructions are considered as one unit to which the ironic meaning is assigned. The gradual conventionalization of this ironic interpretation, attached to a specific construction, explains why certain constructions are used more frequently with an ironic intent than others: those constructions have progressed further in the conventionalization process and the ironic meaning has become more closely attached to the construction (cf. Claridge 2011). The question whether constructions could even become ironic by default is more complicated to answer. According to the widely shared definition of verbal irony (an utterance that contains an opposition between a literal and an intended, ironic, evaluation), constructions that are ironic, and ironic only, would no longer comprise such an opposition of a literal and ironic interpretation, and are then, strictly speaking, no longer cases of verbal irony. This issue remains open to debate, but the outcomes of my analysis suggest that the ironic meaning of a construction can become conventionally attached to the ironic construction whereas the tension between the literal and ironic evaluation is still present. This view is in line with the analyses of other ironic constructions, such as the split interrogative by Michaelis and Feng (2015) and the *sarcastic much?* construction by Hilpert and Bourgeois (in prep.).

A conclusive answer to the research question is difficult to provide, as there is not one best method to collect and analyze corpus data and there is not just one theoretical approach that best explains why people use, process, and interpret ironic utterances correctly. But what has become clear from this study is that doing research on ironic constructions is challenging but fruitful, and that, even though fully understanding verbal irony sometimes seems impossible, there will always be new insights that help solving this seemingly insoluble puzzle.

Bibliography

Anscombre, J. & Ducrot, O. (1989). Argumentativity and informativity. In: M. Meyer (Ed.), *From Metaphysics to Rhetoric*. Dordrecht: Kluwer Academic Publishers, 71-87.

Ariel, M. (2016). Revisiting the typology of pragmatic interpretations. *Intercultural Pragmatics* 13, 1-35.

Burgers, C. & M. van Mulken (2013). Het ironisch spectrum. Een overzicht van onderzoek naar het begrip en de retorische effecten van verbale ironie. *Tijdschrift voor taalbeheersing* 35, 183-202.

Burgers, C., M. van Mulken & P.J. Schellens (2011). Finding irony: An introduction of the Verbal Irony Procedure (VIP). *Metaphor and Symbol* 26, 186-205.

Burgers, C., M. van Mulken & P.J. Schellens (2012). Verbal irony: Differences in usage across written genres. *Journal of Language and Social Psychology* 31, 290-310.

Burgers, C. & G.J. Steen (2017). Introducing a three-dimensional model of verbal irony. Irony in language, in thought, and in communication. In: A. Athanasiadou & H.L. Colston (Eds.), *Irony in Language Use and Communication*. Amsterdam & Philadelphia: John Benjamin Publishing Company, 87-108.

Claridge, C. (2011). *Hyperbole in English. A Corpus-based Study of Exaggeration.* New York: Cambridge University Press. (Studies in English Language).

Fein, O., M. Yeari & R. Giora (2015). On the priority of salience-based interpretations: The case of sarcastic irony. *Intercultural Pragmatics* 12, 1-32.

Gibbs, R.W., G. Bryant & H.L. Colston (2014). Where is the humor in verbal irony? *Humor* 27, 575-595.

Giora, R. (1997). Understanding figurative and literal language: The graded salience hypothesis. *Cognitive Linguistics* 8, 183-206.

Giora, R. (2003). *On Our Mind. Salience, Context, and Figurative Language*. Oxford: Oxford University Press.

Giora, R., A. Drucker & O. Fein (2014). Resonating with default nonsalient interpretations. A corpus-based study of negative sarcasm. *Belgian Journal of Linguistics* 28, 3-18.

Giora, R., A. Drucker, O. Fein & I. Mendelson (2015). Default sarcastic interpretations: On the priority of nonsalient interpretations. *Discourse Processes* 52, 173-200.

Giora, R., S. Givoni & O. Fein (2015). Defaultness reigns: The case of sarcasm. *Metaphor and Symbol* 30, 290-313.

Giora, R., I. Jaffe, I. Becker & O. Fein (2018). Strongly attenuating highly positive concepts. The case of default sarcastic interpretations. *Review of Cognitive Linguistics* 16, 19-47.

Giora, R., E. Livnat, O. Fein, A. Barnea, R. Zeiman & I. Berger (2013). Negation generates nonliteral interpretations by default. *Metaphor and Symbol* 28, 89-115.

Giora, R., D. Meytes, A. Tamir, S. Givoni, V. Heruti & O. Fein (2017). Defaultness shines while affirmation pales. On idioms, sarcasm, and pleasure. In: A. Athanasiadou & H.L. Colston (Eds.), *Irony in Language Use and Communication*. Amsterdam & Philadelphia: John Benjamin Publishing Company, 219-236.

Goldberg, A.E. (1995). *Constructions. A Construction Grammar Approach to Argument Structure.* Chicago & London: The University of Chicago press.

Goldberg, A.E. (2003). Constructions: a new theoretical approach to language. *Trends in Cognitive Sciences* 7, 219-224.

González-Ibáñez, R., S. Muresan & N. Wacholder (2011). Identifying sarcasm in Twitter: A closer look. *Proceedings of the 49th Annual Meeting of the Association for Computational Linguistics*, 581-586.

Grice, H. (1975). Logic and conversation. In: P. Cole & J. Morgan (Eds.), *Syntax and Semantics. Volume 3: Speech Acts*. New York: Academic Press, 41-58.

Grice, H. (1978). Further notes on logic and conversation. In: P. Cole (Ed.), *Pragmatics: Syntax and semantics*, vol. 9. New York: Academic Press, 113-127.

Hilpert, M. (2014). *Construction Grammar and its Application to English.* Edinburgh: Edinburgh University Press. (Edinburgh Textbooks on the English Language – Advanced).

Hilpert, M. & S. Bourgeois (in prep.). Intersubjectification in constructional change: From confrontation to solidarity in the "sarcastic much?" construction.

Kunneman, F., C. Liebrecht, M. van Mulken & A. van den Bosch (2015). Signaling sarcasm: From hyperbole to hashtag. *Information Processing and Management* 51, 500-509.

Liebrecht, C., F. Kunneman & A. van den Bosch (2013). The perfect solution for detecting sarcasm in tweets #not. *Proceedings of the 4th Workshop on Computaional Approaches to Subjectivity, Sentiment and Social Media Analysis*, 29-37.

Michaelis, L.A. & H. Feng (2015). What is this, sarcastic syntax? *Constructions and Frames* 7, 148-180.

Reyes, A., P. Rosso & D. Buscaldi (2012). From humor recognition to irony detection: The figurative language of social media. *Data & Knowledge Engineering* 74, 1-12.

Stefanowitsch, A. & S.Th. Gries (2003). Collostructions: Investigating the interaction between words and constructions. *International Journal of Corpus Linguistics* 8, 209-243.

Stevens, E. (2018). Altijd leuk, zo'n ironische constructie!. *Nederlandse Taalkunde* 23, 371-381.

Sulis, E., D.I. Hernández Farías, P. Rosso, V. Patti, G. Ruffo (2016). Figurative messages and affect on Twitter: Differences between #irony, #sarcasm and #not. *Knowledge-Based Systems* 108, 132-143.

Tobin, V. & M. Israel (2012). Irony as a viewpoint phenomenon. In: E. Sweetser & B. Dancygier (Eds.), *Viewpoint in language: A multimodal perspective.* Cambridge: Cambridge University Press, 25-46.

Traugott, E.C. & G. Trousdale (2013). *Constructionalization and Constructional Changes.* Oxford: Oxford University Press.

Verhagen, A. (2000). "The girl that promised to become something": An exploration into diachronic subjectification in Dutch. In: T.F. Shannon & J.P. Snapper (Eds.), *The Berkeley Conference on Dutch Linguistics 1997: the Dutch Language at the Millennium*. Lanham, MD: University Press of America, 197-208.

Verhagen, A. (2005). *Constructions of Intersubjectivity. Discourse, Syntax, and Cognition*. Oxford: Oxford University Press.

Verhagen, A. (2008). Intersubjectivity and the architecture of the language system. In: J. Zlatev, T.P. Racine, C. Sinha & E. Itkonen (Eds.), *The shared mind: Perspectives on intersubjectivity*. Amsterdam & Philadelphia: John Benjamin Publishing Company, 307-331.

Walles, I. (2016). *Default ironic constructions in Dutch.* Masterscriptie Universiteit Leiden.

Whalen, J.M., P.M. Pexman, A.J. Gill & S. Nowson (2013). Verbal irony use in personal blogs. *Behaviour & Information Technology* 32, 560-569.

Wilson, D. & D. Sperber (1992). On verbal irony. *Lingua* 87, 53-76.