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HIP: A Method for Linguistic Hyperbole Identification in Discourse

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ABSTRACT

This article introduces the Hyperbole Identification Procedure (HIP), a first systematic method for identifying linguistic hyperbole in discourse. We start by comparing existing definitions of linguistic hyperbole. Based on the commonalities shared by these definitions, we provide our operational definition of hyperbole as “an expression that is more extreme than justified given its ontological referent.” The next section argues why it is useful to identify hyperbole, as with metaphor in Metaphor Identification Procedure Vrije Universiteit (MIPVU), at the level of lexical units, and subsequently introduces the steps of HIP. We follow up with two sample analyses of HIP in practice. First, we show how to unitize and analyze one complete sample sentence. Second, we present sample analyses of a number of selected cases. Then we present data showing that HIP can be reliably applied to a sample corpus of Dutch news texts. We end with discussing applications and implications of using HIP in corpus research.

In the press conference before the Champions League soccer game between Paris Saint Germain (PSG) and Real Madrid in October 2015, PSG coach Laurent Blanc suggested that the power of Real Madrid’s game was found in the fact that they could counter-attack very quickly, because

(1) “they [the Real Madrid players] go at 3,000 kilometers an hour” (Bull, 2015).

Example (1) contains a clear example of hyperbole, because 3,000 kilometers an hour is faster than the speed of sound, making this a speed that is simply unattainable by humans, even soccer players as skilled as those playing at Real Madrid.

Hyperbole is a trope that, to date, has received less empirical attention in comparison to tropes like metaphor and irony. Nevertheless, the definition and operationalization of hyperbole has recently been the subject of empirical debate. Some scholars propose that hyperbole can best be understood as a sub-type of verbal irony, together with other tropes like rhetorical questions and understatement (e.g., Averbeck, 2015; Gibbs, 2000). Under this perspective, then, a hyperbolic utterance like (1) always has an ironic tone, because the propositional meaning is meant nonseriously. This first perspective thus takes a broad, encompassing view of irony seeing hyperbole as a subtype of irony nested within a higher category of irony. In contrast, other scholars posit that hyperboles *can* be used ironically (e.g., as a marker of irony), but that this is not necessarily the case, which implies that *some* hyperboles in discourse are used ironically, but not all (e.g., Carston & Wearing, 2015; Wilson, 2013). The second perspective thus takes a more narrow definition of irony, seeing irony as a rhetorical trope like hyperbole and metaphor.

While our theoretical position is in line with the second perspective, we believe that the best way to deal with such theoretical debates is by translating them into empirical questions. In this debate,

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📄 Due to restrictions of journal space, Figures 4–9 are available through the Open Science Framework (OSF) at <https://osf.io/de9ah/>.

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this means investigating how hyperbole is used in actual discourse. Such an analysis could then reveal the proportion of hyperbole use that is ironic (or has an ironic tone), and help to resolve the debate. A prerequisite for such an analysis, however, is a clear operational definition and a reliable identification procedure for identifying hyperbole in natural discourse. In this article, we propose such an operational definition and translate it into the Hyperbole Identification Procedure (HIP).

HIP is the first systematic procedure for identifying hyperbole in natural discourse. It is set up along the same lines as established identification procedures for metaphor (the Metaphor Identification Procedure, MIP, established by the Pragglejaz Group, 2007; its successor Metaphor Identification Procedure Vrije Universiteit, MIPVU, Steen et al., 2010a) and irony (the Verbal Irony Procedure, VIP, Burgers, Van Mulken, & Schellens, 2011). In this way, scholars interested in the cross-sections of these different figures can apply two or more of these procedures independently to get corpus data in which the figures can be compared and contrasted.

Defining hyperbole

While hyperbole has received less empirical attention compared to metaphor and irony, various scholars have concerned themselves with identifying hyperbole. A first step in establishing any identification procedure concerns the definition of the phenomenon at hand. Current definitions of hyperbole identify the trope by emphasizing elements like exaggeration (e.g., Carston & Wearing, 2015), overstatement (e.g., Colston & Keller, 1998), extremity (e.g., Norrick, 2004) and/or excess (e.g., Cano Mora, 2009). In doing so, these definitions implicitly or explicitly assume three elements: hyperbole (1) is scalar, (2) involves a specific shift between the propositional and the intended meaning, and (3) includes a specific referent.

First, when considering scales, hyperboles typically revolve around at least one of two types of scales: scales of quality and scales of quantity (e.g., Ferré, 2014). A scale of quality suggests that hyperbole includes some qualitative dimension on which the literal statement is more extreme than the intended statement. Clear examples are:

- (2) That was the best concert in the history of the known universe!
- (3) That was the worst concert in the history of the known universe!

In (2), the speaker takes up the most extreme positive evaluation possible when discussing a concert, while (3) contains the most negative evaluation possible about a concert. While it may be true that a specific concert is either strikingly good or bad, it is relatively unlikely that the concert the speaker attended is worthy of the prize of best/worst concert in history. This makes utterances (2) and (3) likely candidates for hyperbole. Because the hyperbolic expressions contain a qualitative dimension (in this case: a rating of the concert's quality), they can be considered hyperboles of quality (Ferré, 2014).

A hyperbole of quantity contains a quantitative scale containing exaggerated quantitative information. An example is utterance (4a):

- (4a) It took the waiter a day to get me my coffee.

The hyperbolic element of this utterance lies in the time span between ordering and the waiter bringing the coffee. Even though the time span of a day implied by (4a) is literally likely to be much longer than the waiter's entire shift (making (4a) hyperbolic), quantitative hyperboles can relatively easily be extended along the relevant scale. Consider the following utterances:

- (4b) It took the waiter a week to get me my coffee.
- (4c) It took the waiter a month to get me my coffee.
- (4d) It took the waiter a year to get me my coffee.

While utterances (4a)–(4d) all contain hyperbolic expressions about the length of the waiting time, the exaggeration exponentially increases going further down the line. Furthermore, the

quantities in quantitative hyperboles can exponentially increase, as in (4a)–(4d), which could theoretically be extended until the waiting time approaches infinity. At the same time, quantitative hyperboles can also contain extremely small numbers that can theoretically be extended until zero is approached. Consider utterances (5a)–(5c):

- (5a) It took the waiter ten seconds to get me my coffee.
 (5b) It took the waiter one second to get me my coffee.
 (5c) It took the waiter one microsecond to get me my coffee.

Examples such as (4a)–(4d) and (5a)–(5c) provide information about the second characteristic of hyperbole identified in the literature: the difference between the propositional and intended meaning of the utterance. Most studies of hyperbole refer to this distinction as a difference in magnitude (e.g., Claridge, 2010; Colston & O’Brien, 2000). Under this perspective, then, the propositional meaning is typically “larger” or “more extreme” than the intended meaning of the utterance. For instance, in utterances (4a)–(4d), the propositional meaning (somewhere between a day and a year of waiting for a cup of coffee) is more extreme than the intended meaning to indicate a long waiting time. Similarly, utterances (5a)–(5c) contain propositional meanings (between ten seconds and one microsecond) that are more extreme than warranted to indicate a short waiting time. Utterances (2) and (3), finally also contain such extremities, in that the discussed concert may have been pretty good (utterance 2) or pretty bad (utterance 3), but is unlikely to have been the best or worst concert ever. In these ways, the propositional meaning of the hyperbolic utterance is again more extreme than the actual experience.

A good way to visualize this perspective on hyperbole has been independently suggested by a variety of researchers (e.g., Burgers et al., 2011; Cano Mora, 2006; Colston & O’Brien, 2000; Ferré, 2014; Fogelin, 2011). These authors propose to show the gradability of hyperbole on a scale. Figure 1 shows such a visualization for utterance (2), with a scale including a domain with negative assessments of the concert, a neutral zero point, and a domain with positive assessments of the concert. Figure 1 shows that, if utterance (2) is only interpreted hyperbolically, both the propositional and the intended meaning remain within the positive domain. That is, the propositional meaning (“best concert ever”) is more extreme than the intended meaning, thereby showing that the intended meaning is closer to the neutral zero point compared to the propositional meaning but still in the same domain of positive evaluations. In case the speaker wanted to convey through utterance (2) that they actually did *not* like the specific concert, the zero point is crossed meaning that the utterance contains both hyperbole and irony.

The third characteristic of hyperbole identified in the literature is that hyperbole is a pragmatic phenomenon, which means that it cannot be determined whether a completely decontextualized utterance is hyperbolic (or not). Instead, this distinction can only be made by using real-world information in the interpretation of the utterance (e.g., Cano Mora, 2009; Colston & O’Brien, 2000; McCarthy & Carter, 2004). Consider the following example:

- (6) This is the biggest disaster of the 21st century!

To determine whether utterance (6) is hyperbolic (or not), we need to include real-world knowledge about the specific event that is discussed. For instance, if the speaker were to discuss a horrible event like the 2004 Asian Tsunami, utterance (6) should be taken literally. However, if the speaker were to discuss

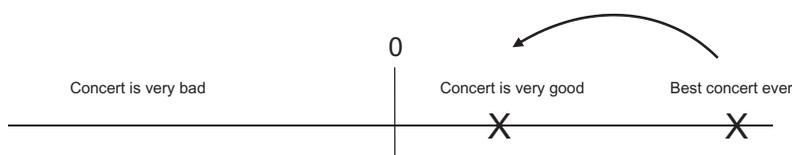


Figure 1. Evaluation of a fictitious concert: Non-ironic hyperbole.

events of a completely different nature (e.g., the failure of the Dutch national soccer team to qualify for the 2016 European Championships), utterance (6) is likely to be hyperbolic. Thus, to establish whether an utterance is potentially hyperbolic, the specific object of reference should be taken into account.

Hyperboles can be used in many discourse situations, implying that many referents can be hyperbolically described. We propose that the term *ontological* best captures this diversity in potential referents because of two reasons. First, many texts in real-world situations assume some prior knowledge about the topic of the text. For instance, if a text is about a political scandal like Watergate or the Libor Scandal, it may omit specific details of the scandal. This is particularly the case if the events are supposed to be common knowledge for the text's target audience at the moment of writing. For analysts coming across such a text at a later time and/or potentially from a different cultural background than the text's target audience, however, such events may not be common knowledge. Thus, it may very well be necessary to use real-world knowledge (e.g., based on information from dictionaries or encyclopedias) to fill in the meaning of such events in order to analyze whether a statement about, for instance, Watergate is hyperbolic. Second, hyperbolic expressions may refer to real-world events or characters, but can theoretically also refer to fictional or hypothetical events and/or characters. The term *ontological* nicely shows that we are dealing with an extra-textual referent while at the same time capturing the possibility that the referent may be based in fact but also in fiction or in hypothetical scenarios.

In sum, our overview shows that hyperbole has three core characteristics that need to be considered: (1) hyperbole involves a scale, (2) hyperbole contains a contrast of magnitude between propositional and intended meaning, with the propositional meaning being "larger" than the intended meaning, and (3) hyperbole should be seen in the light of the ontological referent discussed. From these three characteristics, we derive our operational definition of hyperbole as "*an expression that is more extreme than justified given its ontological referent.*" We use this operational definition of hyperbole as our starting point for the HIP.

Unit of analysis

Most corpus analyses into hyperbole speak little about the issue of how hyperbole can be reliably identified in discourse. The studies that have been explicit about the identification of hyperbole typically present a list of characteristics of which a specific number need to be present for an expression to qualify as hyperbolic. For instance, McCarthy and Carter (2004) and Cano Mora (2006) use cues to identify hyperbole such as the presence of extreme case formulations (i.e., expressions at the edge of a semantic scale), intensification, the creation of impossible worlds and counterfactuality not presented as a lie. Similarly, Kunneman, Liebrecht, van Mulken, and van den Bosch (2015) focus on the presence of language intensity as a potential cue to hyperbole. They, for instance, code for intensified adjectives (e.g., *fantastic* instead of *good*) and the presence of specific typography (e.g., the use of exclamation marks as hyperbole).

While such studies provide interesting insights into the nature of hyperbole, a first striking element is the absence of a specific unit of analysis (cf. Krippendorff, 2013). As such, previous corpus analyses into hyperbole identify the trope at various levels in the discourse. These levels include single-word hyperbole, phrasal hyperbole, and clausal hyperbole (e.g., Cano Mora, 2006; Claridge, 2010; McCarthy & Carter, 2004). This makes it possible for different hyperboles to overlap within the same unit (e.g., a clausal hyperbole containing a separate single-word hyperbole). A properly chosen unit of analysis avoids this overlap and facilitates quantitative comparison of observations at the same level of language use across group of texts (e.g., between genres, between registers, between authors, and/or over time). Thus, the first requirement for an identification procedure is selecting such a stable unit of analysis.

According to Krippendorff (2013, p. 101), units of analysis should be defined "as the smallest units that bear all the information needed in the analysis." Given the insights from previous work into hyperbole, the smallest unit that can be seen as hyperbolic is the single word (e.g., Claridge,

2010). For instance, in examples (4a)–(4d), the magnitude of the hyperboles discussed was extended exponentially when replacing the specific word indicating the length of the waiting time (day, week, month, year). By focusing on hyperbole at the level of single words, we follow the procedure for unitizing as set out in MIP (Pragglejaz Group, 2007) and MIPVU (Steen et al., 2010a). That is, the unit of analysis is a “lexical unit,” which is typically a word.¹ Following procedures of MIPVU, established poly-words (e.g., *of course*, *by means of*) and phrasal verbs (e.g., *look up*, *turn on*) are treated as single lexical units (cf., Steen et al., 2010a, pp. 27–32 for specific instructions on how to unitize poly-words and phrasal verbs).

While our identification procedure is set up to identify hyperbole at the single word level, it is also important that the procedure provides clear guidelines to separate hyperbole from other tropes like irony and metaphor. Previous research has proposed that hyperbole is used in combination with another trope (irony, metaphor) more often than any other trope (Carston & Wearing, 2015). Thus, in order to determine whether metaphors like “Jeb Bush is a marshmallow candidate” (Hoffmann, 2015) or “Frankenfood” to refer to genetically modified food (Hellsten, 2003) also count as hyperbolic, it is paramount to separate the hyperbolic elements of the lexical unit from the metaphorical or ironic elements. Thus, our identification procedure for hyperbole starts by disambiguating the lexical unit for the uses of irony and metaphor by applying established identification procedures for irony (Burgers et al., 2011) and metaphor (Pragglejaz Group, 2007; Steen et al., 2010a).

The hyperbole identification procedure

The HIP consists of a number of concrete steps coders have to take to code whether or not lexical units can be seen as hyperbolic. Below, we describe the steps of HIP (see Figure 2). Subsequently, we show how to apply HIP in a number of sample analyses.

Step 1: Read the entire text.

Step 2: Apply the VIP to every clause in the text to code for the presence of irony (see Burgers et al., 2011 for a detailed instruction on applying VIP).

Step 3: Apply the MIPVU procedure to every lexical unit in the text to code for the presence of metaphors (see Steen et al., 2010a for a detailed instruction on applying MIPVU).

Step 4: Look at the first lexical unit in the text. If the unit is marked as metaphorical (i.e., metaphor-related word, MRW), consider the metaphoricality of the unit when coding:

- If the MRW is conventionalized (i.e., metaphorical meaning included in the dictionary), code the MRW unit in subsequent steps as if it contained the conventionalized meaning found in the dictionary. In other words, the lexical unit is replaced during coding by the conventionalized metaphorical meaning.
- If the MRW is novel (i.e., metaphorical meaning NOT included in the dictionary), first consider using alternative dictionaries to find the metaphorical meaning. If alternative dictionaries do not include the metaphorical meaning either, try to formulate the intended meaning of the MRW as best as possible using the co-text of the text under discussion. In other words, the lexical unit is replaced during coding by the intended metaphorical meaning.

If the unit is marked as ironic, code the unit *as if* it contained the intended rather than the propositional evaluation. In other words, the lexical unit is replaced during coding by the intended ironic meaning. If the unit is neither metaphorical nor ironic, code the unit as is.

¹Applying an automated POS tagger (e.g., for Dutch: Frog; van den Bosch, Busser, Canisius, & Daelemans, 2007) can speed up the process of unitizing a text into lexical units considerably compared to manual coding.

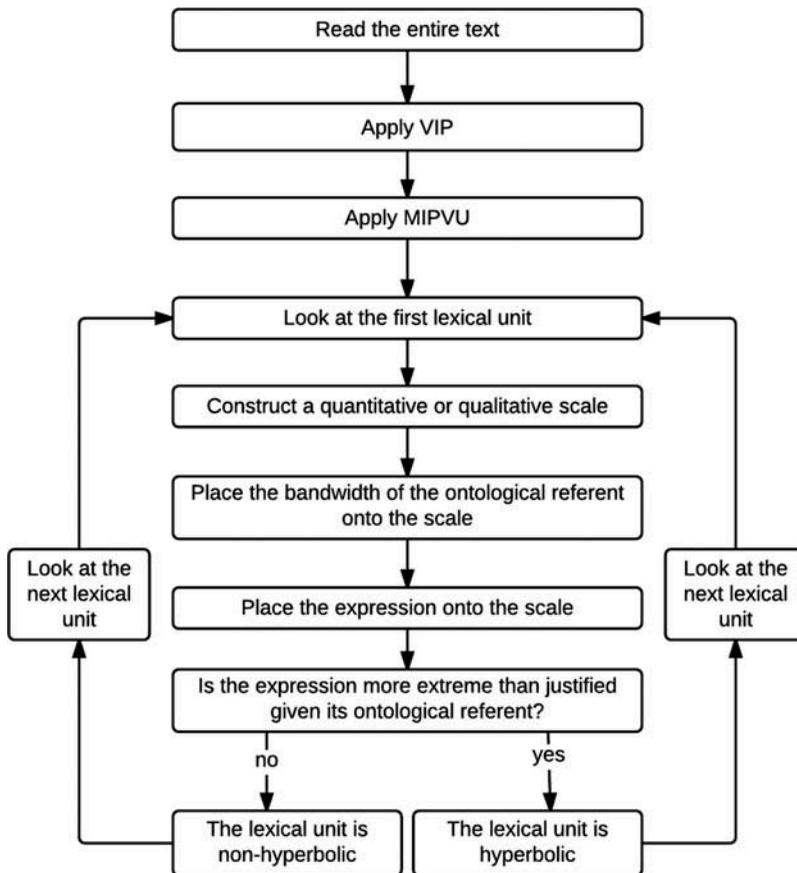


Figure 2. The Hyperbole Identification Procedure (HIP).

Step 5: Consider whether the lexical unit or its replacement (see step 4) warrants constructing a scale involving either a quality or a quantity. If so, construct a scale running from the lowest to the highest value possible of the particular quantity or quality of the lexical unit or its replacement, and place the lexical unit or its replacement on the scale. If not, code as nonhyperbolic and continue with the next lexical unit.

Step 6: Determine the ontological referent of the lexical unit or its replacement (see step 4), by staying as close to the text as possible. In case the text is underdetermined about the ontological referent, use the dictionary or Wikipedia to acquire additional information. Place the bandwidth of acceptable values of the ontological referent onto the scale.

Step 7: Is the lexical unit or its replacement more extreme than justified given its ontological referent? This is the case when the lexical unit or its replacement lies outside of the bandwidth of acceptable values of the ontological referent towards one or the other end of the scale.

- If yes, the utterance is hyperbolic.
- If not, the utterance is nonhyperbolic.
- When in doubt, leave it in and mark the utterance as WIDLII (When In Doubt Leave It In), and reconsider after completion of coding.

Step 8: Look at the next lexical unit.

Sample analysis 1: Entire sentence

In order to show how to apply HIP, we present two types of sample analyses. First, we show how to unitize and code one entire sentence following HIP. For each lexical unit, we take the reader through the steps of HIP to show how to apply the procedure. Second, step 4 of HIP proposes that the coder proceeds slightly differently through HIP depending on whether the lexical unit under evaluation is metaphorical or nonmetaphorical, and whether it is ironic or non-ironic. To show how to apply HIP in each case, we present sample analyses of a number of sentences showing the different possibilities of coding in step 4, and how to proceed accordingly.

We first start with the coding of sample sentence (7). This sentence is part of a Dutch news item from the website *GeenStijl.nl* (Quid, 2014). The news item's author argues that fraudulent managers in health care organizations are an important cause for the (negative) state of the Dutch health care system. The sample sentence runs as follows:

(7) Meer nog dan de crisis en het kabinet, zijn dit soort grootgraaiers de reden dat de zorg in ons land onbetaalbaar wordt en naar de klote gaat.

“Even more than the crisis and the cabinet, these kinds of super money grabbers are the reason that health care in our country becomes not payable and goes to shit.”

The first step of HIP involves applying VIP (Burgers et al., 2011) to the utterance to see if it is potentially ironic. VIP asks its users to break up every text into simple clauses. Sentence (7) consists of three clauses which can be divided as below (separated by a backslash):

(7) Meer nog dan de crisis en het kabinet, zijn dit soort grootgraaiers de reden dat /de zorg in ons land onbetaalbaar wordt /en naar de klote gaat.

“Even more than the crisis and the cabinet, this kind of super money grabbers is the reason that health care in our country becomes not payable /and goes to shit.”

The three sub-clauses of (7) contain a negative evaluation of the impact of the fraudulent managers in health care organizations (who are described as “super money grabbers”). This negative evaluation is in line with the author's stance in the rest of the article, making the three clauses non-ironic.

The second step of HIP involves applying MIPVU (Steen et al., 2010a) to every lexical unit in the clause. Because this step and every subsequent step of HIP involves lexical units as the units of analyses, we now need to divide sentence (7) into lexical units. This demonstrates that it contains twenty-seven lexical units, as displayed below (with different lexical units separated by a backslash):

(7) Meer /nog /dan /de /crisis /en /het/kabinet,/zijn /dit/soort /grootgraaiers /de /reden /dat /de /zorg /in /ons /land /onbetaalbaar /wordt /en /naar /de /klote/gaat.

We subsequently applied MIPVU to every lexical unit. Following advice for using MIPVU on Dutch data (Pasma, 2010), our dictionary was the online version of the Van Dale dictionary (accessed January 2016).

Sentence (7) breaks up into lexical unit on a word-by-word basis, because every word forms its own lexical unit. That is, in Dutch, the sentence contains one fixed expression (*naar de klote gaan*, which translates as “to go to shit”). Because the focus of our article does not lie in the application of MIPVU to Dutch language data (for an informative discussion, see Pasma, 2010), we show sentence (7) below with all metaphor-related words (MRWs) printed in italics:

(7) Meer /nog /dan /de /*crisis* /en /het/kabinet,/zijn /dit/soort /*grootgraaiers* /de /reden /dat /de /zorg /in /ons /land /onbetaalbaar /wordt/en/*naar* /de /*klote/gaat*.

We now show how to apply the remaining steps of HIP to every lexical unit in sentence (7). We discuss every lexical unit separately, in the order of usage in sentence (7).

Meer (more)

According to the dictionary, the Dutch word *meer* means “to a higher degree.” This indicates that this lexical unit does not itself contain a referent that can be placed onto a scale, but indicates how another lexical unit should be evaluated. This lexical unit is therefore nonhyperbolic.

nog (even)

The Van Dale dictionary indicates that the Dutch word *nog* can be seen as an intensifier of the word directly preceding it. Thus, the words *Meer nog* should be translated to English as “Even more.” As such, *nog* does not contain a referent that can be placed onto a scale, making it nonhyperbolic.

dan (than)

The Dutch word *dan* is a subordinating conjunction of comparison, which means that it contains no referent that can be placed onto a scale, making it nonhyperbolic.

de (the)

The Dutch word *de* is a definite article, which, in itself, do not have a referent to be placed onto a scale. Because articles are nonhyperbolic, we do not discuss the other definite articles (in Dutch: *de, het*) and indefinite articles (in Dutch: *een*) in sentence (7).

crisis (crisis)

The word *crisis* is an MRW. According to Van Dale dictionary, its basic Dutch meaning refers to a “decisive state in a severe illness.” In this sentence, though, it refers to the economic crisis in the early twenty-first century. This second meaning is also included in the Van Dale dictionary, because, when talking about economics, the word *crisis* refers to a “time of weakness and unemployment.” Because both meanings (source and target) are included in the dictionary, the MRW is conventional. In those cases, coders should interpret the lexical unit as if it contained the target description of “time of weakness and unemployment.” This description directly fits the economic time period the author refers to, making this lexical unit an example of a conventional nonhyperbolic metaphor.

en (and)

The word *en* is a conjunction. Like articles, conjunctions do not in itself refer to ontological referents and are therefore nonhyperbolic. The other conjunctions in this sentence (e.g., *dat*) are thus not discussed.

kabinet (cabinet)

According to Van Dale, the Dutch word *kabinet* means the “joint Secretaries of State and Assistant Secretaries of State.” In this sentence, this is also exactly the meaning of the word *kabinet*, making it nonhyperbolic.

zijn (are)

The Dutch word *zijn* serves as a copula in this sentence, meaning that it does not refer to an ontological referent in itself and is thus nonhyperbolic. The same is true for the other copula in this sentence (*wordt*), which is not discussed further.

dit (this)

The Dutch word *dit* is a demonstrative pronoun. In this sentence, the demonstrative pronoun is used as an MRW. According to Van Dale dictionary, in its basic meaning, *dit* is used to “refer to something that is in close proximity of the speaker.” Because *dit* refers to *soort* (see next unit), it does not refer to a physical element in close proximity of the speaker, making it an MRW. In line with MIPVU, such words could potentially be implicit hyperboles if they refer to lexical units that are coded as hyperbolic. This is not the case in this example, because, as we will see, *soort* is nonhyperbolic, making *dit* nonhyperbolic as well.

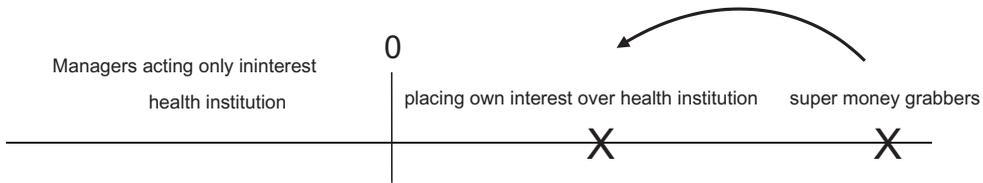


Figure 3. Characterization of managers: Hyperbole.

soort (kind of)

According to Van Dale, the word *soort* refers to “a group of people with shared characteristics.” This is exactly the meaning of this word in this sentence, making it nonhyperbolic.

grootgraaiers (super money grabbers)

The word *grootgraaiers* cannot be found in Van Dale, indicating that it is novel. When parsing *grootgraaiers*, we can see that it comprises three morphemes. The first is “groot” (literally: large), which is a free morpheme that can be used to indicate size. Because the basic meaning of this morpheme refers to physical largeness, it is an MRW according to MIPVU. The root morpheme is *graaier*, which means “somebody who enriches themselves through legal or illegal means.” Because Van Dale does not contain an English translation of this morpheme, we assume that it is a typically Dutch word. The most natural English translation of the morpheme “graaier” is the compound “money grabber.” The final morpheme is—s. This suffix is a bound morpheme indicating plurality.

When analyzing such a new compound, HIP proposes to start with the root morpheme, in this case *graaier*. Remember that this sentence was placed in an article about poorly performing managers in Dutch health care institutions. The article describes how these managers performed poorly, because the health institutions they managed had financial problems. After the managers (either voluntarily or involuntarily) resigned their jobs, they received a severance fee of several hundred thousands of euros. With this information, it is possible to construct a scale categorizing the managers of acting in the interests of themselves or the institution they managed (Figure 3).

The ontological referent is that the managers have performed poorly, and in some decisions (e.g., accepting the severance fee) placed their own interest over that of the institution they managed. In other cases (e.g., the poor financial management), the text is unclear whether the managers acted on their own accord, were advised by their employees or by external consultants. Thus, it is unclear whether these managers made poor financial decisions due to a lack of information, poor advice, their own incompetence and/or by placing their own interests first. Thus, the ontological referent is that the managers placed their own interests first in some cases, but no evidence exists that they always acted in such a way.

The expression (especially when considering the morphological intensifier *great*) suggests that the managers acted solely out of motives to enrich themselves greatly. This expression is more extreme than justified given the ontological referent, making it an example of hyperbole.

reden (reason)

The meaning of the Dutch word *reden* is “that which motivates somebody’s actions or beliefs.” This is also the meaning of this word in this sentence, making it nonhyperbolic.

zorg (health care)

According to Van Dale, the Dutch word *zorg* means “health care.” This is also the referent of this word in this sentence, which is why it is nonhyperbolic.

***in* (in)**

The word *in* is a preposition of place. In this sentence, the preposition does not in itself comprise an ontological referent, making it nonhyperbolic. The same goes for the other prepositions in sentence (7) which are not discussed further. The only exception is *naar* which is part of an idiomatic expression, which is why this preposition is discussed below.

***ons* (our)**

The word *ons* is a possessive pronoun referring to a specific in-group. In this sentence, it refers to people with the Dutch nationality. This is also the group to which the author himself belongs, making this lexical unit nonhyperbolic.

***land* (country)**

The meaning of the word *land* is nation state. In sentence (7), the ontological referent of *land* is The Netherlands. Because The Netherlands is a nation state, the expression directly refers to the ontological referent, making it nonhyperbolic.

***onbetaalbaar* (not payable)**

According to Van Dale, the word *onbetaalbaar* means that something is “not payable” because the costs are extremely high. It is possible to construct a scale about this referent referring to the degree to which health care in The Netherlands is payable (Figure 4, supplementary materials, <https://osf.io/de9ah/>). The ontological referent is that the costs for health care in The Netherlands are rising due to increasing prices and a general ageing of the population. This implies increasing difficulty in the degree to which Dutch health care is payable. The expression literally indicates that Dutch health care is not payable, which is more extreme than the ontological referent. Thus, this lexical unit is hyperbolic.

***naar* (to)**

The word *naar* is part of the Dutch idiomatic expression *naar de klote gaan*, which, according to Van Dale dictionary, means that something “becomes dead, lost and/or broken, etc.” MIPVU specifies that, in idiomatic expressions, each word needs to be analyzed in isolation if it contributes to the meaning of that idiomatic expression, which is the case in this expression. The basic meaning of *naar* is to indicate the direction, destination or physical point towards which a specific movement is directed. In this idiomatic expression, the movement is metaphorical (as we will see in the next examples), making *naar* an MRW. However, in this example, *naar* does not have an ontological referent on its own (because it is used to indicate metaphorical direction of another referent), making it nonhyperbolic.

***klote* (testicle)**

According to Van Dale dictionary, the meaning of the Dutch word *kloot* is a vulgar use of the male testicle. In the idiomatic expression, *kloot* is used to indicate an undesired destination (which the dictionary specifies as dead, lost, broken, etc.). This makes *kloot* an MRW in the idiomatic expression *naar de klote gaan*.

HIP specifies that the analyst subsequently needs to continue with the nonmetaphorical meaning of the MRW, which is specified in Van Dale dictionary as “dead, lost, broken, etc.” When the dictionary gives such diverging nonmetaphorical meanings of the same expression without distinguishing between them (as in this case), we recommend to use the meaning that best fits the ontological referent, which, in this case, is Dutch health care. The meaning that best fits this referent is “broken.” Because Dutch health care is not a physical object, we use the basic meaning of broken, which Van Dale specifies as shattered into pieces, making something no longer functional. With this interpretation, it is possible to construct a scale about the quality of Dutch health care (Figure 5, supplementary materials). The report itself indicates the financial crisis, the Dutch government, and poor managers as reasons why the quality of Dutch health care deteriorates. The ontological referent of this statement is thus that the quality of Dutch health care is lower than it was at an (unspecified)

point in the past. Nevertheless, Dutch health care still has positive aspects and may be better than or at least comparable to health care in other European countries, making it at least partly functional. The expression indicates that Dutch health care is no longer functional. This is more extreme than justified given the ontological referent, making the lexical unit hyperbolic.

gaat (goes)

In this sentence, the verb *gaat* is an MRW indicating metaphorical movement within the idiomatic expression *naar de klote gaan*. The author of this sentence indeed wanted to indicate a change in status of Dutch health care, making this metaphorical movement verb nonhyperbolic.

Sample analysis 2: Selected cases

The sample sentence presented in the previous section shows how to identify different types of hyperboles using HIP. It demonstrates how to identify hyperboles in conventionalized nonmetaphorical expressions (e.g., *onbetaalbaar*, *klote*) and in lexical units containing novel expressions (e.g., *grootgraaiier*). Below, we present a number of additional examples to demonstrate how to apply HIP in practice. For convenience we only discuss the word of interest rather than every lexical unit in the sentence under discussion.

The first sample sentence is taken from a newspaper report about the opportunities for Dutch people of starting a business in Australia (Meeuwssen, 2014). The sample sentence reads:

- (8) Als je iets goed doet, kun je hier *altijd* voet aan de grond krijgen.
 “If you do anything right, you can *always* gain a foothold here.”

The Van Dale dictionary indicates that the word *altijd* means that something happens at all times. For this word, it is possible to construct a scale with the chances of getting a foothold in the Australian market when doing anything right. The ontological referent is the Australian market, which is relatively easy to get in to, according to the sentence’s author. Thus, the ontological referent indicates a fairly large chance. The lexical item, however, suggests that the chance is 100%, because gaining a foothold would happen in all cases. This is more extreme than warranted given the ontological referent and thus hyperbolic (Figure 6, supplementary materials).

The second example sentence comes from an interview in the Dutch newspaper *Telegraaf* with the founders of a Dutch chain of shoe stores (Swarte, 2014):

- (9) In twee jaar tijd openden zij vier winkels en een webshop *gevuld* met schoenen, tassen en accessoires in alle kleuren van de regenboog.
 “In two years’ time, they opened four stores and a web shop *filled* with shoes, bags, and accessories in all colors of the rainbow.”

In sentence (9), the lexical unit under discussion is the verb *vullen* (to fill), of which the past participle *gevuld* (filled) is given in the text. According to the Dutch Van Dale dictionary, the most basic meaning of the verb *vullen* is “to make full,” in which “full” means “completely filled, so that nothing can be added anymore” (as in “a full glass”). This means that the lexical unit can be placed at the very end of the quantitative scale about the number of products that can be added to the store space (Figure 7, supplementary materials). The ontological referent is that a large amount of store space (i.e., all shelf space) is occupied by products. The lexical unit is more extreme than the ontological referent. After all, it would be hypothetically possible to add more products to the stores (e.g., by stacking shoes on top of each other, by filling the aisles with shoes). This means that utterance (9) is hyperbolic. Please also note that the hyperbolic expression in sentence (9) may be so conventionalized that ordinary language users do not notice it as hyperbolic. The way such a sentence is processed is beyond the scope of HIP, and should be addressed in a reader-response

study. Nevertheless, applying HIP in detail to language materials can generate interesting hypotheses for such future studies, for instance by revealing conventionalized hyperboles which (so far) have received little attention in the literature.

The third example comes from the same text as sample sentence (7) (Quid, 2014). In this example, the author remarks about the health-care managers:

- (10) Deze week [waren] twee gigantisch schandalige *parasitaire* zorgrovers [in het nieuws].
 “This week, two gigantically outrageous *parasitic* health robbers [were in the news].”

The lexical unit of interest is *parasitair*, which is metaphor-related according to MIPVU. In the Van Dale dictionary, its basic meaning is “like a parasite” or “caused by parasites.” Looking up the noun parasite, we find the basic meaning of “organisms living on or in other organisms, feeding itself at the expense of these organisms, and thereby harming the organisms.” The metaphorical meaning of “parasite” is conventionalized and is “somebody who only lives at the expense of others.” Thus, it is possible to construct a scale with the evaluation of the managers (Figure 8, supplementary materials). The ontological referent is that the text suggests that the managers have not only acted in the interest of the organizations they managed, but also in their own interest. The lexical item suggests that the managers did nothing and only received their salary at the expense of others and the organization in general. This is more extreme than justified given the ontological referent, making it hyperbolic.

The fourth example refers to a situation in which a couple has just gone to a mattress store to try out mattresses to find out which one is the spongiest. When they leave the store and come outside, they find that the weather is unexpectedly pleasant. One of them comments:

- (11) This weather is the *spongiest!*²

In sentence (11), the word *spongiest* is used metaphorically. Its basic meaning refers to physical softness (as in a “spongy mattress”). The intended meaning in sentence (11) is a novel metaphor, indicating that the weather is the softest weather imaginable (which is intended as a positive evaluation of the weather). Although it may be likely that the weather was very nice, it is unlikely that the weather was the nicest weather ever (Figure 9, supplementary materials), making *spongiest* an example of a metaphoric hyperbole.

HIP can also be applied to experimental materials from previous experimental studies on hyperbole. For instance, Stewart and Kreuz (2003) describe a situation in which somebody did not enjoy watching James Cameron’s 1997 film *Titanic*, and commented:

- (12) After *five* hours, I was rooting for the iceberg (Stewart & Kreuz, 2003, p. 340).

In sentence (12), the lexical unit under discussion is *five*, which is neither ironic nor metaphoric. In order to show whether five hours is a time that fits within the running time of the movie *Titanic*, coders can turn to the Wikipedia entry for *Titanic*. The Wikipedia entry reveals that *Titanic* has a total running time of 195 minutes, which is slightly over three hours ([https://en.wikipedia.org/wiki/Titanic_\(1997_film\)](https://en.wikipedia.org/wiki/Titanic_(1997_film))). Thus, a viewing time of five hours is longer than the actual running time of the film, making it more extreme than justified and making sentence (12) an example of hyperbole.

Colston and Keller (1998, Experiment 2) present an example of a couple going on holiday to a place where it is usually very cool. Yet, upon arriving, they find that it is actually 80 degrees Fahrenheit (approx. 27 degrees Celsius). One of them comments hyperbolically:

- (13) It’s a *million* degrees here (Colston & Keller, 1998, p. 507).

²We thank an anonymous reviewer of this article for suggesting this example and the example in sentence (16).

Regardless of whether one measures in Celsius or in Fahrenheit, a million degrees is a temperature that cannot be reached on Earth. This makes this statement about the temperature more extreme than justified given regular temperatures on Earth, and thus an example of hyperbole.

Rubio-Fernández, Wearing, and Carston (2015), then, present an example where somebody comments on their 2-mile jog in a local park:

(14) My morning jog is a *marathon* (Rubio-Fernández et al., 2015, p. 28).

According to the MacMillan dictionary, the basic meaning of the word *marathon* is a race where people run over a distance of approximately 26 miles. Thus, the actual distance of a *marathon* is about 13 times the length of the actual jog. This makes the word “*marathon*” in sentence (14) more extreme than justified given the actual length of the job, and thereby hyperbolic.

Finally, applying HIP may also help to distinguish lexical units that may seem hyperbolic at first glance, but are not so. Consider the following header of a Dutch news article:

(15) Halvering winst bij *oliereus* Shell (NOS, 2015)

“Halving of profit of *oil giant* Shell.”

The Dutch word *oliereus* is in the dictionary, where it means “oil-processing multinational organization.” When coders are in doubt about the question whether a description fits an ontological referent, they may consider using Wikipedia to search for information about the ontological referent. The Wikipedia entry (https://en.wikipedia.org/wiki/Royal_Dutch_Shell) demonstrates that this description completely fits the company Shell, making this lexical item nonhyperbolic.

A second example of an expression that may seem hyperbolic at first glance, but is nonhyperbolic is the following statement, uttered by Conservative pundit Brent Bozell:

(16) Jeb Bush is running a *marshmallow* candidacy (Hoffmann, 2015).

Sentence (16) contains a metaphor in which Jeb Bush, a Republican candidate in the 2016 U.S. presidential elections, is compared to a marshmallow. This is a novel metaphor, because the MacMillan dictionary only contains two nonmetaphorical meanings of the word “marshmallow”: (1) “a soft pink or white sweet with a thick round shape” and (2) “a plant with pink flowers that grows in wet areas.” The speaker of (16) likely referred to the first meaning of marshmallow, that of a sweet. Through this metaphoric comparison, the speaker wanted to convey that Bush had a sweet demeanor, but that his campaign had no real substance. This was reflected in Bush’s lackluster performance at the polls for the Republican primaries for the 2016 presidential elections, leading him to drop out of the presidential race in February 2016. Thus, by adequately describing the state of the Bush campaign at the time of writing, sentence (16) is nonhyperbolic.

Reliability analysis

In order to check for HIP’s reliability, we conducted three reliability analyses on three different sub-corpora from a corpus from a larger research project. The first two reliability analyses led to slight alterations and clarifications in the procedure. To check for reliability of the final procedure as presented in this article, we randomly selected 10 Dutch news texts from a corpus from a larger project. These 10 texts contained a total 4,444 lexical units. After applying an electronic part-of-speech (POS) tagger to the corpus, two coders (the second and third authors of the article) independently applied HIP to each lexical unit. First, coders agreed that none of the sentences was ironic (100% agreement). Second, reliability for the application of MIPVU was high with interrater agreement in 95.05% of all cases (Cohen’s kappa: .71, “substantial agreement,” Landis & Koch, 1977). Most importantly, for HIP, the two coders reached a very high interrater agreement of 99.66% of all cases. The associated Cohen’s kappa is .62, indicating “substantial agreement” (Landis & Koch,

1977). Following up on this successful reliability test, we applied HIP to a larger corpus of >50,000 Dutch words. This implies that HIP can be applied on a similar scale as coding procedures like MIPVU (Steen, Dorst, Herrmann, Kaal, & Krennmayr, 2010b).

Discussion and conclusion

In this article, we introduced the HIP, a method that can be used to identify linguistic hyperbole in corpus research. We started out with comparing existing definitions of hyperbole. Based on commonalities of the different approaches, we presented our operational definition of hyperbole as “an expression that is more extreme than justified given its ontological referent.” This definition then formed the basis of the steps coders can take when applying HIP. Sample analyses of both one specific sentence and of selected cases present readers with illustration on how to apply these steps in practice. Reliability analyses, finally, showed that HIP is reliable in application when used by two trained coders.

As such, HIP can join the growing arsenal of methodological tools like MIP (Pragglejaz Group, 2007), MIPVU (Steen et al., 2010a), and VIP (Burgers et al., 2011) which scholars can use when conducting corpus analyses of figurative language types. Furthermore, by specifically choosing to make HIP compatible with MIPVU and with VIP, scholars interested in combinations of two or more of these tropes can select the procedures of interest. HIP can help scholars interested in hyperbole in corpus research in making their codings more robust.

Like any coding procedure, HIP starts out from a basic unit of analysis, which—in the case of HIP—implies that hyperboles are coded at the level of lexical units. Like metaphors, some hyperboles may also occur at other levels of analysis. For instance, sentence (10) was analyzed for one hyperbole-related word, while it in fact contains an example of a hyperbole comprising multiple lexical units. After all, four lexical units are used hyperbolically to create one image (“gigantisch /schandalige /parasitaire /zorgrovers”; “gigantically /outrageous /parasitic /health robbers”). One of the advantages of a coding procedure like HIP is that it can bring such examples to the fore. To the best of our knowledge, the notion of hyperbole spanning multiple lexical units has not yet been discussed in the literature. When applying HIP, such examples are also taken into account, because each of the four lexical units comprising the hyperbole would be coded as hyperbolic.

In some cases, speakers may be intentionally vague or ambiguous which may make it difficult to determine whether or not they use hyperbole (or not). Nevertheless, the steps of HIP help the coder in reducing such ambiguity. First, the coder is required to read the entire text before the start of coding (step 1 of HIP) so that they get an idea of the general position and point of the author. Second, in case the text is underspecified about the topic at hand, coders can use additional real-world information from sources like the dictionary and Wikipedia to help them in making their coding decisions. Our reliability analysis has shown that approaching hyperbole in such a way drastically helps in reducing the potential ambiguity of expressions, and that these can be reliably coded for hyperbole.

Finally, we also like to emphasize that HIP mainly serves to indicate whether a word is used hyperbolically or not. Metaphor research has taught that words coded as metaphor-related can still vary on a variety of dimensions like novelty (e.g., Steen, 2011), aptness (e.g., Tourangeau & Sternberg, 1981), and so on. We expect that similar subdivisions and classifications can be made for hyperbole (e.g., Claridge, 2010). Yet, to determine if (and if so, what) subtypes of hyperboles are used by language users, a bottom-up corpus analysis is a good approach. A tool like HIP gives scholars the opportunity to conduct such a corpus analysis in an explicit and reliable way.

In this article, we introduced the HIP, which can be used by corpus analysts to identify hyperbole in natural discourse. HIP breaks up the coding of hyperbole into a number of systematic steps, and is designed to be used in conjunction with other identification procedures like MIPVU (Steen et al., 2010a) and VIP (Burgers et al., 2011). We hope that the introduction of a methodological tool like

HIP will increase interest in the study of hyperbole in discourse, and stimulate corpus analysts to consider hyperbole in their projects and analyses.

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