

Normative Generics without Ambiguity

Olivier Lemeire – This is a draft

Abstract

Some generic generalizations have both a descriptive and a normative reading. The generic sentence “Philosophers care about the truth,” for instance, can be read as describing what philosophers in fact care about but can also be read as prescribing philosophers to care about the truth. Similarly, the generic stereotype “Men are tough” can also be understood in a normative way, saying that men ought to be tough. According to the standard account, these normative generics are ambiguous between expressing a descriptive generalization and a normative generalization. This paper argues against the ambiguity thesis, focusing in particular on Leslie’s most recent articulation of this view. In response, an alternative view is developed according to which generics are not ambiguous but rather semantically indeterminate with respect to the type of generic relation that exists. A generic has a normative reading when an utterance of the generic can be used to convey the existence of a functional relation between the kind and property.

Introduction

Generic sentences, or *generics* for short, are generalizations that are formulated without the overt use of a quantifier.¹ Typical examples of generics are sentences like the following:

¹ The subject of this paper is restricted to so-called ‘I-generics’ with a bare plural noun phrase. I-generics, such as (1) and (2), express generalizations about members of a kind. D-generics, on the other hand, such as “Dinosaurs are extinct” and “Tigers are widespread” predicate a property directly of the kind. Furthermore, I-generics can have a bare plural noun phrase but can also have an indefinite singular (e.g. “A tiger is striped”) or a definite

(1) Tigers are striped.

(2) Ravens are black.

Even after decades of research, there is little agreement in the literature as to the type of generalization these sentences express (Krifka et al. 1995; Sterken 2017). Generics appear to express broad kind-wide generalizations even though they can still be true when there are exceptions. The existence of some albino tigers does not falsify (1), for instance, just as the existence of albino ravens does not falsify (2). Yet their tolerance for exceptions is not the most puzzling feature about the meaning of generics. Even more puzzling is the fact that whereas some generics only have a descriptive reading, other generics also have a normative reading. Sentences like (1) and (2), for instance, express broad generalizations that simply describe what members of the kind are like. Other generics, however, can also be understood as prescribing what members of the kind ought to be like. Here are two examples that will be returned to throughout this paper:

(3) Philosophers care about the truth.

(4) Men are tough.²

singular noun phrase (e.g. “The tiger is striped”). Since there are subtle differences in meaning between these different types of generics that fall outside the scope of this paper, only bare plural I-generics are discussed here (but see: Greenberg 2003; Krifka et al. 1995; Sterken 2017).

² This paper will mention this stereotype often. Obviously, this should not be considered an endorsement of the stereotype. Instead, it is precisely because this stereotype is problematic that we should aim to understand it. The fact that generic stereotypes like these can be read in both descriptive and normative ways is one factor that explains why the communication of their normative content can sometimes pass under the radar so to speak and is difficult to respond to in a conversation (Haslanger 2014).

Generic sentences like (3) and (4) have both a descriptive and a normative reading. Sentence (3), for instance, can be read as describing what philosophers in fact care about but can also be read as prescribing philosophers to care about the truth. The same holds for the stereotype in (4), which, according to one of its readings, states that men ought to be tough. Because of their normative reading, generics like these are often used to rebuke people who belong to the kind but who do not instantiate the predicated property. For example, because (3) has a reading on which it prescribes philosophers to care about the truth, the sentence can be used to rebuke a philosopher who does not care about the truth. Similarly, a stereotype like (4) is typically used to reproach a man who does not act tough. The question at hand is why sentences such as these have a normative reading.

More specifically, normative generics like (3) and (4) raise the question as to why a normative reading is available for these particular generics but not for other generics like (1) and (2). There is no reading of (1), for instance, according to which this sentence says that ravens ought to be black in a prescriptive-normative sense. An adequate account of normative generics should explain why only some generics have this normative reading.

A second question that arises with respect to normative generics is why *generics* are particularly prone to having a normative reading. After all, explicitly quantified generalizations about the same kinds do not by default have a normative reading available (Leslie 2015a). Consider, for example, the following two quantified generalizations:

(5) Most philosophers care about the truth.

(6) All men are tough.

There is no available interpretation of (5) according to which most philosophers *ought* to care about the truth.³ Instead, it simply expresses a generalization that describes what most philosophers care about. Similarly, (6) does not say that all men *ought* to be tough. In a default context, this sentence can only be interpreted as stating that all men are in fact tough. Quantified generalizations like (5) and (6) are therefore less likely to be used in order to rebuke members of a kind that do not instantiate the predicated property. An adequate theory of normative generics should also explain why *generics* about these same kinds do have a normative reading.

According to the account defended here, the truth-conditions of generics are such that a generic sentence can be true based on a suitable statistical, causal, and functional relation. The generalization expressed by a generic sentence is indeterminate (i.e. unspecified, nonspecific, sense-general) regarding which of these relations exists.⁴ Hence the different readings of a generic sentence correspond to more specific messages that may be conveyed by uttering the generic in a particular context. When a generic sentence can be used to convey a functional relation between a kind and property, it has a normative reading.

This account is defended in response to the standard view of normative generics according to which they are ambiguous between expressing a descriptive generalization and a normative generalization (Cohen 2001; Greenberg 2003; Leslie 2015). In the first part of the paper, three different versions of this ambiguity view are introduced. In this first part as well as throughout the rest of paper, particular attention is paid to Leslie's most recent

³ This is not to say that quantified sentences cannot indirectly convey normative generalizations in some conversational contexts (Leslie 2015a). Here I simply note that many generics have a normative reading by default whereas quantified generalizations do not.

⁴ For more on the notion of indeterminacy, see Zwicky & Sadock 1975.

version of this view (Leslie 2015a). Although her theory of normative generics has already received numerous favorable mentions, it has as of yet not been subjected to critical scrutiny (Del Pinal 2018; Del Pinal & Reuter 2017; Laskowski 2020; Reuter 2019).⁵ In the second part of this paper, three objections are provided against the ambiguity view of normative generics, two of which are specifically aimed at Leslie's version. In the third and final part of the paper, the alternative indeterminacy theory of normative generics is defended.

1. The Ambiguity View of Normative Generics

1.1 Three Ways of Being Ambiguous

The fact that some generic sentences have both a descriptive and a normative reading calls for an explanation. Before aiming to explain why some generics have two different readings, however, a simpler question should be answered: what gives rise to the generic meaning of a sentence in the first place? According to what is now the standard view, the generic meaning of a sentence can be attributed to the presence of an unpronounced variable binding operator called '*Gen*' which resides in the logical form of the sentence (Krifka et al. 1995; Leslie 2015b). Generics like (1) and (3), for instance, are commonly thought to have the following logical form, a view that will not be disputed in this paper:⁶

(7) Gen x [Tiger(x)][Striped(x)]

⁵ Though for an early response and an alternative pragmatic proposal, see Haslanger (2014).

⁶ I am not committed to this logical form for generics and mainly use it here for expository purposes. For a recent defense of an alternative, sophisticated kind-predicating account of generics, see Teichman (2017). For a defense of a simple kind-predicating account, see Liebesman (2011).

(8) $Gen\ x\ [Philosopher(x)][Cares-about-the-truth(x)]$

Based on the standard view then, the logical form of generics is similar to that of adverbially quantified generalizations – like “Tigers are *always* striped” – as analyzed by Lewis (1975). The generic operator *Gen* functions like an adverb of quantification by relating a restrictor – such as “Tiger(x)” – with a scope – such as “Striped(x).” Although unpronounced, *Gen* is triggered whenever a variable occurs in the restrictor that is not otherwise bound by a pronounced quantificational operator. Since it is commonly believed that bare plural noun phrases like “Tigers” and “Philosophers” contribute predicates with unbound variables to the logical form of a sentence, *Gen* is triggered whenever such a bare plural occurs without a quantificational adverb (Heim 1982; Kamp 1981; Kratzer 1995). To understand the meaning of a generic sentence is to understand the meaning of *Gen* and what it says about the denotations of the restrictor and scope.

If one defends the thesis that the normative reading of some generics is due to their ambiguity, then the logical form of generics outlined here still leaves open several possible options for where to locate the source of this ambiguity. A first way in which generics could come to be ambiguous is if the generic operator *Gen* is itself lexically ambiguous. In that case, all generic sentences are potentially ambiguous. The ambiguity of a descriptive generic like (1) and a normative generic like (3) could then be represented as follows:

(9) a. $Gen_1\ x\ [Tiger(x)][Striped(x)]$

b. $Gen_2\ x\ [Tiger(x)][Striped(x)]$

(10) a. $Gen_1\ x\ [Philosopher(x)][Cares-about-the-truth(x)]$

b. $Gen_2\ x\ [Philosopher(x)][Cares-about-the-truth(x)]$

Greenberg (2003) defends this version of the ambiguity thesis.⁷ When interpreted as *Gen*₁, a generic says that all members of the kind instantiate the generalized property and that this is a robust pattern.⁸ When interpreted as *Gen*₂, a generic instead expresses an ‘in virtue of’ generalization. On this reading, a generic says that there is some property associated with the kind in virtue of which its members instantiate the generalized property. This ‘in virtue of’ interpretation results in a normative reading of a generic when the reader takes the speaker’s intended ‘in virtue of’ property to be *deontically* associated with the kind. A generic like (3), for instance, has normative meaning when it is understood as saying that there is some property that all philosophers *ought* to have, in virtue of which they care about the truth. Hence according to Greenberg’s version of the ambiguity thesis, all generics of the form “*Ks are F*” are ambiguous, but they only have a normative reading when the reader’s background knowledge results in the accommodation of an ‘in virtue of’ property that is associated with the kind on deontic grounds.

A second version of the ambiguity thesis has it that bare plural generics are structurally ambiguous because two different logical forms can be derived from the surface structure “*Ks are F*.” This version of the ambiguity thesis is defended by Cohen (2003). He argues that a sentence with the surface structure “*Ks are F*” can indeed have a logical form by which the sentence expresses a generalization with *Gen* as the unpronounced quantificational

⁷ More precisely, Greenberg (2003) holds that all generics of the form “*Ks are F*” express a generalization that says of all worlds accessible from the world of evaluation, that every member of *K* in that world instantiates *F*. Bare plural generics, however, are ambiguous between two different accessibility relations.

⁸ To account for exceptions, Greenberg suggests an additional restriction to a relevant set of individuals by way of a domain vague restrictor (Greenberg 2003).

operator, but can also have a very different logical form. Generics like (1) and (3), for example, are said to be ambiguous in the following way:

(11) a. Gen x [Tiger(x)][Striped(x)]

b. In-effect(! (Tiger(x) → Striped(x)))

(12) a. Gen x [Philosopher(x)][Cares-about-the-truth(x)]

b. In-effect(! (Philosopher(x) → Cares-about-the-truth(x)))

On their quantificational (a-)readings, generic sentences are interpreted based on the semantics of *Gen*. In that case, a generic says that the probability for a member of the kind to instantiate the generalized property is higher than $\frac{1}{2}$. On their alternative (b-)readings, however, a generic sentence instead says that a rule is in effect according to which members of the kind instantiate the generalized property. This reading is the result of the 'In-effect' predicate being applied to a rule, where '!' maps a formula of the form $(K(x) \rightarrow F(x))$ to the rule that it describes. A sentence like (1), for example, has a rules-and-regulations interpretation on which there is a *biological* rule in effect according to which tigers are striped.⁹ A generic has normative force, however, when the reader recognizes that the potential rule described by the formula $(K(x) \rightarrow F(x))$ is a social or moral rule. A sentence like (3), for instance, has normative force on its rules-and-regulations reading because a reader of this sentence knows that the potential rule described by the formula $(\text{Philosopher}(x) \rightarrow \text{Cares-about-the-truth}(x))$ is a social rule with prescriptive force. Thus,

⁹ Though Cohen does not explicitly say so, his view must include the existence of biological rules since he argues that whereas bare plural generics are ambiguous, generics with an indefinite singular noun phrase unambiguously predicate that a rule is in effect. But note that "A tiger is striped" and "A raven is black" are true on their generic reading. Hence there must be biological rules that ground the truth of these generics on Cohen's view.

according to both Greenberg and Cohen's versions of the ambiguity thesis, all generics of the form "Ks are F" are ambiguous between two different readings, but they only have a distinct *normative* reading when this accords with the reader's background knowledge about the kind.

This is quite different from Leslie's most recent version of the ambiguity thesis. Based on her theory, generics are by default *not* ambiguous. Generics like (1) and (2), for example, unambiguously express a single generalization. Normative generics, however, *are* ambiguous according to Leslie. The crux of her theory is that the ambiguity of normative generics like (3) and (4) is due to the lexical ambiguity of kind terms like 'philosopher' and 'man.' Because these kind terms themselves have both a descriptive and a normative sense, generics about these kinds also have descriptive and normative readings. This version of the ambiguity view can be represented as follows:

(13) Gen x [Tiger(x)][Striped(x)]

(14) a. Gen x [satisfies-descriptive-criterion-of-philosopher(x)][cares-about-the-truth (x)]

b. Gen x [satisfies-normative-criterion-of-philosopher (x)][cares-about-the-truth (x)]

More precisely, Leslie maintains that kind terms like 'philosopher' and 'man' are lexically polysemous. Polysemy is a type of lexical ambiguity whereby a single word has multiple established senses that are distinct yet related.¹⁰ A typical example would be the word 'book.' In a sentence such as "This book is too heavy" the word denotes a physical entity with pages and a cover. In the sentence "This book is too difficult" the same word denotes

¹⁰ Polysemy is thereby distinct from *monosemy*, where one word is associated with a single meaning, and *homonymy*, where a single word is associated with multiple unrelated meanings. For an overview of current theoretical and experimental issues regarding polysemy, see Falkum & Vicente (2015).

the text that is written on these pages; a different yet related sense of the word (Löhr 2019). Note, however, that even though the word 'book' has a different sense in these two sentences, neither of these *sentences* is ambiguous. In both sentences there is only one interpretation of the word 'book' that is appropriate in the given linguistic context. Generics like (3) and (4), however, do have two different possible readings. Hence Leslie's view must be that the two different senses of kind terms like 'philosopher' and 'man' are both by default available to a reader, but that the generic context does not determine which one is most appropriate.

For Leslie, kind terms like 'philosopher' and 'man' are polysemous due to the common conception of philosophers and men as having a particular function or social role. Kind terms like 'raven' and 'tiger' are not polysemous in this same way because biological kinds like *ravens* and *tigers* are not conceived of as having a function. In their descriptive sense, kind terms like 'philosopher' and 'men' denote individuals who instantiate the properties that are typical of members of that kind. In their normative sense, however, these same terms denote those people who actually carry out the main function associated with that kind. This is a normative understanding of the term due to the *prima facie* obligation for all individuals who satisfy the description of a kind to also carry out the function of that kind. Hence in its normative sense, the word 'philosopher' denotes everyone who exemplifies the ideal of a philosopher; that is, who carries out the function that all philosophers (in a descriptive sense) are expected to carry out. Similarly, the normative sense of the term 'man' denotes all individuals who exemplify the ideal of a man by virtue of performing the function that all men (in the descriptive sense) are expected to perform. A more precise representation of the ambiguity of normative generics like (3) and (4) would therefore be as follows:

(15) a. Gen x [satisfies-descriptive-criteria-of-a-philosopher(x)][cares-about-the-truth(x)]

b. Gen x [exemplifies-the-ideal-of-a-philosopher(x)][cares-about-the-truth(x)]

(16) a. Gen x [satisfies-descriptive-criteria-of-a-man(x)][tough(x)]

b. Gen x [exemplifies-the-ideal-of-a-man(x)][tough(x)]

According to this version of the ambiguity thesis, the normative (b-)readings of generics are the result of the (unambiguous) meaning of *Gen* being applied to a distinct, lexically available normative sense of the kind term. Explaining Leslie's complex account of the truth-conditions of *Gen* in any detail is beyond the scope of this paper (Leslie 2007, 2008). Very roughly, she holds that on their normative (b-)readings, generic sentences *characterize the ideal* that is exemplified by the denoted individuals. To characterize this ideal is to specify the function they carry out. As Leslie has it: "[c]haracteristic properties of the ideal are either full or partial specifications of the primary role/function in question, or properties that are important or necessary for adequately fulfilling that role/function." So according to its normative reading, sentence (3) states that the function actually carried out by those individuals who exemplify the ideal of a philosopher, is to care about the truth or requires that one cares about the truth. Similarly, according to its normative reading, sentence (4) states that the function carried out by those who exemplify the ideal of a man, is to be tough or requires that one is tough. This is Leslie's analysis of the truth-conditions of normative generics.

Three different versions of the ambiguity thesis about normative generics have now been introduced. In each of these three versions, a reader's background knowledge about kinds like *philosopher* and *man* is partially responsible for the normative reading of generics like (3) and (4). As Greenberg and Cohen maintain, generics of the form "*Ks are F*" are always ambiguous even though a generic only has a normative reading when a reader's background

knowledge allows for the accommodation of a normative ‘in virtue of’ property or of a normative rule. According to Leslie’s account, one’s background knowledge rather results in kind terms like ‘philosopher’ and ‘man’ being lexically polysemous between a descriptive and normative sense, so that otherwise unambiguous generics become ambiguous between a descriptive and normative reading.

In the next section, it will be argued that each version of this ambiguity thesis confronts the same issue; even though normative generics have two readings, they do not satisfy a common test for ambiguity. Focusing on Leslie’s lexical polysemy version of the ambiguity thesis, two further objections are then levelled against her view that the normative reading of generics is due to the normative sense of the kind terms in question.

2. Against the Ambiguity Thesis

2.1 The Contradiction Test

One common way to test whether a sentence is ambiguous is to check for the lack of a contradiction in the conjunction of the sentence with its negation (Sennett 2016; Quine 1960). If a sentence is ambiguous, a non-contradictory reading of such a conjunction is possible. For example, since the sentence “The chicken is ready to eat” is structurally ambiguous, it is possible to read the following conjunction in such a way that it is not contradictory:

(17) The chicken is ready to eat but it’s not ready to eat; (we need to cook it first.)¹¹

Even though the phrasing of the sentence is awkward, one can definitely read it in such a way that both conjuncts can be true together. Based on the ambiguity view of normative

¹¹ Example adapted from Sennett (2016).

generics, sentences like (3) and (4) are similarly ambiguous, namely between expressing a descriptive and a normative generalization. If that were indeed the case, there should also be a non-contradictory reading of sentences like (18) and (19) below:

(18) *Philosophers care about the truth but philosophers don't care about the truth.

(19) *Men are tough but men aren't tough.

Against the prediction of the ambiguity thesis, no non-contradictory reading is possible for sentences like (18) and (19). One cannot, for example, read the first generic as a normative generalization stating what ought to be the case and the second as a descriptive generalization stating what is in fact the case. The lack of such a non-contradictory reading is a problem for each version of the ambiguity thesis.

Spelling out the objection in more detail for Leslie's account, note that on her view sentences like (18) and (19) should have a non-contradictory reading because kind terms like 'philosopher' and 'man' are polysemous. If that were the case, one would expect that a reader's knowledge of this polysemy would allow the reader to resolve the otherwise contradictory nature of (18) and (19). After all, when a kind term is in fact lexically ambiguous, a generic sentence can both be true and false, as shown by the following example:

(20) Bishops move diagonally but bishops don't move diagonally.

Even though this sentence contains a conjunction of two apparently opposing generics, it has a non-contradictory reading. The kind term is ambiguous – though in this case not between a descriptive and normative sense – allowing the generic sentence to be true on one meaning and false on another meaning. Knowing that 'bishop' can designate both a chess piece and a member of the Christian clergy, one can resolve the apparent

contradiction. It appears that one cannot, in this same way, interpret ‘philosopher’ and ‘man’ in two distinct ways to resolve the contradiction in (18) or (19).

Leslie disagrees with this judgment, however, arguing that because of the polysemy of the kind term ‘boy,’ “there is a sense in which one can coherently hold both that *boys don’t cry* and that *boys do cry*” (Leslie 2015a, 113). Leslie proposes that these two sentences are semantically compatible because the first token appearance of ‘boys’ can be understood in the normative sense whereas the second token appearance can be understood in the descriptive sense.¹²

Leslie is correct that there is a reading on which “boys don’t cry” and “boys do cry” are compatible. Importantly, however, this is not a reading on which both sentences have *generic* meaning, as required for Leslie’s argument. As Cohen has argued elsewhere, an emphatic affirmation like “boys [do]_F cry” can cause a sentence of the form “*Ks are F*” to have a (quasi-)existential reading (Cohen 2004). Indeed, when “boys *do cry*” is understood as akin in meaning to “some boys cry,” it is coherent to accept this sentence and the generic “boys don’t cry.” Although boys are expected not to cry, some of them do. Understood as a descriptive *generic* about boys, however, “boys cry” is incompatible with “boys don’t cry.” Hence one cannot solve the apparent contradiction in (21) below by reading the first generic as a descriptive generalization and the second as a normative generalization.

(21) *Boys cry but boys don’t cry.

¹² Not everyone would agree that a non-contradiction test is a suitable way to test for polysemy, since polysemy is often conceived as a phenomenon in between homonymy and indeterminacy (Zwicky & Sadock 1975). However, since Leslie’s main argument in favor of her polysemy view is precisely that normative generics (and other sentences containing normative kind terms) can be both true and false, the non-contradiction test must be a suitable way to test her account even by her own lights.

Even though normative generics like (3) and (4) have both a descriptive and a normative reading, they do not appear to be ambiguous. If their two different readings were a case of ambiguity, there should also be a non-contradictory reading available for sentences like (18), (19) and (21). Since no such reading is available, this is a first reason to reject the ambiguity thesis. Before an alternative theory of normative generics is defended, two additional arguments will be provided against Leslie's polysemy version of the ambiguity thesis.

2.2 Quantified Generalizations

According to Leslie's account, the fact that readers of (3) and (4) can select between a descriptive and a normative sense of kind terms like 'philosopher' and 'man' causes these generics to have both a descriptive and a normative reading. However, if readers of (3) and (4) really had access to both a descriptive and a normative sense of these kind terms, one would expect explicitly quantified generalizations featuring these same kind terms to have a distinct normative reading as well. Yet as has been noted before, quantified generalizations about philosophers and men do not have a distinct normative reading. Sentences like (5) and (6), repeated below, do not have two different readings for instance:

(5) Most philosophers care about the truth.

(6) All men are tough.

Both (5) and (6) only have a single descriptive reading. If Leslie were right, however, one would expect there to be a reading of (5) according to which most people who exemplify the ideal of a philosopher care about the truth. Similarly, there should be a reading of (6) according to which the sentence says that all those who exemplify the ideal of a man are tough. The fact that quantified generalizations evidently do not have this normative reading

is a second reason to doubt that the normative meaning of generics is due to the descriptive/normative polysemy of kind terms.

If Leslie were to respond to this objection and maintain that the polysemy of the kind terms really does give rise to the normative meaning of generics, she would have to argue that quantified generalizations in some way select specifically for the descriptive sense of these terms. She would have to hold that even though both senses of these kind terms are appropriate in a generic context, only the descriptive sense is appropriate in the context of an explicitly quantified generalization.

There is, however, no reason to think that the context of a quantified generalization selects specifically for the descriptive sense of a kind term. This becomes clear when considering quantified generalizations about kinds that are explicitly normative, like '*true* philosophers' or '*real* men.' Predicates like these do seem to denote only those individuals who exemplify the ideal associated with the kind (Del Pinal & Reuter 2017; Knobe et al. 2013). Furthermore, it appears that quantified generalizations with these predicates are perfectly felicitous, as can be seen in the following examples:

(22) Most true philosophers care about the truth.

(23) All real men are tough.

Given that generalizations like (22) and (23) sound perfectly fine, there is no reason to believe that quantified generalizations somehow require a kind term with a descriptive denotation. Hence Leslie cannot explain the absence of a normative reading for (5) and (6) based on the claim that a quantified generalization selects specifically for a descriptive sense of a kind term. Thus, if kind terms like 'philosopher' and 'man' were really polysemous between a descriptive and a normative sense, one should expect quantified generalizations

like (5) and (6) to have normative readings as well. In fact, given that Leslie believes that the phrase ‘true philosophers’ has the exact same denotation as ‘philosophers’ when that term is understood normatively, one should predict the normative (22) to be one reading that is available for (5). Similarly, since Leslie believes ‘real men’ to denote the same individuals that ‘men’ does when the latter term is understood normatively, one should expect the normative (23) to be one available reading for (6). Neither of these predictions is borne out, showing that kind terms like ‘philosopher’ and ‘man’ are not really polysemous between a descriptive and a normative sense. By locating the cause of the normative reading of generics like (3) and (4) in the lexical semantics of kind terms, Leslie’s account lacks an explanation for the fact that quantified generalization featuring these same kind terms do not have a normative reading as well.¹³

2.3 Anaphoric Pronouns

For Leslie, the normative readings of (3) and (4) result from interpreting the kind terms as denoting those individuals who exemplify the ideal associated with the kind. A third issue with this proposal is that the following compound sentences are perfectly felicitous:

(24) Philosophers care about the truth though most of them don’t live up to this ideal.

(25) Men are tough even though most of them don’t live up to this ideal.

In both these sentences, the anaphoric pronoun ‘them’ receives its denotation from the antecedent kind term. If that kind term were to denote individuals who instantiate the ideal

¹³ Neither Greenberg nor Cohen face this objection. According to their view the ambiguity of normative generics is not due to the meaning of kind terms that can also appear in quantified generalization, but rather due to the lexical ambiguity of *Gen* itself (Greenberg) or due to the structural ambiguity of “*Ks are F*” (Cohen).

of the kind, however, it would not make sense to say that many of these individuals do not live up to this ideal. The following sentences, which explicate this denotation, are therefore infelicitous:

(26) # People who exemplify the ideal of a philosopher care about the truth, though most of them don't live up to this ideal.

(27) # People who exemplify the ideal of a man are tough even though most of them don't live up to this ideal.

If Leslie's account were correct, it should not make sense to read the generic clause in (24) as a normative generic, given that it would require predicating of people who exemplify the ideal of a philosopher that many of them do not live up to this ideal. Similarly, it should not make sense to read the generic clause in (25) as having normative force. If the normative reading of these generics were really the result of interpreting the kind terms in a normative sense, only the descriptive reading of the generics should be available in these compound sentences. This is clearly not the case. In both (24) and (25) the normative reading of the generics is readily available. In fact, given that the second clause concerns the ideal of the kind in both cases, the normative reading of the generic is the most prominent one.

Thus, compound sentences like (24) and (25) provide evidence for the claim that even when the generic has a normative reading, the kind term does not only denote those individuals who exemplify the ideal of the kind. Instead, the most prominent reading of (24) is that although people who satisfy the description of a philosopher ought to care about the truth, many of them do not in fact live up to this ideal. The same point holds for (25).

Consider, furthermore, that these anaphoric pronouns also provide additional support for the claim made earlier that the coherency of holding both that "Boys don't cry" and that

“Boys *do* cry” is due to the emphatic affirmation in the second sentence resulting in an existential interpretation rather than due to the two different senses available for the kind term ‘boy.’ After all, “Boys don’t cry but of course they *do* cry” is equally coherent, even though in this case the anaphoric pronoun receives its denotation from the antecedent occurrence of ‘boys.’

I have now argued that normative generics are not ambiguous (2.1) and that their normative reading is not due to the lexical polysemy of the kind terms (2.2 & 2.3). Still, generics like (3) and (4) do appear to have a normative reading that is distinct from their descriptive reading. Hence an alternative theory of normative generics is required; one according to which they are not ambiguous. Such a theory would be successful if it can explain why only some generics have a normative reading and why generics are particularly prone to having this normative reading. The theory defended in the third and final part of this paper provides these explanations.

3. Indeterminacy rather than ambiguity

3.1 Indeterminate meaning

Although normative generics like (3) and (4) have both a descriptive and a normative reading, these sentences are not ambiguous. On the alternative account defended here, the normative reading that is available for some generics is not due to the lexical ambiguity of *Gen* or of kind terms like ‘philosopher’ and ‘man,’ nor due to the structural ambiguity of the

surface form “*Ks are F.*”¹⁴ Instead, sentences like (3) and (4) can express only a single generalization, which can be represented as follows:

(28) Gen x [philosopher(x)][cares-about-the-truth (x)]

(29) Gen x [man (x)][tough (x)]

As will be explained in more detail below, there are three different types of generic relations that can exist between a kind and a property; a statistical, causal, and functional one. A generic sentence says that at least one of these relations exists but does not specify which one(s). In the same way that a sentence like “I am visiting my aunt,” for instance, does not specify whether I am visiting a sister of my mother or of my father, so a generic does not specify the type of generic relation that exists. And just like “aunt” is indeterminate without therefore being ambiguous, so *Gen* is indeterminate with respect to the type of generic relation that exists without therefore being ambiguous. The truth-conditions of generics can be informally stated as follows:

- (a) A generic of the form “*Ks are F*” is true iff there exists at least one generic relation between *K* and *F* (where a generic relation is a suitable statistical, causal, or functional relation).¹⁵

¹⁴ The view about normative generics defended here is compatible with several different theories about the content of kind terms like ‘philosopher’ and ‘man.’ It was argued that these kind terms are not by default ambiguous between a descriptive and a normative sense in the context of a generic generalization. This still leaves open the possibility that these kind terms can, *in other contexts*, denote only those individuals who exemplify the ideal of the kind, for example due to having contextualist semantics (Saul 2012) or due to *ad hoc* pragmatic sense modulation (Carston 2019). A sentence like “Hillary Clinton is the only man in the Obama administration” (Leslie 2015a) may be one such context.

Even though each generic sentence unambiguously expresses a single generalization, this generalization only says that at least one of the different generic relations exists between a kind and a property. Because there are three different generic relations, a generic sentence can be true in several different ways. A generic can be true based on a suitable statistical, causal, or functional relation, or indeed any combination of these three. The meaning of a generic sentence is indeterminate with respect to which of these relations exist.

The truth-conditions of sentences like (3) or (4) can now also be informally explicated as follows:

(b) “Philosophers care about the truth” is true iff there exists at least one generic relation between *being a philosopher* and *caring about the truth* (where this can be a suitable statistical, causal, or functional relation).

(c) “Men are tough” is true iff there exists at least one generic relation *between being a man* and *being tough* (where this can be a suitable statistical, causal, or functional relation).

Before further defending this claim that generics are indeterminate with respect to the type of generic relation that exists, let me provide an example and a brief characterization of the three types of generic relations. A generic *functional* relation exists between a kind *K* and a property *F*, when *F* is the defining function of *K* or when *F* is a property that is required for *K*'s to adequately carry out their defining function. A kind's defining function can be thought

¹⁵ Although it will not be discussed any further here, there is also the additional condition that a generic is only true if there exists *no* generic causal or functional relation between *K* and an *incompatible alternative* to *F*. This condition explains why a generic like “Humans are right-handed” is false even though most humans are right-handed. For more on this additional condition, see (REF SUPPRESSED).

of as its functional essence. Not all kinds have such a functional essence but when they do, an object can be categorized as a member of that kind based on its function. It is, for example, true that “Hearts pump blood through the circulatory system” because the defining function of the kind *heart* is to do just that; pump blood through the circulatory system. Given that this generic sentence is true based on a functional relation, it would still be true even if all actual hearts stopped pumping blood due to some global pandemic. In the next section, this generic functional relation will be revisited, since there it will be argued that it is this functional relation that is responsible for the normative force of some generics.

A generic *causal* relation exists between a kind *K* and property *F* when at least in some cases where a *K* instantiates *F*, the defining property of *K* is part of the *causal* explanation for the instantiation of *F*. Whatever property determines an individual’s membership of *K*, the instantiation of this property must be causally responsible for some cases of a *K* instantiating *F*. The sentence “Sharks attack bathers,” for example, is true based on this generic relation, even though the vast majority of sharks never attack a bather. A generic causal relation exists between the kind *shark* and the property *attacking a bather* since the nature of sharks is causally responsible for some cases of a shark attacking a bather. Finally, a generic *statistical* relation exists between a kind *K* and a property *F* when a majority of *Ks* instantiate *F* and when this majority is robust.¹⁶ It is based on this relation, for example, that “Cars have radios” and “American barns are red” are true generic sentences.

A generic of the form “*Ks* are *F*” says that at least one of these three relations is instantiated between *K* and *F* but does not specify which one(s). Despite not being

¹⁶ For more on this robustness, see (SUPRESSED FOR REVIEW). The basic idea is that this majority must not only exist in our actual world but also in all the closest possible worlds in which *K* has alternative members.

ambiguous, this indeterminacy can cause generic sentences to have multiple readings. While a generic sentence is semantically indeterminate with respect to the type of generic relation that exists, stating a generic in a particular context can convey the existence of a specific generic relation. The multiple readings of a generic sentence correspond to the specific messages that can be conveyed by uttering the sentence, rather than that they correspond to multiple semantic representations. As Hintikka already noted: “From the fact that a sentence can be split into a disjunction of several sentences by evoking some further feature of the speech-situation [...] it does not follow that the sentence is ambiguous” (Hintikka 1973, 205).¹⁷

The specification of pragmatic meaning that occurs when a generic sentence is uttered in a conversational context can be explained based on standard Gricean maxims (1975). When, for example, someone asks for specific information about a kind, often the existence of only one of the three generic relations would satisfy the maxim of relevance. In that case, the utterance of a generic sentence in response to such a question implicates the existence of the one relevant generic relation. Consider, for example, the different messages conveyed by (3) and (4) when they provide an answer to either Q1 or Q2:

(30) Q1: “What is a property that most philosophers have?”

Q2: “What is the role of philosophers?”

A: “Philosophers care about the truth.”

(31) Q1: “What is a property that most men have?”

Q2: “What is the role of men in society?”

A: “Men are tough.”

¹⁷ For a further discussion of this issue and the citation from Hintikka, see Zwicky & Sadock (1975).

Depending on whether one responds to Q1 or Q2, (3) and (4) will either *specifically* implicate the existence of the statistical relation or of the functional relation. In a null context – as when provided in this paper – generic sentences like (3) and (4) have multiple readings only because one recognizes that an utterance of the sentence can be used to convey several more specific messages. On the indeterminacy view then, a generic has only a single semantically available meaning, yet has multiple readings corresponding to multiple more specific in-context pragmatic meanings. On an ambiguity view, the multiple readings of a generic instead correspond to multiple semantically available meanings, each of which can be selected for as the in-context pragmatic meaning. How to arbitrate between these two alternative views?

A first argument in favor of the indeterminacy view has already been provided. Recall that the main problem for an ambiguity view of normative generics is that these sentences fail the contradiction test. A conjunction of a generic sentence and its negation can only be contradictory. Sentences like (18) and (19), repeated here for convenience, were found to be contradictory:

(18) *Philosophers care about the truth but philosophers don't care about the truth.

(19) *Men are tough but men aren't tough.

The indeterminacy thesis readily explains why these conjunctions can only be contradictory. Given the truth-conditions provided in (b) for the sentence "Philosophers care about the truth," the first conjunct in (18) states that at least one generic relation exists between *being a philosopher* and *caring about the truth*, whereas the second conjunct denies that there exists at least one such relation. This can only be contradictory. Since a generic sentence is not semantically ambiguous between different meanings, it is not

possible to understand the negation in the second conjunct as applying to a different generalization than the one affirmed in the first conjunct. Instead, the negation in the second conjunct can only apply to the same generalization that is expressed by the generic in the first conjunct, thus resulting in a contradiction. The same point holds for (19) based on the truth-condition in (c).

A second argument relies on the fact that the indeterminacy thesis entails that for a speaker to assert a generalization, no specification is required. On an ambiguity view on the other hand, for a speaker to assert a generalization, selection is mandatory. If a generic sentence is semantically ambiguous between several generalizations, a cooperative speaker who aims to assert a generalization by stating a generic must have the intention to assert one of these generalizations. If the context of the conversation does not allow the listener to determine which of the semantically available generalizations is the intended one, communication has failed and has to be repaired, for example by asking: “What do you mean?”. On an indeterminacy view, however, a generic sentence can only express a single generalization and a speaker can assert this generalization without the intention of communicating something more specific. In a context that does not require a speaker to be specific, one should therefore expect that stating a generic sentence constitutes a successful assertion and that nothing must be repaired. This is exactly what we find in the following examples:

(32) Q3: What do you think is a property of philosophers?

A: Philosophers care about the truth.

(33) Q3: What do you think is a property of men?

A: Men are tough.

In the context of answering Q3, a generic answer is appropriate and the speaker has successfully asserted a generalization. A speaker can answer the question while leaving it indeterminate based on which specific generic relation they believe the sentence to be true. If the ambiguity thesis were correct, these answers should instead strike one as ambiguous and requiring reparation. That is not the case. Of course, one can continue the conversation by asking the speaker to be more precise about the way in which they believe the generic to be true, but such specification is optional. In the context of answering Q3, it suffices to respond with a generic that is indeterminate with respect to the type of generic relation that exists.¹⁸

Two reasons have now been provided for why one should favor the indeterminacy thesis over the ambiguity thesis. Generic sentences unambiguously express a single generalization that is indeterminate with respect to the type of generic relation that exists. Nevertheless, generic sentences can have multiple readings that correspond to multiple possible in-context-specifications. What remains to be explained now is why not all generic sentences have three different readings, given that there are three different generic relations based on which a generic sentence can be true.

The different readings that are available for a generic sentence are restricted to those that are consistent with what is commonly presupposed about the kind and the property at hand. If the existence of one of the generic relations is inconsistent with information that is by default in the common ground, this generic relation will not arise as a reading of the

¹⁸ It is because the generalization expressed by a generic is indeterminate that it is so difficult to object to utterances of generic stereotypes and falsify their content. Often when objecting to a generic stereotype like “Men are tough,” the original speaker will maintain that the stereotype is nevertheless true based on a fact unaddressed by one’s objection. For more on the difficulties in responding to generic stereotypes, see (SUPRESSED).

sentence in a null context.¹⁹ Descriptive generics like (1) and (2), for instance, have both a statistical and a causal reading because an utterance of (1) or (2) may implicate the existence of either a statistical or a causal generic relation. Neither of these generics has a functional reading, however, such that the generic describes the function of the kind. After all, animals like tigers and ravens are commonly conceived as not having a function. Hence a reader of (1) or (2) recognizes that a cooperative speaker may use these sentences to convey the existence of a statistical or of a causal generic relation, but not the existence of a functional relation. As a result, these generics do not have a functional reading (with normative force).

Normative generics like (3) and (4) are distinct from descriptive generics like (1) and (2) insofar as the former do have a functional reading. They have a functional reading because it is consistent with the default common ground that a functional relation exists between the kind and the generalized property. A speaker who utters (3) or (4) may do so in order to implicate the existence of a functional relation. Hence both (3) and (4) have a functional reading (with normative force).

On the current proposal then, generics have a normative reading when the kinds are conceived of as having a function. In this respect the proposal is similar to that of Leslie. Yet it is not the case that this functional conception results in kind terms being polysemous between a descriptive and a normative sense. Instead, this functional conception allows a

¹⁹ Some contexts, however, force a functional-normative reading. Imagine that someone explicitly asks what the function of a tiger is. In that case, responding with “Tigers have stripes” will convey that the function of a tiger is to have stripes. In this context the functional reading is possible because the default assumption that animals as such do not have functions has been trumped. The speaker’s question presupposes that animals do have a function. If this presupposition is not objected to, it is accommodated and added to the common ground against which the generic is interpreted (Stalnaker 2002).

reader of (3) and (4) to recognize that a cooperative speaker who utters one of these sentences may do so in order to communicate the existence of a generic functional relation.²⁰

3.2 Function Statements with Normative Entailments

When a kind is commonly conceived as having a function, a generic about that kind will have a functional reading. The following generics therefore have a functional reading:

(34) Couches are soft.

(35) Hearts pump blood through the circulatory system.

(36) Bus drivers transfer passengers between different locations.

For each of (34-36) the generalized property either is the kind-defining function itself or is required for a member of the kind to adequately carry out that function. Each of these generics is therefore true based on a generic functional relation. Since the function of a couch is presumably to allow people to sit and relax – which requires that they be soft – (34) is true. Similarly, (35) is true because the function of a heart is to pump blood through the circulatory system, and (36) is true based on the fact that the function of bus drivers is to transfer passenger between different locations.

²⁰ In any case, Leslie also requires a similar pragmatic theory in addition to her polysemy theory to explain why stereotypes like “Philosophers are bad writers” and “Men are weak” do not have normative force. On Leslie’s polysemy view a normative reading is semantically available given the normative sense of the kind terms, so an additional pragmatic account is needed to explain why this reading nevertheless does not arise. On the alternative view that has been defended here, these generics do not have normative force because it is commonly presupposed that the generalized properties are not required to carry out the function of the kind. The normative reading is inconsistent with the common ground about these kinds.

Because these generics have a functional reading, they also have normative force. That is because a kind's defining function is an *inherently normative notion*. A kind's function is normative in both the axiological sense, i.e. that it determines the standard for evaluating whether a member of a kind is a good or bad member of that kind, and in the deontic sense, i.e. that it determines what members of the kind ought to be or do. Thus, when (34) is read as saying that carrying out the function of a couch requires that it be soft, this function statement entails that:

(37) A good couch is one that is soft.

(38) Every couch ought to be soft.

Exactly what grounds the normative force of an object's function is a question that cannot be settled here (Franssen 2006). It would seem that this normative force is somehow grounded in our practical reasons for wanting an object to fulfill the wish or desire that the kind was designed to fulfill. What grounds the normativity of biological functions is even more vexing, since nature falls outside of the normative domain. Philosophers of biology have proposed a variety of accounts in order to explain what it is for biological kinds, like organs, to have a function (Ariew et al. 2002). Note, however, that it is precisely because our ordinary notion of a kind's function is an inherently normative one that making sense of its application to biological kinds has proven so puzzling for philosophers of biology. This normativity of the notion of a function is all that is required here for the claim that when (35) is read as describing the function of a heart, it entails that:

(39) A good heart is one that pumps blood through the circulatory system.

(40) Every heart ought to pump blood through the circulatory system.

In the case of social kinds, the normative nature of their defining functions is somewhat easier to understand. As Leslie already said, there is a *prima facie* obligation for members of a kind to carry out the function of their kind. According to the current account, it is by virtue of this normative expectation for members of a kind to perform their function, that (36) has normative force when it is read as describing the function of bus drivers. As a function statement, this generic entails both that a good bus driver is one that transfers passengers between locations and that bus drivers ought to perform this function.

We can now also explain why generics like (3) and (4) have normative force. From the reading of (3) by which it conveys that fulfilling the function of a philosopher requires one to care about the truth, this generic also has normative entailments. From that reading, (3) entails (41) and (42):

(41) A good philosopher is one that cares about the truth.

(42) Every philosopher ought to care about the truth.

Similarly, (4) has a functional reading by which it conveys that fulfilling the function of a man requires that one is tough. From that reading, it entails (43) and (44):

(43) A good man is one that is tough.

(44) Every man ought to be tough.

This explains why some generics have normative force. When a generic has a reading on which it conveys the existence of a generic functional relation, it also entails on that reading that every member of the kind ought to instantiate the generalized property.

Conclusion

Some generics, like “Philosophers care about the truth” and “Men are tough,” have both a descriptive and a normative reading. I have argued that this is not because these generics are ambiguous and in particular not due to the lexical polysemy of kind terms like ‘philosopher’ and ‘man,’ as Leslie proposes. Instead, generics can have a normative reading because generic sentences are indeterminate with respect to the type of generic relations that exist, including a functional relation. When an utterance of a generic sentence can be used to convey the existence of this functional relation, the generic has a functional reading with normative force.

This theory readily explains why only some generics have a normative reading. Descriptive generics like “Tigers are striped” and “Ravens are black” do not have a normative reading because based on what is commonly presupposed about these kinds, a cooperative speaker cannot use one of these generics to convey the existence of a generic functional relation. Furthermore, generics are particularly prone to having such normative readings because unlike explicitly quantified generalizations, they express a generalization that is indeterminate with respect to the type of generic relation that exists. Thus, this theory explains normative generics without ambiguity.

References

- Ariew, A.; Cummins, R.; Perlman, M. (ed.), 2002, *Functions: New essays in the philosophy of psychology and biology*. Oxford: Oxford University Press.
- Asher, N. & Pelletier, F. J., (2012), More Truths About Generic Truth, In: A. Mari, C. Beyssade, Claire, & F. Del Prete (Eds.) *Genericity*, Oxford: Oxford University Press, 313–333.

- Carlson, G. (1995). Truth-Condition of Generic Sentences: Two Contrasting Views. In G. Carlson & F.J. Pelletier (Eds.), *The Generic Book*. Chicago: University of Chicago Press.
- Carston, R. (2019). Ad Hoc Concepts, Polysemy and the Lexicon. In K., SCOTT, B. Clark, & R. Carston (Eds.), *Relevance, Pragmatics and Interpretation* (pp. 150-162). Cambridge: Cambridge University Press.
- Cohen, A. (2001). On the generic use of indefinite singulars. *Journal of semantics*, 18(3), 183-209.
- Cohen, A. (2004). Existential generics. *Linguistics and Philosophy*, 27(2), 137-168.
- Del Pinal, G. (2018). Meaning, modulation, and context: a multidimensional semantics for truth-conditional pragmatics. *Linguistics and Philosophy*, 41(2), 165-207.
- Del Pinal, G., & Reuter, K. (2017). Dual character concepts in social cognition: Commitments and the normative dimension of conceptual representation. *Cognitive science*, 41, 477-501.
- Falkum, I. L. & Vicente, A. (2015). Polysemy: Current perspectives and approaches (editorial), *Lingua*, 157, 1-16.
- Franssen, M. (2006). The normativity of artefacts. *Studies in History and Philosophy of Science Part A*, 37(1), 42-57.
- Greenberg, Y. (2002). Two kinds of quantificational modalized genericity, and the interpretation of bare plural and indefinite singular NPs. In B. Jackson (Ed.) *Proceedings of SALT*. Cornell University: Cornell Linguistics Circle.
- Grice, P. (1975). "Logic and conversation". In P. Cole, J.L. Morgan (eds.). *Syntax and semantics. 3: Speech acts*. New York: Academic Press. pp. 41–58.
- Haslanger, S. (2014). The normal, the natural and the good: Generics and ideology. *Politica & Società*, 3(3), 365-392.
- Heim, I. (1982). *The Semantics of Definite and Indefinite Noun Phrases*. Ph.D. dissertation, University of Massachusetts, Amherst.

- Hintikka, K.J.J. (1973). Grammar and Logic: Some Borderline Problem. In K.J.J. Hintikka, J.M.E. Morvecsik, and P. Suppes (Eds.), *Approaches to natural language: Proceedings of the 1970 Stanford workshop on grammar and semantics*. Dordrecht, D. Reidel, 197-214.
- Kamp, H. (1981). A theory of truth and semantic interpretation. In J. Groenendijk, T. Janssen and M. Stokhof (eds.), *Formal Methods in the Study of Language*. Dordrecht: Forts Publications, pp. 277–322.
- Knobe, J., Prasada, S., & Newman, G. E. (2013). Dual character concepts and the normative dimension of conceptual representation. *Cognition*, 127(2), 242-257.
- Kratzer, A. (1995). “Stage-Level and Individual-Level Predicates”. In G. Carlson and F. J. Pelletier (eds.) *The Generic Book*. Chicago: Chicago University Press, pp. 125-176.
- Krifka, M., Pelletier, F. J., Carlson, G. N., ter Meulen, A., Chierchia, G., and Link, G. (1995). “Genericity: An Introduction,” in G. N. Carlson and F. J. Pelletier (eds.), *The Generic Book*, Chicago: University of Chicago Press.
- Laskowski, N. G. (2020). Moral Constraints on Gender Concepts. *Ethical Theory and Moral Practice*, 1-13.
- Leslie, S.J. (2007). Generics and the structure of the mind. *Philosophical perspectives*, 21, 375-403.
- Leslie, S.J. (2008). Generics: Cognition and acquisition. *Philosophical Review*, 117(1), 1-47.
- Leslie, S.J. (2014). Carving up the social world with generics. *Oxford studies in experimental philosophy*, 1, 208-232.
- Leslie, S.J. (2015a). “Hillary Clinton is the only man in the Obama administration”: Dual Character Concepts, Generics, and Gender. *Analytic Philosophy*, 56(2), 111-141.
- Leslie, S.J. (2015b). Generics oversimplified. *Noûs*, 49(1), 28-54.
- Lewis, D. “Adverbs of Quantification,” in *Formal Semantics of Natural Language*, edited by E. L. Keenan. Cambridge: Cambridge University Press, 1975, 3–15.
- Liebman, D. (2011). Simple generics. *Noûs*, 45(3), 409-442.
- Löhr, G. (2019). Polysemy and contextualism. *Manuscript in preparation*.
- Reuter, K. (2019). Dual character concepts. *Philosophy Compass*, 14(1), e12557.

- Saul, J., (2012), Politically Significant Terms and Philosophy of Language: Methodological Issues, In Crasnow, S.. and Superson, A. (eds.), *Out From the Shadows: Analytical Feminist Contributions to Traditional Philosophy*, New York: Oxford University Press, 195–216.
- Sennet, A. (2016). Polysemy. *Oxford handbooks online*.
- Stalnaker, R. (2002). Common ground. *Linguistics and philosophy*, 25(5/6), 701-721.
- Sterken, R. (2015). Generics in context. *Philosopher's Imprint*, 15(21), 1–30.
- Sterken, R. K. (2017). The meaning of generics. *Philosophy Compass*, 12(8), e12431.
- Teichman, M. (2017). The sophisticated kind theory. *Inquiry*, 1-47.
- Quine, W. V., 1960. *Word and Object*, Cambridge, MA: MIT Press.
- Zwicky, Arnold M. and Jerrold M. Sadock, 1975. "Ambiguity Tests and How to Fail Them," in *Syntax and Semantics*, 4, Kimball (ed.), New York: Academic Press, 1–36.