**The Meaning of Generics**

**Abstract:** This article discusses recent theories of the meaning of generics. The discussion is centred on how the theories differ in their approach to addressing the primary difficulty in providing a theory of generic meaning: The notoriously complex ways in which the truth-conditions of generics seem to vary. In addition, the article summarizes the primary considerations for and against each theory.

Generics are sentences such as:

(1) a. Horses are mammals.

b. Horses are smart animals.

c. Ticks carry Lyme disease.

They play a central role in our everyday speech and reasoning, and yet it has proven exceptionally difficult to provide an adequate theory of the meaning of generics. Generics seem to express, or at least communicate, generalizations, but it is far from clear just what generalization(s) they indeed express or communicate. Unlike explicitly quantified sentences (e.g., *all horses are mammals* or *generally horses are smart*), generics are unmarked – leaving theorists uncertain whether they are quantified sentences (of some sort), involving an unpronounced quantifier expression *Gen*, or predications (of some sort) as their surface structure may suggest. Generics do not convey any stable or easily specifiable information about how many members of the given kind or group have the given property [Lawlor (1973), Carlson (1977), Leslie (2007, 2008)]. Moreover, generics are often taken to communicate non-accidental, *quasi*-essential or principled generalizations [Dahl (1975), Carlson (1989), Pelletier and Asher (1997), Prasada and Dillingham (2006), Greenberg (2012)], however, the strength and nature of the relevant modal relation seems to vary from generic to generic (and more controversially between utterances of a single generic).

To illustrate, consider the small sample in (1). While it may appear apt to characterise (1a) as universally quantified, (1b) seems better characterised as a statement about most horses or horses in general, not about all of them (not even all of the normal ones or some restricted set of them). To make matters even more complicated, (1c) appears merely to require that some ticks carry Lyme disease, as only a very small minority carry the disease. Still further, (2) conveys a generalization that is stronger than its universal counterpart:

(2) Supreme Court Justices have even social security numbers.

In a scenario where all Supreme Court Justices have even social security numbers, (2) can be intuitively false.

Examples like (2) indicate that there is an intensional component to generic meaning. However, saying just what this intensional component is, is fraught with difficulties: Consider the variety of modal features exhibited by the sample of generics in (3):

(3) a. OrangeCrusher2000s crush oranges.

 b. Members of this club help each other in emergencies.

 c. A gentleman does not offend a lady.

 d. Oil floats on water.

 e. Bananas cost $0.99/lb.

(3a) can be true even when the said juicers are directly off the assembly line and are never going to be used – the truth of (3a) seems to stem from the juicers’ capacities, a distinctively modal notion. (3b) can be true even if no emergencies ever occur – on such an interpretation, (3b) seems to be about what the members of the club would do if an emergency were to occur. (3c), instead, conveys some sort of social norm – about how gentlemen should behave towards ladies. (3d) communicates some kind of natural physical or chemical law. Finally, if the price of bananas is set to $0.99/lb, (3e) can still be true even when inept cashiers routinely charge $0.89/lb – that is, (3e) can be understood as expressing a contingent rule.

Consideration of even just the small sample of generics in (1)-(3) makes it clear that their intuitive truth-conditions vary greatly across several distinct dimensions. Consequently, a primary task in coming up with a theory of generic meaning, is to somehow identify these dimensions and any semantic stability across them (if there is any).

There are a wide variety of semantic theories that have been defended for generics, and with them a large variety of fundamentally different approaches to dealing with the difficulties posed by truth-conditional variability: Some theorists abandon the idea that the variability in question is semantic in nature (see the sections Simple Kind-Predication and Pragmatic Theories below). Other theorists maintain that, despite the variability, (most) generics express a determinate and stable quantified generalization – for example that *all normal Ks are F* (see the section Normality Theories below). Psychologically-oriented theorists argue that generics give voice to cognitively primitive, default generalizations and that the variability in question is grounded in qualitative features of basic human cognition (see the section Psychologically-Based Theories below). Finally, some argue that the variability at issue is simply another instance of linguistic context-sensitivity (see the section Context-Sensitive Theories below), similar in kind to the context-sensitivity exhibited by expressions like *that* or quantifier domain variables.

In what follows, I will outline a number of prominent theories of the meaning of generics as examples of the different approaches, mentioning some of the pros and cons of each theory.

**Simple Kind-Predication**

A prominent, but nonetheless controversial, proposal is that generics are a species of monadic kind-predication [Carlson (1977), Liebesman (2011)]. On this view, generics do not express dyadic generalizations – quantificational or otherwise – rather they ascribe a property to a kind. On such analyses the noun phrase is taken to be a referring expression (e.g., a name or a definite description) that denotes a kind.[[1]](#footnote-1)

Liebesman (2011) advocates the simple kind theory. According to this theory, the semantics of generics is “simple” in that generics straightforwardly ascribe properties to kinds. The semantic theory doesn’t attempt to account for any of the variability noted in the examples (1)-(3). Rather, variability is part and parcel of a metaphysical theory of genericity: A theory of how and when kinds inherit properties from their members. For example, the generic *tigers are striped* is true because the kind tiger is striped: the kind tiger has inherited the property of being striped from the individual tigers that are striped. There needn’t be any stable proportion of individuals having the object-level property (or other such conditions) in order for the kind to inherit the corresponding kind-level property.

There are three main benefits of such a view: First, it eschews the need to provide a semantic theory. Second, though generic sentences are present in every known language, the generic quantifier *Gen* is not pronounced in any known language, and this is not what one would expect if *Gen* were indeed part of the logical form of generics. On the simple kind view *Gen* doesn’t exist and so the kind-predication theorist has an easy explanation of its complete absence. Third, the theory is consistent with accounts of non-generic predications that display similar forms of variability. Theorists do not standardly explain the variability of the below non-generic predications on semantic grounds, so why do it for generics? Consider, for instance:

(4) a. The table is touching the wall.

 b. Oxford’s Keble College is red.

 c. The children ate the pizza.

(4a) can be true even though only part of the table – say, a single edge – is touching the wall. Similarly, speakers can truly utter (4b) even though Keble College is not entirely made of red bricks. (4c) can be true even when only four out of the group of six children ate any pizza. Cases like (4a)-(4c) exhibit analogous behaviour and yet semanticists do not standardly posit covert *Gen*-like structure in order to account for it.

Turning now to the challenges: the main challenge for the simple kind-predication theorist is to defend the claim that generics are simple predications in light of evidence that their logical forms are quantificational. While there is some linguistic evidence in favour of a kind-predicating logical form,[[2]](#footnote-2) the vast majority of evidence favours the existence of *Gen*.[[3]](#footnote-3) However, according to Liebesman, this linguistic evidence can be accounted for on independent semantic and pragmatic grounds.

One of the main benefits of covert structure is that it can account for generics involving individual co-reference. The early Carlson (1977, p. 161) argued that covert structure is needed as a necessary semantic addition to simple kind-predication – consider the example (6a):

 (6) a. Goldfish like everyone who likes them.

 b λ*x*. [*x* likes everyone who likes *x*](Goldfish).

 c. Gen *x* Every *y* [if Goldfish(*x*) and Likes(*y*, *x*), then Likes(*x*, *y*)]

 d. Exists *x* Every *y* [if Goldfish(*x*) and Likes(*y*, *x*), then Likes(*x*, *y*)]

(6a) has a reading where individual co-reference is required to yield the given interpretation – that is, a reading whereby each individual goldfish has the property of liking everyone who likes that individual goldfish. A simple kind-predication logical form for (6a), given in (6b), does not capture the appropriate truth-conditions since it says that the kind goldfish likes everyone that likes the kind goldfish. The *Gen*-theorist, on the other hand, allows the pronoun to be bound, akin to (6c).

Liebesman argues that *Gen* is not needed to account for cases like (6a): He would treat the bare plural in (6a) as an indefinite (exploiting the existing ambiguity in the bare plural). This initially makes the semantic content of (6a) too weak – akin to (6d) – however, he would argue, the apparent strength of (6a) can be recovered via Gricean pragmatic means. (6a), though it sounds like a generic, is not really a generic after all.[[4]](#footnote-4)

**Normality Theories**

There are several normality-based theories of generic meaning [Asher and Morreau (1995), Asher and Pelletier (2012), Pelletier and Asher (1997), Greenberg (2007), Nickel (2008, 2016)]. The basic idea that underlies all of them is that generics express something about what is normal for the members of the given kind. *Dogs have four legs* is true because the only dogs that don’t have four legs are the ones that have been deformed by some sort of birth defect or genetic abnormality, or were involved in some sort of unfortunate accident. Similarly, *ravens are black* is true because the only ravens that aren’t black are the abnormal ones – e.g., painted ravens or rare albino ravens.

There are two approaches to spelling out what is normal for the members of a given kind. The first sees what is normal, as what properties the members of the kind would possess had its’ members met with entirely normal circumstances – no accidents, interventions, rarities, norm-violations. This type of approach sees generics as communicating something about what members of the given kind are like in the most normal possible worlds. These types of theories I will label *normal worlds approaches*. The second type of approach sees what is normal for the given kind, as what properties the normal members of the kind possess. Generics, then, express something about what the normal members of the kind are like. I will label these *normal individual approaches*.

There are four major explanatory virtues that drive the normality approach in either of its forms.

The first is that a notion of normality can explain quantificational variation as an epiphenomenon [cf. Asher and Pelletier (2013), Nickel (2016)]. As noted above, the proportion of members of the given kind (at the actual world) that need satisfy the predicated property varies drastically from generic to generic. (Recall (1)-(3).) According to the normality theorist, however, the only thing that matters to truth-conditions is how things stand with members of the kind at normal worlds, or with the normal members of the kind. The proportion of members of the kind that occupy the normal worlds or that are normal will differ for different generics.

The second virtue is that normality can provide a nice account of exception toleration [cf. especially Greenberg (2007), Eckhardt (1999), Nickel (2008, 2016)]. The idea is that abnormality tracks exceptions. This is at least *prima facie* plausible. For instance, in the case of *dogs have four-legs*: The exceptions are the dogs that got injured or were born with birth defects – i.e., those that met with abnormal circumstances and plausibly count as abnormal members of the kind. (For interesting alternatives to normality, see Declerck (1991) and Cohen (2013).)

The third explanatory virtue is that such accounts can explain the modal force of generics. As noted, (most) generics seem to have a modal component to their meaning. On the normal worlds approach, generics, like modals, quantify over possible worlds, and hence, have a substantial modal component to their meaning. Sophisticated versions of the normal individuals approach add a counter-factual component to generic meaning: Depending on how things are at the actual world, it may be that no normal members of the kind exist. (Imagine a spectacular coincidence in which all the dogs at the actual world lost a leg.) This indicates that quantification over counter-factual worlds is needed as part of the normal individuals account: if there were normal members of the kind, then they would possess the given property [Nickel (2008)].

The fourth virtue is that normality approaches vindicate a wide variety of inference patterns studied in the literature on defeasible and non-monotonic reasoning [Pelletier and Asher (1997)]. Generics figure prominently as premises and conclusions in such patterns of reasoning. As an example, consider the pattern known as *defeasible modus ponens*:

(DMP) Birds fly.

 Tweety is a bird.

 Therefore, Tweety flies.

Simplifying and glossing over differences in approaches, the normality theorist can explain the defeasible validity of (DMP) by representing it as the deductively valid argument in (N-DMP):

(N-DMP) All normal birds fly.

 Tweety is a bird.

 Tweety is a normal.

 Therefore, Tweety flies.

When speakers reason as in (DMP), they tacitly assume the enthymematic premise that Tweety is normal (*qua* bird). The conclusion of (DMP) can be defeated if we learn that Tweety is in some way abnormal (*qua* bird). It is worth noting that most other theories of generic meaning would have a difficult time explaining our tendency to reason along the lines of defeasible patterns like (DMP).

**Normal Worlds**

The normal worlds approach has a distinguished history, originating in the work of semanticists such as Heim (1982), Kratzer (1981) and Krifka et al (1995, pp. 49-57). In a series of papers, Asher, Pelletier and Morreau develop the most sophisticated version of the approach. According to their theory, generics are a type of modal conditional involving a parameterised notion of normality. Generics universally quantify over individuals in the most normal worlds, but what worlds count as the most normal is a function of the individual being quantified over and the kind in question. Asher and Pelletier (2013) call such worlds, *K(i)-normal worlds* and provide the truth-conditions for a generic, *Ks are F*, are as follows:

(7) For all *i*, for all of the most *K(i)*-normal worlds *w*, if *i* is a *K* in *w*, then *i* is *F* in *w*.

Precisefying the notion of a *K(i)-*normal world is, of course, a complex issue and a highly contentious one.

As an example, consider (3a):

(8) a. Birds fly.

b. For all x and all w [if x is a bird in w and w is normal with respect to x’s being a bird, then x flies in w].

According to this analysis, the most normal worlds are worlds in which birds with broken wings, penguins, ostriches and emus fly. At the most normal worlds, birds that encountered unfortunate accidents or interventions involving their wings at the actual world, will not encounter such circumstances, and so will be perfectly capable of flying. And, penguins, ostriches and emus will possess the properties that are normally possessed by birds at the actual world, so that they in fact fly at the most normal worlds (e.g., they wouldn’t be too large to fly, or would be capable of swimming and flying).

An objection to the normal worlds approach, found in Eckhardt (1999) [cf. also Krifka et al. (1995, p. 56), Cohen (2013)], runs as follows:

…one might ask how speakers can acquire this kind of sophisticated knowledge about counterfactual worlds. All they can look at is the real world around them. Generic beliefs should be the result of “[speakers’] desire to understand and characterise the world immediately surrounding them” (Pelletier and Asher 1997: 1129), yet the “normal case in the world immediately surrounding one” seems to be deeply hidden [on the normal worlds approach]. (Eckhart, 1999, p. 241)

At heart the problem is that the more complex one makes the notion of normality to account for different kinds of exceptions, the further the normal worlds get from the actual world. A world devoid of mutations, accidents and abnormalities is completely different from the actual world. But we use generics as a means to characterise and know about members of a given kind at the actual world. One might take as an upshot to this, that the modal component of generic meaning should not involve normality. The modal component should, instead, involve the worlds as close as possible to the actual world (in a relevant respect). The normal individual approach takes the worlds as close as possible to the actual world and claims that generics say something about normal members of the kind at these worlds.[[5]](#footnote-5)

**Normal Individuals**

The most sophisticated version of the normal-individuals approach is developed by Nickel (2008, 2016). According to Nickel, generics quantify over normal members of the kind in the actual world or in close counterfactual worlds. In schematic form, the truth-conditions for a generic of the form *Ks are F* go as follows:

(9) If there were a normal K, then all normal Ks would be F.

The tough theoretical work is to provide an adequate notion of normality understood as a property of individuals. Nickel’s relativizes his notion of normality to three distinct parameters: *kinds, respects* and *ways*. I will summarize Nickel’s motivation for each parameter in a moment. First, it will be useful to see the truth-conditions for generics Nickel ultimately ends up with (ignoring the modal component for simplicity).

(10) There exists a way of being a normal K with respect to Fness, such that all Ks that are normal in this way, are F.

*Normality in a Respect*. Respects of normality are motivated by data like that in (11):

(11) a. Mammals give birth to live young.

b. All mammals that give birth are necessarily female.

c. Mammals are female.

Though (11a) is intuitively true, we do not conclude (11c) on the basis of (11a) and (11b). However, if the domain of normal mammals quantified over is fixed, then (11a) is true just in case all the normal mammals give birth to live young, and since all mammals that give birth are necessarily female, we can conclude that all normal mammals are female, but that means (11a) and (11b) entail (11c). In order to ensure that generics, like (11a) and (11c), quantify over different domains, the idea is to relativize the notion of normality to *respects*.[[6]](#footnote-6) (11a) quantifies over mammals that are normal with respect to method of extrusion of offspring, while (11c) quantifies over mammals that are normal with respect to biological sex. Thus, (11a) and (11c) quantify over different domains and we cannot automatically conclude (11c) on the basis of (11a) and (11b).

There are numerous respects in which a member of a kind can be normal: method of extrusion of offspring, colour, gender, wing-span, etc. The respect of normality relevant for the interpretation of a given generic is determined by the predicated property. If the predicated property is giving birth to live young or laying eggs, then the respect of normality at issue is normality with respect to method of extrusion of offspring.

*Ways of Being Normal.* Nickel asks us to consider generics where it seems like the normal members are partitioned by a number of related properties (i.e., that are related by a respect).

(12) Elephants live in Africa and Asia.

These generics are intuitively true, even when there are no individual elephants that live in both Africa and Asia. That is, (12) can be interpreted as in (13):

(13) Elephants live in Africa and Elephants live in Asia.

But this is problematic from the point of view of any theory that treats generics as majority quantified over a fixed domain: Such views will not make (12) come out as true. If they are majority quantified and the domain of elephants quantified over in each conjunct is the same, then in order for the conjunction to be true, there must be elephants that live in both Africa and Asia.

(14) a. All normal elephants live in Africa and all normal elephants live in Asia.

b. Most elephants live in Africa and most elephants live in Asia.

Nickel suggests that generics do not just tell us about what is normal (in a respect) for a kind, but rather about the *ways of being normal* (in a respect) for a kind. There are different ways of being a normal elephant with respect to habitat – one way is to live in Africa and another way is to live in Asia.

A worry with Nickel’s approach is that restricting to ways of normality weakens the semantics of generics too much. For instance, it makes generics such as (15a) and (15b) come out as true:

(15) a. Books are paperbacks.

b. Mammals are female.

**Psychologically-Based Theories**

A different approach to the meaning of generics sees them as connected to our cognition of categorization and generalization. On such an approach, generics “give voice to” aspects of the mind’s basic mechanisms of categorization and generalization. The “give voice to” metaphor is just a way of saying that the meaning of generics somehow encodes features of the ways in which the mind categorizes and generalizes.

Theories that take such an approach make sense of the non-systematicity of generic content by appeal to the non-systematicity of the mind’s mechanisms of categorization and generalization. Such theories place strong emphasis on qualitative aspects of the meaning of generics: On all psychologically-based theories, the meaning of generics is, at least in part, spelled out in terms of qualitative features of the mind’s mechanisms of categorization and generalization.

A compelling argument that generics give voice to cognitively fundamental generalizations is what Leslie (2008) terms the *Paradox of Acquisition*. She characterises the paradox as follows:

A puzzling question now arises: how does a language learner ever come to master generics? Not only is the interpretation of *Gen* rather complicated, the operator is not even phonologically realized... To make matters all the more puzzling, it happens that generics are acquired quite early on. Children start using generics by two years of age, which is significantly earlier than explicit quantifiers (Gelman [2003]; Roeper, Strauss, and Zurer Pearson [2006]). That children ever master generics is perplexing; that children master them more readily than explicit quantifiers borders on the paradoxical. This is a phenomenon that demands explanation. (2008, p. 19)

The Paradox of Acquisition supports the claim that generics are cognitively fundamental: If generics express generalizations that are cognitively more fundamental than explicitly quantified generalizations, then we can straightforwardly explain why they are acquired and comprehended earlier than explicitly quantified sentences, despite their (apparently) more complex truth-conditions.[[7]](#footnote-7)

The most well-developed psychologically-based theory is that of Leslie (2007, 2008). For interesting alternatives, see, for example, Geurts (1985) and Nunberg and Pan (1975).

**Cognitively Fundamental Generalizations**

Leslie (2007a, 2008) argues that the mind is equipped with a *primitive cognitive mechanism of generalization*. The truth-conditions of generics can be understood as the accuracy conditions of the cognitively fundamental generalizations associated with this mechanism. The mark of generic generalization, then, is that their truth-conditions depend on qualitative features associated with the primitive cognitive mechanism of generalization – which are, Leslie argues, certain features of our System 1 cognition.

There are three kinds of primitive generalization that Leslie claims that generics “give voice to”: simple *majority-based generalizations*, *characteristic generalizations* and *striking-property generalizations*.

According to Leslie, many generics seem true simply because a large majority of the members of the kind in question satisfy the predicated property — as exemplified by:

(16) Barns are red.

However, many generics can be true even when the majority of the members of the kind do not satisfy the predicated property. Such generics can be true provided they give voice to *characteristic generalizations* or *striking-property generalizations*, which are particularly sensitive to qualitative features of our primitive cognition. An example of a characteristic generic is:

(17) Lions have manes.

An example of striking-property generics is (1c) above.

Generics like (17) are sensitive to our background assumptions and expectations about the characteristics of the kind in question along certain dimensions. For animal kinds the characteristic dimensions are dimensions like appearance, method of reproduction, food, noises. Our primitive cognitive mechanism of generalization generalizes based on characteristic dimensions, regardless of how many members of the kind happen to have the given characteristic property. For example, when we encounter a lion that has a mane, our primitive cognitive mechanism will generalize the characteristic of having a mane to other members of the kind lion since having a mane lies along the appearance dimension. (17) is understood as a true generalization since the property of having a mane is judged to lie along a characteristic dimension of the animal kind – namely, appearance, and some lions do in fact have manes.

In the case of striking-property generics, the predicated property is some sort of alarming, dangerous or striking property of the kind in question. Whether or not the property in question is striking or relevant to characteristic dimensions of the kind is derivative upon the primitive cognitive mechanism of generalization. Thus, (1c) for instance, is understood as a true generalization about ticks since carrying Lyme disease is judged to be a striking property by our primitive mechanism of generalization and some ticks indeed carry the disease.

The story is somewhat more complicated though since some intuitively false generics, such as:

(18) a. Lions don’t have manes.

b. Lions are male.

c. Books are paperbacks.

would come out true on the account given so far (not having a mane and being male presumably lie along characteristic dimensions and the majority of books are paperbacks). In order to deal with these, Leslie introduces the distinction between positive and negative alternatives for a property:

I propose a powerful factor here is whether the counterinstances are positive rather than negative. The distinction I have in mind is as follows: A positive counterinstance to *Ks are F* occurs when an instance of the kind K has a concrete alternative property, that is, when it has a positive alternative to the property F, while negative counterinstances occur when an instance simply fails to be F. Whether a counterinstance counts as positive or negative is highly dependent on the property being predicated. (2007b, p.66)

The idea behind this distinction is that negative counterinstances are more likely to be tolerated as exceptions than the positive ones. So, (18a)-(18c) are false since their exceptions have a positive alternative property — namely, having a mane, being female and being hardcover, respectively. It is important to note that Leslie takes this distinction to be grounded in our System 1 cognition, as she does with striking properties and characteristic ones.

Bringing all these observations together, here is Leslie’s proposal for the (metaphysical) truth-conditions for generics:

... the circumstances under which a generic of the form *Ks are F* is true are as follows:

The counterinstances are negative, and:

If F lies along a characteristic dimension for the Ks, then some Ks are F, unless K is an artifact or social kind, in which case F is the function or purpose of the kind K;

If F is striking, then some Ks are F and the others are disposed to be F;

Otherwise, almost all Ks are F.

(2008, p. 43)

Though robust and flexible, Leslie’s theory doesn’t escape objections. A pressing issue for the theory is that the best evidence in its favour are cases like (1c), but the cognitive features that underpin the truth of examples like (1c) could equally be understood to underpin an error-theory. In other words, when a speaker judges (1c) as true, that speaker is making a mistake and the strikingness is what causes the mistake [Sterken (2015b)].

Contradictory conjunctions and the ways in which speakers disagree with and retract generic statements is evidence that we are in fact making mistakes when we intuit (1c) as true. For example, consider the following paradoxical sounding sentence:

(19) Ticks carry Lyme disease, but typically they don’t.

(19) sounds contradictory or at least bad, but according to Leslie, (19) could turn out as true since she is committed to both conjuncts in each case being true. How can we explain the apparent falsity of (19)? The most obvious explanation is simply to say that the first conjunct of (19) is close in meaning to that of the negation of the second conjunct, and so their conjunction is false in the relevant contexts. Our initial reaction is that the first conjunct of (19) is true, but this initial reaction is a mistake. Cases like (19) make the falsity of (1c) clear to us.

**Theories of the Context-Sensitivity of Generics**

One of the most obvious ways to deal with truth-conditional variability, in general, is to posit some form of context-sensitivity. However, many theorists have either thought that context-sensitivity is irrelevant to the variability exhibited by generics.[[8]](#footnote-8) The focus has been on how the truth-conditions of generics seem to vary from generic to generic, not across utterances of a single generic: Often the interpretation of a single generic seems to have a stable interpretation across permutations of the context – take for example, (1a). However, such stability is compatible with context-sensitivity. Moreover, not all generics display widespread stability. As a case of non-stability across contexts, consider an example from Nickel (2008):

Consider [(20)].

(20) Dobermans have floppy ears.

The important fact about dobermans is that they are born with floppy ears that breeders then cut to given them the pointy shape we are familiar with. In the context of evolutionary biology, [(20)] is true. The text [(21)] certainly sounds acceptable.

(21) Some breeds of dogs have evolved to focus on their hearing. These breeds have pointy ears. Dobermans, however, mostly rely on their sense of smell, which is why dobermans have floppy ears.

However, in the context of a discussion of dog breeding, [(22)] seems clearly false, as

the text [(22)] illustrates.

(22) While labradors and golden retrievers have floppy ears, dobermans don’t. Dobermans have pointy ears.

(2008, p. 644)

In Nickel’s example, the same generic, (20), differs in intuitive truth-value across the two contexts – “the context of evolutionary biology” and “the context of a discussion of dog breeding”. This indicates that (20) is context-sensitive. (For further cases, see Greenberg (2003) and Sterken (2015a).)

There are two kinds of theories that make context-sensitivity the center-piece of a theory of generics: Those that take the context-sensitivity at issue to be semantic in nature, and those that take it to be pragmatic.

**Indexicality and Metasemantics**

Sterken (2015a) argues for a theory on which the context-sensitivity at issue should be understood as semantic in nature. In particular, she argues that the best way to treat the context-sensitivity of generics is to treat *Gen* as a covert indexical. Not only can treating *Gen* as an indexical account for truth-conditional variability and context-sensitivity, it can also account for the apparent semantic underdetermination of generic utterances, and further, provides a means to distinguish explicitly quantified generalizations from generic generalizations when theorizing the connections between generics and the mind (cf. the section Psychologically-Based Theories).

Like other context-sensitive expressions (e.g., demonstratives, the implicit argument places of gradable predicates, domain variables), Sterken treats *Gen* as a free variable at the level of logical form – as such, *Gen* needs to be saturated in some way as a function of the context of utterance. Specifying just what contextual or metasemantic factors play a content-determining role in the case of *Gen*, Sterken grants, is complex, however, she claims, this is true of demonstratives, implicit argument places and quantifier domain variables as well. A characteristic feature of Sterken’s approach is that much of what has appeared to be semantic work is moved into the metasemantics. Rather than create very complex semantic clauses or construe other complex notions as constitutive of genericity (e.g., normality, probability, metaphysical inheritance relations or a primitive cognitive mechanism of generalization), the proposal is that those complexities are best dealt with in a metasemantic theory. This keeps the semantics simple and what needs to be added is familiar sorts of metasemantic and pragmatic explanations of meaning determination.

**Pragmatically-Based Theories**

There are a number of distinct pragmatic approaches differing quite substantially in the kinds of pragmatic explanations they offer. I outline the loose talk approach [Lasersohn (1999), Nickel (2016, pp. 26-30)], however, see also Cohen (2013), Declerck (1986, 1991), Collins (2015) and Tessler and Goodman (*ms.*) for divergent theories.

On all pragmatic theories, variability is explained on pragmatic grounds – the truth-conditions depend on the pragmatic context. Like the simple kind view, there is no *Gen* present at the level of logical form, and consequently, no substantial semantic theory is needed.

**Loose Talk**

A tempting view is to uniformly treat generics as a form of loose talk. On such a view, generic utterances express universal generalizations that are strictly speaking false, but that are nonetheless judged to be acceptable given the standards of the context of utterance. For example, an utterance of a given generic can be acceptable despite being literally false since we can appropriately ignore or deem unimportant the exceptions to the corresponding universal generalization in the context of utterance.

A prima facie appealing argument for adopting a loose talk conception appeals to the fact that it can explain some otherwise puzzling patterns of dialogue (cf. Nickel, 2016, p. 28) – consider:

(23) a. A: Birds fly.

 B: But penguins don’t fly.

 b. A: ♯ No, birds fly.

c. A: Well, almost all birds fly.

In the exchange in (23a), B can be understood as disagreeing with A’s universal generalization. But once B has made salient the exceptions, it is no longer appropriate for A to “stick to her guns” and continue the disagreement by asserting responses to B in generic form, as in (23b). It is, however, appropriate for A to assert things like (23c), which can be seen as a retraction of her original statement in light of the exceptions.

Pelletier and Asher (1997) object to loose talk theories on the grounds that we don’t necessarily find generics more acceptable based on properties that make us more likely to ignore their exceptions.

A further objection is that there are generics that, according to the proponent of loose talk, should be perfectly acceptable and yet which are not – take for instance (2). (2) is judged to be unacceptable/false even in contexts where all Supreme Court Justices have even social security numbers. The proponent of loose talk, however, predicts that it is acceptable in such contexts since it is simply true.

**Works Cited**

* Asher, N. & Morreau, M. (1995) What some generic sentences mean. In G. Carlson and F.J. Pelletier (Eds.), *The Generic Book* (pp. 300–339). Chicago, IL: University of Chicago Press.

Asher, N. & Pelletier, F.J. (2013) More truths about generic truth. In A. Mari, Beyssade, C. & Del Prete, F. (Eds.), Genericity (pp. 313–333). Oxford, UK: Oxford University Press.

* Carlson, G. (1977) Reference to kinds in English. University of Massachusetts-Amherst (doctoral dissertation).

\_\_\_\_\_\_. (1989) On the semantic composition of English generic sentences. In Chierchia, G., Partee, B. & Turner, R. (Eds.): *Properties, Types and Meaning II* (pp. 167-192). Dordrecht: Kluwer.

Cohen, A. (2013) No quantification without reinterpretation. In A. Mari, Beyssade, C. & Del Prete, F. (Eds.), Genericity (pp. 334–351). Oxford, UK: Oxford University Press.

\_\_\_\_\_\_. (2009) No alternative to alternatives. *Journal of Semantics*, 26(1), 1-48.

\_\_\_\_\_\_. (1999a) How are alternatives computed? *Journal of Semantics*, 16(1), 43-65.

\_\_\_\_\_\_. (1999b) *Think Generic! The Meaning and Use of Generic Sentences*. Stanford, CA: CSLI.

Collins, J. (2015) Generics as a unitary psychological phenomenon: An argument from linguistic diversity. *Ratio*, 28(4), 369-394.

Dahl, O. (1975) On generics (pp. 99-111). In Keenan, E. (Ed.): *Formal Semantics of Natural Language*. Cambridge, UK: Cambridge University Press.

* Declerk, R. (1986) The manifold interpretations of generic sentences. *Lingua*, 68, 149–188.

\_\_\_\_\_\_. (1991) The origins of genericity. *Linguistics*, 29(1), 79–102.

Eckhardt, R. (1999) Normal objects, normal worlds and the meaning of generics. *Journal of Semantics*, 16, 237-278.

Gelman, S. A., Goetz, P. J., Sarnecka, B. S. & Flukes, J. (2008). Generic language in parent-child conversations. *Language Learning and Development*, 4, 1–31.

Geurts, B. (1985) Generics. *Journal of Semantics*, 4(3), 247–255.

Greenberg, Y. (2012) Genericity and (non)accidentalness. In Mari, A. (Ed.): *Researches Linguistiques de Vincennes* (pp. 163-190).

\_\_\_\_\_\_. (2007) Exceptions to generics: where vagueness, context dependence and modality interact. *Journal of Semantics*, 24(2), 131-167.

* Heim, I. (1982) *The Semantics of Definite and Indefinite Noun Phrases*. University of Massachusetts-Amherst (doctoral dissertation).

Hollander, M.A., Gelman, S.A., & Star, J. (2002) Children’s interpretation of generic noun phrases. *Developmental Psychology*, 36(6), 883-894.

Kratzer, A. (1981) The notional category of modality. In Eikmayer, H.J. & Rieser, H. (Eds.):

*Words, Worlds and Contexts: New Approaches to Word Semantics*. Berlin: De Gruyter.

Krifka, M., Pelletier, F.J., Carlson, G., ter Meulen, A., Chierchia, G. & Link, G. (1995) Genericity: an introduction. In Carlson, G. & Pelletier, F.J. (Eds.): *The Generic Book* (pp. 1–125). Chicago: University of Chicago Press.

* Lasersohn, P. (1999) Pragmatic halos. *Language*, 75(3), 522-551.
* Lawler, J. (1973) Studies in English generics. *University of Michigan Papers in Linguistics*, 1(1).
* Leslie, S.J. (2007a) Generics and the structure of the mind. *Philosophical Perspectives*, 21(1), 375–403.

\_\_\_\_\_\_. (2007b) Generics, cognition and comprehension. Princeton University (doctoral dissertation).

\_\_\_\_\_\_. (2008) Generics: cognition and acquisition. *Philosophical Review*, 117(1), 1–47.

\_\_\_\_\_\_. (2015a) Generics oversimplified. *Noûs*, 49(1), 28–54.

Leslie, S.J. & Gelman, S. (2012). Quantified statements are recalled as generics: evidence from preschool children and adults. *Cognitive Psychology*, 64, 186-214.

Leslie, S.J., Khemlani, S. & Glucksberg, S. (2011) All ducks lay eggs: the generic overgeneralization effect. *Journal of Memory and Language,* 65(1), 15-31.

Liebesman, D. (2011) Simple generics. *Noûs*, 45(3), 409–442.

Meyer, M., Gelman, S.A. & Stilwell, S.M. (2011) Generics are a cognitive default: Evidence from sentence processing. In *Proceedings of the 33rd Annual Conference of the Cognitive Science Society*. Boston, MA: Cognitive Science Society.

Nickel, B. (2008) Generics and the ways of normality. *Linguistics and Philosophy*, 31(6), 629–648.

\_\_\_\_\_\_. (2016) *Between Logic and the World: An Integrated Theory of Generics*. Oxford, UK: Oxford University Press.

Nunberg, G. & Pan, C. (1975) Inferring quantification in generic sentences. In *Papers from the Eleventh Regional Meeting of the Chicago Linguistic Society* (pp. 412–422). Chicago, IL: Chicago Linguistic Society.

Prasada, S. & Dillingham, E. (2006) Principled and statistical connections in common sense conception. *Cognition*, 99(1).

Pelletier, F.J. & Asher, N. (1997) Generics and defaults. In van Benthem, J. & ter Meulen, A. (Eds.): *Handbook of Logic and Language* (pp. 1125–1179). Cambridge, MA: MIT Press.

Sterken, R.K. (2015a) Generics in context. *Philosopher’s Imprint*, 15(21), 1–30.

\_\_\_\_\_\_. (2015b) Leslie on generics. *Philosophical Studies*, 172(9), 2494-2512.

\_\_\_\_\_\_. (2016) Generics, covert structure and logical form. *Mind and Language*, 31(5), 503-529.

Teichman, M. (2016) The sophisticated kind theory. *Inquiry*.

Tessler, M.H. & Goodman, N. (ms.) A pragmatic theory of generic language. Department of Psychology, Stanford University.

1. See Carlson (1977) and Teichman (2016) for *sophisticated* kind theories (that posit covert structure). [↑](#footnote-ref-1)
2. Notably, generics with subjects that directly refer to kinds, and complex conjunctions that involve the co-occurrence of direct kind-predication and genericity [Carlson (1977)]:

 (5) a. This kind of animal barks.

 b. Ticks are widespread and carry Lyme disease. [↑](#footnote-ref-2)
3. It can also be evidence for a predicate modifier, *Gn* – cf. Carlson (1977) and Teichman (2016). [↑](#footnote-ref-3)
4. Leslie (2013), Sterken (2016) and Collins (2015) argue against Liebesman’s proposal. See also, Carlson (1989). [↑](#footnote-ref-4)
5. For another solution, see Cohen (2013). [↑](#footnote-ref-5)
6. For interesting alternatives, see Cohen (1999a, b, 2009), who uses *alternatives* to the predicated property. [↑](#footnote-ref-6)
7. Other evidence from psychology includes Hollander *et al.* (2002), Gelman *et al.* (2008) Leslie *et al.* (2011), Meyer *et al.* (2011), and Leslie and Gelman (2012). [↑](#footnote-ref-7)
8. In addition, many theorists have been hesitant to rely on context-sensitivity in theorizing about generics because of the disanalogies between explicitly quantified sentences and generics. [↑](#footnote-ref-8)