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Generics in Context

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When speakers communicate *generalisations* about the world, they often use sentences like the following:

(1) a. Candy is bad for your teeth.

b. A raven is black.

c. The tiger has stripes.

d. Ticks carry Lyme disease.

e. Books are paperbacks.

f. Lions have manes.

These are examples of generic sentences (or simply *generics*). Generics come in a variety of forms. Moreover, they communicate generalisations without any pronounced element which is responsible for expressing the content of the generalisation itself. What characterises the class of generic sentences, then, is that each member of the class communicates some sort of generalisation without any obvious component that is responsible for expressing this generalisation. For example, (1a) is a generic since it communicates a generalisation about candy — let's say a generalisation akin to *in general, candy is bad for your teeth*, but does not contain an explicit expression, like *in general*, which is responsible for expressing the content of the generalisation. Similarly for (1b)–(1f).

Specifying the truth-conditions of generics has proved especially challenging.[1] The primary challenge is that the intuitive truth-conditions of generics seem to vary quite radically from generic to generic: while nearly all ravens are black and tigers have stripes, (1d) is intuitively true despite the fact that only very few ticks (around 1%) carry Lyme disease. Still further, (1e) is false even though the vast majority of books have paper covers, while (1f) is true despite the fact that it is only adult, male lions that have manes.

1. Difficulties include: (i) what is the logical form of generic sentences — *i.e.*, are they kind-predications or quantified sentences? (ii) Do generics express or merely convey generalisations? (iii) What generalisation or class of generalisations do generics communicate?

A central goal of much theorising about generics has been to provide a relatively simple and unified semantics for these sentences, in spite of the many ways in which their truth-conditions seem to vary. The basic theoretical starting point of nearly all theorists has been to assume that there is a unifying phenomenon called genericity, which generics, in general, instantiate:

> **Assumption of Unity:** There is a unified phenomenon of genericity that generic sentences, in general, instantiate.

Those who endorse the Assumption of Unity think that once we have figured out what genericity consists in, we have a straightforward path to a unified semantics for generic sentences. Furthermore, such theorists believe that the Assumption of Unity allows the semantics of generics to remain relatively simple since the complexity lies in the phenomenon of genericity, not in the semantics for generic sentences.

Several recent proposals pursue this line of thought: Leslie (2007a, 2008) suggests that generics instantiate cognitively primitive generalisations, Cohen (1996) that they communicate probabilistic (majority) generalisations, Liebesman (2011) that they instantiate inheritance relations between kinds and their instances, and Nickel (2008), and Asher and Pelletier (2012) independently suggest that they express generalisations involving a notion of normality.[2, 3]

Contrary to these proposals, this paper suggests that we should deny the Assumption of Unity. There is no stable phenomenon that constitutes genericity. One way to think of the proposal is as a form of eliminativism:

> **Elimitivism about Genericity:** There is no such phenomenon of genericity.

If Eliminativism about Genericity is correct, then the search for a theory of genericity has been a mistake. Moreover, I propose that we do not need a notion of genericity to have a simple and unified semantics for generic sentences. In particular, a complex notion of genericity is not needed to explain the truth-conditional variability of generics. Rather, I propose that we simply take the truth-conditional variability of generics as our basic theoretical starting point in building a theory of generics.

The appearance of truth-conditional variability can be evidence of many things—*e.g.*, ambiguity, errors in truth-evaluation, and pragmatic or semantic context-sensitivity. I argue that the truth-conditional variability of generics is evidence that what is conveyed by generic sentences varies widely between contexts, and that this suggests that there is no content that is distinctively generic. This, however, does not entail that we must think that providing a quantificational semantics for the implicit expression, *Gen*, is impossible, as Leslie (2007a) and Liebesman (2011), following Carlson (1977), argue:[4]

> …despite appearances, generics are in no sense quantificational. The generic operator *Gen* is a variable-binding operator that is used to express generalisations, and yet is not a quantifier. (2007a, p. 379)
>
> Surveying the literature on generics reveals a large supply of complicated and interesting examples, and to go with the examples, a large supply of complicated and interesting semantic accounts of *Gen*. …there are extant counterexamples to every analysis… I think the intractability of

2. See also Asher and Morreau (1995), and Pelletier and Asher (1997).

3. Though, the theories of Pelletier and Asher, Nickel and especially Cohen have been accused of being overly complex (cf. Leslie [2007a]), I still take these theorists to have the aim of providing a simple account of the truth-conditions of generics. Their theories end up being complex because the data is complex, but their theories are nonetheless as simple as possible given the data.

4. Leslie and Liebesman draw different lessons from Carlson: while Liebesman thinks that generics cannot be given a quantificational analysis because there is simply no expression *Gen*, Leslie thinks that there is an expression *Gen*. It is just that *Gen* cannot be given a quantificational semantics.

> *Gen* is unsurprising. On my view *Gen* has proven intractable for a very simple reason: it doesn't exist. Generics do not have the tripartite structure that theorist take them to have. (2011, p. 411)

Nor must we think that a compositional, truth-conditional semantics for generics is impossible, as Chomsky (1977) and Pietroski (2003) suggest:

> … plurality is, in a sense, a semantic property of the sentence rather than the individual noun phrases in which it is formally expressed. *Unicycles have wheels* means that each unicycle has a wheel, and is thus true, though *each unicycle has wheels* is false.
>
> In these relatively simple examples, it seems possible to give an organized and systematic account of the syntax of the relevant expressions in terms of reasonably well-motivated principles of grammar… But it seems plain that the syntactic structures are not a projection of the semantics… As the 'plural sentences' show, even a principle of compositionality is suspect. Global properties of the sentence which may be quite involved, seem to play a role. We cannot simply assign a meaning to the subject and a meaning to the predicate (or to a sentence form with a variable standing for the subject), and then combine the two. Rather, the meaning assigned to each phrase depends on the form of the phrase with which it is paired. (1977, p. 31)

Nor must we lapse into a pragmatic theory, as Declerck (1986) advocates:[5]

> Since a generic reading results from an interplay of unboundedness with pragmatic factors, there is no reason for assuming that generic sentences involve a 'generic quantifier'…, a 'generic VP operator'…, or any other similar device to account for genericness. (1986, p. 180)

Instead, I suggest that we can provide a simple and unified semantics for generics, which remains truth-conditional, quantificational and compositional, even though there is a large degree of variability in the interpretation of generics and no distinctive generic content. In particular, I propose that the implicit, unpronounced quantifier expression, *Gen*, which is part of the logical form of generics, expresses different (in a very strong sense of *different*) generalisations in different contexts.

Many natural language expressions have these same two properties — most notably, context-sensitive expressions such as demonstratives. If we understand generics as context-sensitive, on the model of demonstratives and similarly behaved expressions, then we have thereby provided a unified and simple semantics that explains variability without any complex notion of genericity. On this model, the implicit, unpronounced quantifier expression, *Gen*, is understood as similar to a demonstrative like *that*. *That* picks out an object as a function of the context of utterance and likewise, *Gen* picks out a generalisation — a certain type of relation between the domain property and scopal property of a given generic — from the domain of such relations, as a function of the context of utterance. On this proposal, *Gen* itself behaves like a free variable whose content is determined by the context of utterance.

When context-sensitivity is made the centrepiece of a theory of generic sentences, our theorising has to be reoriented. This includes moving what has been taken to be semantic work into the metasemantics. In other words, rather than attempting to provide a theory of what the semantic value of *Gen* is, I suggest we attempt to provide a metasemantic theory — that is, a theory which addresses the question: in virtue of what does *Gen* have the semantic value it has in a given

5. See also Dever (1997, p. 172), Bach (1994, p. 267), and Lasersohn (1999, p. 541).

context? It is the metasemantics, not the semantics, that determines the content of *Gen* relative to context (just as it is the metasemantics, for the most part, which determines the content of *that*). This keeps the semantics simple.

This paper is structured as follows: I begin by briefly considering how other theorists view the context-sensitivity of generics. In section 1, I provide evidence for the claim that the truth-conditional variability of generics is semantic context-sensitivity which is distinctive. In section 2, I propose a particular account of the context-sensitivity of generics — that *Gen* is like a demonstrative; and explain how this proposal should be implemented. In section 3, I outline three virtues of the theory proposed in section 2.

1. Generics in Context

The truth-conditional variability of generics has long been thought of as *the* major challenge in constructing theories 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 type of variability they are focused on, or they have been hesitant to rely on context-sensitivity in theorising about generics. Theorists, for the most part, have instead opted to posit either a complex notion of genericity, ambiguity, or both to account for the appearance of variability. Even those that posit context-sensitivity limit it to whatever explicit forms of context-sensitivity they are committed to in virtue of logical form, or to whatever ambiguity and their theory of genericity cannot explain. There are, I think, three main reasons why the kind of context-sensitivity that I advocate has not been much explored.

First, the focus has been on how the truth-conditions of generics seem to vary from generic sentence to generic sentence, not across utterances of a single generic. The generics (2a) and (2b) below seem to vary in quantificational force:

(2) a. Horses are mammals.

b. Horses are smart animals.

While it seems apt to characterise (2a) as universally quantified, (2b) 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 horses). The question that theorists have been focused on is how the truth-conditions of (2a) and (2b) seem to vary, and not on how utterances of (2a) can vary, or how answering the latter question can help to answer the former. Context-sensitivity is a natural tool for explaining variability among utterances of a single generic, but not obviously for variability from generic to generic.

Second and perhaps most importantly, it is assumed that (2a) and (2b) seem best characterised as universally quantified and *most*-quantified (respectively), no matter how we permute the context of utterance and no matter how strange a context we attempt to concoct. So, if we take (2a) and (2b) as representative, then it would appear as though the truth-conditions of generics vary from generic to generic, but that the truth-conditions of a single generic remain stable across contexts of utterance. This stability, of course, is not what one would expect if generics were context-sensitive.

Third, one might argue that generics are context-sensitive if and only if they contextually restrict their domains,[6] but generics do not contextually restrict their domains, hence, generics are not context-sensitive. Carlson (1977) and Leslie (2007a) put forth examples that give compelling reason to think that generics do not contextually restrict their domains.[7] Consider (3) below:

(3) a. Ducks lay eggs.

b. Ducks are female.

c. Ducks lay eggs and are female.

6. Here I mean to be excluding irrelevant forms of context-sensitivity (*e.g.*, like that the predicate in the generic is *tall* or *big*).

7. Declerck (1986, p. 182) argues that in order for a generic reading to arise, the domain must be *unbounded* in his preferred sense of the term.

Suppose we want to account for the truth of (3a) by restricting the generalisation to female ducks. Then the question arises: why are (3b) and (3c) intuitively false? If we can use a restriction to female ducks in the case of (3a), why can't we use the same or at least a similar restriction in the case of (3b) and (3c)? Examples like these make it seem as though generics cannot be contextually restricted as explicitly quantified sentences can, and thus, that generics are not context-sensitive.

None of these considerations suffice to establish that generics do not display extensive context-sensitivity.

First, there is no good reason to limit our focus to the investigation of variability to generic sentences, as opposed to generic utterances.

Second, the assumption that a given generic has stable content across contexts is a misrepresentation of the data. I show this in the next section. The claim of stability should be much more restricted — not all generics display widespread stability (as the cases of context-sensitivity that I will present below will, I hope, demonstrate), and even though some generics display widespread stability, this stability is consistent with context-sensitivity and can be explained on different grounds. The reason we tend to read (2a) as universally quantified across all contexts is that we share the assumption that if one horse is a mammal, then all of them are: we take mammalhood to be an essential property that generalises across all members of the horse kind. However, we can imagine a scenario where this assumption is not shared, and in such a scenario the universal interpretation is much more shaky, indicating that it is our shared beliefs about what properties are essential that give rise to stability and not anything about the content of *Gen* itself: imagine that you happen to know that the speaker thinks that some cats are mammals but others are reptiles, and that she also thinks that some sheep can be both mammals and reptiles. If you knew this about the speaker, you would be less confident in the universal interpretation. Further, it is also worth noting that there are some context-sensitive phrases that do not, as a matter of fact, vary their referent between utterances — take, for example, *this world*.

Finally, as will become apparent, I think there are other ways generics can be context-sensitive beyond contextual domain restriction — one of the main theses of this paper is that variability in the quantificational force and lexical restrictor of generics is a result of context-sensitivity. Moreover, though I won't go into the details due to lack of space, the patterns predicted by the Carlson and Leslie examples can be explained on different grounds. Briefly, to get a sense of the type of explanations I have in mind: I think (3a) is intuitively true in most contexts for standard reasons — presuppositions of the predicate restrict the domain to ducks that reproduce in some way or another. (3b) is intuitively false in most contexts because there is no such presuppositions of the predicate, but there are contexts in which (3b) is intuitively true — *e.g.*, imagine contexts in which we have certain practical interests or where certain rules are in effect or we are talking about a particular group of ducks. There are at least two explanations for why (3c) sounds false. A first explanation is that on a distributive reading (3c) is false (in most contexts) because (3b) is false (in most contexts).[8] A further explanation is that (3c) is infelicitous, not necessarily false. To illustrate the type of infelicity I have in mind, consider (4a):

(4) a. Tomy learned that his car had been stolen and Tomy's car had been stolen.

b. Tomy learned that his car had been stolen.

c. Tomy's car had been stolen.

(4a) sounds bad in a similar manner to (3c), and yet there is no domain to speak of in the case of (4a). What likely explains the infelicity of (4a) is that (4b) presupposes the truth of (4c), and hence it is peculiar to proffer the content of (4c) directly after saying something that presupposes it.

8. On such a view of the logical form of (3b), there is no reason to assume that the two instances of *ducks* cannot contextually restrict their domain differently.

Since the foregoing indicates that none of these considerations is conclusive, for the remainder of this section, I will focus on establishing some plausible evidence that generics display a distinctive form of context-sensitivity, not merely across generic sentences, but across generic utterances.

1.1 Cases of Context-Sensitivity

Here, I provide examples of how the truth-value of a given generic can vary between contexts of utterance. In doing so, I hope to show that we can take evidence of the truth-conditional variability of generic utterances as our theoretical starting point in constructing theories of generics. I hope to demonstrate that it is at least plausible that the variability can be seen as context-sensitivity, which is distinctive and semantic in nature. I begin by providing five examples, in turn. Once some data is on the table, I will provide additional evidence for context-sensitivity, and show that the five cases pass a test, which provides evidence that the context-sensitivity is distinctive and semantic in nature. In the next section, I will outline my preferred theory—*i.e.*, I will argue for a specific account of the distinctive, semantic context-sensitivity that I claim generics display.

Case 1: The best extant case, to my mind, arguing for the context-sensitivity of generics is from Nickel (2008):[9]

> Consider [(5)].
>
> (5) 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, [(5)] is true. The text [(6)] certainly sounds acceptable.
>
> (6) 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, [(5)] seems clearly false, as the text [(7)] illustrates.
>
> (7) While Labradors and golden retrievers have floppy ears, dobermans don't. Dobermans have pointy ears.
>
> (2008, p. 644)

Nickel's argument is familiar from other places in which the context-sensitivity of a given expression is argued for. The same sentence is uttered in different contexts and it is claimed that the truth-conditions differ. Nickel describes the two contexts as "the context of evolutionary biology" and "the context of a discussion of dog breeding." The truth-conditions of (5) vary between these contexts, and thus, (5) is context-sensitive.[10]

Case 2: This second example is a variation on a case that has been discussed quite a bit in the literature.[11] Suppose that as a matter of fact, all Supreme Court justices happen to have even social security numbers. This, it seems, does not suffice to make the generic, (10) true:

(10) Supreme Court justices have even social security numbers.

9. Cavedon and Glasbey (1994, 1996) provide some good cases as well.

10. Other examples along these lines can be generated by contrasting what biologically should be the case and some widespread human intervention, or what an animal kind is like in the wild versus in captivity—consider, for example:
    (8) Horses wear horseshoes.
    (9) Rabbits eat rabbit food.

11. See, *e.g.*, Cohen (2011, 2001b).

Various diagnoses have been made of this, but I want to use the case in support of context-sensitivity. In effect, my claim is that in certain contexts, when certain questions are under discussion, or when the speakers have certain practical interests, we would, under such circumstances judge (10) to be true. I assume it is easy to come up with contexts in which (10) is false, because the standard assumption in the literature is that (10) is false (even in contexts where all Supreme Court justices have even social security numbers). I will provide a context in which it is intuitively true.

Context: Two friends are planning a party where they want all the party guests' social security numbers to add to an even number. In hopes of providing information that will help compile the list of guests, one of the friends says (10).

In a context where all Supreme Court justices have even social security numbers, my informants hear (10) as true. The different practical interests across the two contexts seems to play a key role in the variability in this case. Thus, I take it that there are contexts in which (10) is intuitively true and the truth-conditions of (10) can vary across different contexts.

Case 3: As a third case, consider (11):

(11) Cabs are yellow.

Suppose (11) is uttered in a situation where there is a regulation in effect that cabs must either be yellow or pink, but that as a matter of fact all cabs are yellow. If (11) is uttered while giving practical travel advice to a friend about how to identify cabs in the jurisdiction of the regulation, then (11) is intuitively true. However, in contexts in which (11) is used to describe the rule (or some unbounded descriptive generalisation), (11) is intuitively false.[12] Thus, for (11), we again have two contexts in which the intuitive truth-value differs.

12. Though I won't argue against this explicitly, I don't think tense or temporal considerations are playing a role here. And even if one wanted to insist that they are, I contend that the case could be changed so that such considerations weren't an issue.

When considering cases such as (11), it is often argued that generics are ambiguous between a rules-and-regulations reading and a descriptive reading.[13, 14]

However, I do not think examples such as (11) are cases of ambiguity. If (11) were genuinely ambiguous between these two readings, then we would not expect to hear a contradiction in (14) below, but we do and hence, we have evidence that there is no such ambiguity:[15]

(14) *Cabs are yellow, but they are not yellow.[16, 17]

Case 4: For the fourth case, consider (15):

(15) Frenchmen eat horsemeat.

13. See, *e.g.*, Carlson (1995), Cohen (2001a), and Greenberg (2002).

14. Other examples include:
(12) Bananas cost $0.99 per pound.
(13) Bishops move diagonally.

15. See Sennett (2011) for the motivations for this test, and why it works even in the case of context-sensitive expressions.

16. This test works in the other cases as well, and should be seen as evidence against claims that certain generics are ambiguous (*e.g.*, the generic in the next case is often taken as evidence of ambiguity as well).

17. An anonymous referee for this journal pointed out that the ambiguity theorist could respond by saying that the peculiarity of (14) should be explained on analogy with how one would explain syllepsis — for example, how one might explain the peculiarity of *Eggs and oaths are soon broken* and *She arrived home in a carriage and a flood of tears*. These are semantically okay, but still sound peculiar. Maybe, the referee suggests, the peculiarity of (14) can be explained along the same lines: it is not a contradiction, but still peculiar for the same reason these examples of syllepsis sound peculiar. I agree this is a strategy worth exploring for the ambiguity theorist. A full exploration of the proposal would require examining a theory of syllepsis and of the various example sentences. For now I will simply point out that the sense that there's a genuine contradiction expressed by (14) is very strong. The question to be explored is whether a proposed account of syllepsis in the above examples could also explain why *The eggs broke and they didn't break* is intuitively not just infelicitous, but also a contradiction. To assess that question fully would require full exploration of a theory of syllepsis and that would take me too far beyond the scope of this paper.

It is often noted that when the distinctive properties[18] of the French population are salient, (15) sounds intuitively true (Krifka et al. [1995, p. 81]). In such a context, (15) seems to express a generalisation along the lines of:

(16) It is a distinctive of many traditional French people that they eat horsemeat.

Whereas, in a context where a group of nutritionists is querying the unhealthy eating patterns of the French population, (15) seems intuitively false:

(17) Frenchmen eat croissants and baguettes. They don't eat traditional food, like horsemeat and grains.

In such a context, the negation of (15) seems to express something along the lines of (18):

(18) Generally, Frenchmen don't eat horsemeat.

Again, the generic (15) seems to vary its truth-conditions across contexts of utterance.[19]

(15) is also standardly taken to be a case of ambiguity, however, again, if it were a case of ambiguity, then we would expect the corresponding contradictory conjunction to sound fine, but it doesn't.

Case 5: As the fifth and final case, consider (19):

(19) Mammals lay eggs.

In a context where a biologist, Suzy, is discussing birds, and their relationship to other species, she utters the following:

(20) Birds lay eggs. Mammals lay eggs too.

In this context, (19) is intuitively true since there are species of mammal that lay eggs — namely, platypuses and echidnas.[20] By contrast, in the context of a mother teaching her child the properties of mammals (19) is intuitively false.

Nickel (forthcoming) argues that (19) is in fact true in both contexts, and that there is a pragmatic explanation of the apparent falsity of (19) in contexts such as a mother teaching her child the properties of mammals. Nickel's explanation is basically this: (19) is true since there exists a way of being a normally reproducing mammal such that all mammals which are normal in this way lay eggs. The reason we hear it as false is because there is a false quantity implicature that this is the *only* way of being a normally reproducing mammal. Thus, according to Nickel, we hear (19) as true in the first context because the implicature is absent, and as false in the second context because the implicature is present.

However, this cannot be the whole story. In the second context, *Mammals give birth to live young* is intuitively true and (19) is intuitively false, however, according to Nickel's pragmatic explanation, they should both be intuitively false because the false implicature is present in both instances. It is hard to see what might motivate the absence of the false implicature for *Mammals give birth to live young* which

18. Perhaps distinctive properties is not strictly speaking correct. Norwegians and other cultures eat horse meat. As such, we might be better off with characteristic properties.

19. As an anonymous referee for this journal pointed out, the account I give is in tension with the widespread view that negations of generics are stronger than what a quantificational account typically would predict. The view I am proposing predicts that negations are sometimes weak (requiring only that some Fs are not G). For example, *it is not the case that Frenchmen eat horse meat*, on the view proposed here, does not say — *e.g.*, that no (normal) Frenchmen eat horse meat. I grant that intuitions about negations are very hard to track, but it does not seem strongly counter-intuitive to interpret (15) as saying *Generally, Frenchmen don't eat horse meat* in the given context.

20. (20) is what Cohen (2003) calls an *existential generic* since he claims it has a *quasi-existential* force. von Fintel (1997) discusses similar cases as well. Both think that the interpretation of generics is altered in the presence of focus-sensitive expressions like *too*. In other work, I argue that generics can receive their "normal" *quasi-universal* interpretation in the presence of such expressions. This suggests that something different is needed to account for these cases. I think positing the sort of context-sensitivity I propose in section 2 can account for these cases. On such an account, it is plausible that focus-sensitive particles will play a role in arriving at the generalisation expressed.

doesn't also motivate its absence in the case of (19). Both properties are relevant in the given contexts, and moreover, the speaker is presumed to be well informed on the matter. Thus, I contend the truth-conditional variability in this case does not have a pragmatic explanation; indeed, Nickel's is the most plausible such explanation. This gives reason to believe that the variability is semantic, and, that (19) is context-sensitive.

This concludes my presentation of the five cases. Note that it is not hard to come up with more. In the remainder of this section, I offer additional evidence for the claim that the generics in Cases 1–5 are context-sensitive, and that this context-sensitivity is distinctive and semantic in nature.

1.2 Additional Evidence for Context-Sensitivity

In their book *Relativism and Monadic Truth*, Cappelen and Hawthorne present a series of tests which if passed, are meant to provide evidence of context-sensitivity. I will use the test they label the *Agreement Test* to confirm the presence of context-sensitivity in Cases 1–5. The test, as all such tests, is controversial,[21] but insofar as there are tests for context-sensitivity, the following is one of the better ones:

> **The Agreement Test:** Let u be a sincere utterance of a sentence S by a speaker A in a context c, and u' be a sincere utterance of *not-S* by a speaker B in a context c'. If from a third context c'', A and B cannot be correctly reported by *A and B disagree whether S*, then S is semantically context-sensitive. Meanwhile, if from a third context c'', A and B can be correctly reported by *A and B disagree whether S*, then this is evidence that S is semantically invariant across c, c' and c''. (2009, p. 54)

21. See, *e.g.*, Weatherson (2011).

If we apply the Agreement Test to a sample of the examples just discussed, we have additional evidence for context-sensitivity. Consider again the two utterances of (5) in Case 1:

(6) 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.

(7) While Labradors and golden retrievers have floppy ears, dobermans don't. Dobermans have pointy ears.

Knowing about the difference in context, we would be hard pressed to classify the two agents as disagreeing over whether (5) is the case. Thus, we have additional evidence that (5) is context-sensitive.

Similarly, we can apply the Agreement Test to Case 4. Consider (15) embedded in the following text where the speaker is pondering and listing the relatively unorthodox cultural habits of different nations:

(21) People eat lots of weird things. Koreans eat dog meat. Frenchmen eat horsemeat. The Scottish eat haggis.

Meanwhile, consider a context where the speakers are considering the typical diets of different nations and one speaker utters the negation of (15):

(22) Frenchmen eat baguettes and croissants. They don't eat horsemeat.

Again, applying the Agreement Test, we have evidence that (15) is context-sensitive since we do not get the sense that the speakers in the two contexts are disagreeing over a particular generalisation about the eating habits of the French.

The Agreement Test is also perspicuously applied to Case 5. Consider a context where a biologist is discussing different species that lay eggs:

(20) Birds lay eggs. Mammals lay eggs too.

Now consider a mother teaching her child about the characteristics of different species — she utters:

(23) Birds lay eggs, but mammals don't. Mammals give birth to live young.

The judgement here is easy — we do not take the biologist and the mother to be in disagreement over whether or not mammals lay eggs. This is further evidence that (19) is context-sensitive.

1.3 Alternative Sources of Context-Sensitivity?

So far, I take myself to have established that someone constructing a semantic theory for generics should at least take the context-sensitivity of generics under consideration. In order to argue for the model of this context-sensitivity that I favour — *i.e.*, that *Gen* is like a demonstrative, I need to establish that not only are generics context-sensitive, but that the context-sensitivity is semantic in nature and that it is traceable to *Gen*. Cases 1–5 and the Agreement Test do not yet show that *Gen* is distinctively or semantically context-sensitive. One might, for instance, think that the cases merely show a difference in felicitous assertability, not a difference in truth-conditions, so that the context-sensitivity is not semantic. Or, one might think that there are other semantic sources for the context-sensitivity, such as the presence of a gradable adjective or some standard form of contextual domain restriction which is displayed by quantifiers in general. When presenting the cases above, I provided a couple of arguments against ambiguity and pragmatic explanations of the data; however, here I argue more systematically for the claim that differences in intuitive truth-value across the contexts is distinctive and semantic in nature. In other words, I will provide arguments and considerations for the following claims:

> **Semantic:** The context-sensitivity displayed by generics is semantic.

> **Distinctive:** The context-sensitivity displayed by generics is distinctive — *i.e.*, the context-sensitivity is not a consequence of any familiar source of context-sensitivity (*e.g.*, standard contextual domain-restriction or the presence of a gradable or vague predicate).

An Argument for Semantic: Here I provide a test for Semantic and show that because this test is passed for each of Cases 1–5, we have an argument that the contextual variability in Cases 1–5 is semantic. I call the test the *A-Quantifier Test* and it is as follows. (Later, I will use the test again as an argument for Distinctive.)

> **A-Quantifier Test:** Check whether explicitly A-quantified sentences vary their truth-value across the given contexts. If there is no difference in truth-value, then pragmatic context-sensitivity (*e.g.*, an implicature) is not responsible for the appearance of a difference in truth-value, and hence, this is evidence that the context-sensitivity at issue is semantic.

Here is why the test is evidence for Semantic: If some sort of pragmatic mechanism (*e.g.*, presupposition or implicature) were responsible for differences in intuitive truth-value, then we would expect the same pragmatic mechanism to be present in the case of explicitly quantified utterances which are close in meaning to generics. The speaker is communicating generalisations which share many or all relevant features in both instances, and so any presuppositions or implicatures we would expect to be the same. Thus, if the test is passed and there is no difference in truth-value for explicitly quantified utterances, then this is evidence that a pragmatic mechanism is not responsible for the difference in intuitive truth-value.

I grant that this test is not infallible: there could, of course, be lexical reasons for differences in truth-value across contexts. Moreover, robust intuitions are hard for A-quantified utterances, in part because their interpretations are so flexible. Nonetheless, the test is useful and

does provide at least some objective means for assessing the claim that the relevant variability does not have a pragmatic source. The test works best if one chooses A-quantifiers that are as close as possible in meaning to *Gen* — *e.g.*, *typically*, *generally*, *normally*. I apply the test to Cases 1–5 in turn.

Case 1: Let's try the test with several different explicit A-quantifiers, using the same two contexts from Case 1.

(24) Typically / Generally / Normally dobermans have floppy ears.

(25) 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 typically / generally / normally dobermans have floppy ears.

(26) While Labradors and golden retrievers have floppy ears, typically / generally / normally dobermans don't have floppy ears. Typically / Generally / Normally dobermans have pointy ears.

There is no difference in intuitive truth-value for each of the A-quantified sentences in (24) in the two contexts given by (25) and (26): in both contexts, my informants hear the explicitly quantified sentences in (24) as false. This is evidence that the difference in truth-value for (24) between the two contexts is not a result of the presence of presuppositions or implicatures.

Case 2: To get evidence that the context-sensitivity of (10) is not in virtue of the fact that *Gen* is an A-quantifier, let's consider the test applied to Case 2. If the truth-value of the explicitly quantified utterances is preserved, then we have support for the claim that the context-sensitivity in the case of (10) is semantic. To this end, consider utterances of *typically / normally / generally, Supreme Court justices have even social security numbers*, in the circumstances outlined above. Since there is no difference in the intuitive truth-value between contexts (I hear them as true across both contexts), we indeed have evidence for semantic context-sensitivity.

Case 3: The test applied to this case again yields a supporting result: consider *typically / normally / generally, cabs are yellow* in the contexts specified above. On its most natural reading these sentences remain true even after the emerging consensus is a change of regulations.

Case 4: Again, the test provides the result we want: consider *typically / normally / generally, Frenchmen eat horsemeat*; this is arguably false in both contexts.

Case 5: The explicitly A-quantified *typically / normally / generally, mammals lay eggs* is false in both contexts.

The test is passed in all the cases, and so there is solid evidence that the context-sensitivity displayed by the generics in Cases 1–5 is semantic in nature.

An Argument for Distinctive: We have already seen some reason to think any context-sensitivity displayed by generics is distinctive, recall the Leslie and Carlson style examples in (3). Leslie and the early Carlson take these examples to show that generics cannot be given a quantificational analysis. However, the examples might merely show that there is a distinctive form of context-sensitivity exhibited by generics, over-and-above that exhibited by explicitly quantified sentences.

Most theorists think that generics are quantified sentences and that there is quite overwhelming syntactic and semantic evidence that they are (*e.g.*, binding, scope ambiguities, weak-cross over effects, focus-sensitivity); however, there are also ways in which generics do not behave like explicitly quantified sentences. I will outline three such respects in a moment; however, it is first worth noting that I take the respects in which generics differ to provide prima facie evidence for Distinctive. As a second point, I think it is worth mentioning how quantification-theorists have dealt with these differences. In general, I think the strategy has been to recognise Distinctive, but to limit the

amount of context-sensitivity; instead such theorists have favoured packing the differences into their preferred notion of genericity.[22]

The first respect in which generics differ from explicitly quantified sentences is that the apparent force of generics seems to vary depending on the property being predicated.[23] The example (2a) from above has the quantificational force of *all*, at least in part because of the predicate *are mammals*, while (2b) has the force of *most*, at least in part because of the predicate *are smart animals*. If generics are quantified sentences and this observation is correct, then *Gen* acquires its meaning as a function of the meaning of the predicate. With the exception of vague quantifiers perhaps, no other quantifier acquires its meaning in this way, and thus, generics are quite different from explicitly quantified sentences in this respect.

The second respect in which generics do not behave like explicitly quantified sentences is that generics seem to tolerate exceptions more easily than explicitly quantified sentences (or, in other terms, they are more resistant to counterexamples). So, while some sufficient number of three-legged rabbits can falsify *all rabbits have four legs*, *most rabbits have four legs* and even *rabbits normally have four legs* or *many rabbits have four-legs*, it does not seem that any specific number of three-legged rabbits suffices to falsify the generic. Consider, for instance: *All the rabbits in Scotland have three legs, but rabbits have four legs!*

The third respect in which generics differ is in how their domains are restricted: if generics share the same logical form as quantified sentences, then we would expect them to restrict their domains in the same way as explicitly quantified sentences. But they do not. Krifka et al. (1995) and others observe, for instance, that by contrast with (27b) and (27c), it is not possible to hear (27d) as restricted to the set of lions in the cage or (27e) as restricted to the set of tigers in the cage.

(27) a. There are lions and tigers in this cage.

b. Look! Every lion has a mane.

c. Look! Most tigers are white.

d.Look! Lions have manes.

e.Look! Tigers are white.

So, generics appear, at the very least, to have difficulty restricting their domains to some contextually salient domain, unlike many explicit quantifiers.[24]

It is not hard to see how appeal to additional context-sensitivity can account for these special properties of generics. Each of the respects in which generics differ from explicitly quantified sentences is reason to think that generics display a distinctive form of context-sensitivity. These differences in behaviour provide a prima facie case for a distinctive form of context-sensitivity.

I take it that there are three alternative sources of semantic context-sensitivity which could potentially be responsible, in whole or in

22. In this way, I partly agree with some recent theorists. For example, Nickel (2008, 2015) takes generics to have a lexical restriction to normal members, where what counts as normal is context-dependent. Cohen (1996) places an additional constraint on the usual contextual restriction displayed by adverbially quantified sentences — what he calls a *homogeneity constraint*. Greenberg (2007) also takes there to be an additional constraint called the *abnormality constraint*. I agree with Nickel, Cohen and Greenberg that generics can be given a quantificational analysis and that they display a distinctive form of context-sensitivity. However, I do not think that these theorists have recognised nearly enough context-sensitivity. As will become apparent in the foregoing, I do not think that their theories can adequately account for the data, nor do I think that their theories have adequate explanations of the properties of generics I discuss in sections 2.4 and 3.

    Further, while I agree with the early Carlson, Leslie and Liebesman (among others) that generics are very different from explicitly quantified sentences, I disagree that these differences entail that a simple and unified quantificational semantics is impossible. Further, elsewhere I argue that these views do not adequately account for the linguistic evidence, nor the form of truth-conditional variability in Cases 1–5 (cf. Sterken [2015, forthcoming]).

23. More realistically, it is a combination of both the kind and property predicated which contribute to determining the quantificational force.

24. Condoravdi (1992, 1997) provides examples which can be seen as counterexamples to this claim. von Fintel (1996) provides a theory of generics where both types of example are predicted. Beaver and Clark (2008, p. 60) argue that generics *freely associate* with focus, and thus, though they do not typically pick up a salient domain, they can do so.

part, for the context-sensitivity exhibited by the generics in Cases 1–5 above. It is useful to outline these (for the interested reader, examples of the different types of context-sensitivity appear in footnotes):

> **Alternative Source 1:** The presence of a context-sensitive predicate (*e.g.*, a gradable or vague predicate) in the restrictor or scope of the generic might explain, in whole or in part, the context-sensitivity at issue.[25]

> **Alternative Source 2:** The presence of a quantifier domain variable which forms part of the restrictor of the generic might explain, in whole or in part, the context-sensitivity at issue.[26]

25. To see an example, consider the following explicitly A-quantified sentence in the two contexts given below:
(28) a. Typically, purple turtles are fast.
b. Context 1: Suppose there are two kinds of turtles — purple turtles and yellow turtles. The purple ones are much faster walkers than the yellow ones. Suppose further, that the context is such that the speakers are talking about turtle walking.
c. Context 2: Again, suppose there are two kinds of turtles — purple and yellow. The purple ones are much faster walkers than the yellow ones. But this time the context is such that the speakers are talking about fast animals — antelopes, leopards, etc.
In the first context, (28a) is intuitively true while in the second context (28a) is intuitively false. The context-sensitivity here seems to be directly as a result of the predicate *fast* picking out different standards of fastness, which are salient in the two contexts.

26. According to a fairly standard semantics for A-quantified sentences, there are two ways in which quantifier domain variables can be resolved in context (cf. Beaver and Clark [2008] on free association with focus): these variables are sometimes contextually restricted by a domain which is salient in the context of utterance; and they can also be contextually restricted to a domain that is derived from the scope of the quantified sentence. To illustrate these two distinct types of contextual domain restrictions, I'll provide examples of the former and the latter in turn:
(29) a. Typically, cabs are yellow.
b. Context: Uttered while talking about cabs in New York City.
It should be clear that (29a) can be contextually restricted to New York City cabs as a result of that domain being salient in the context outlined in (29b). So, explicitly A-quantified sentences can be contextually restricted by a salient domain. To see an example of the latter type of contextual domain restriction, consider:
(30) Bartenders always serve alcohol.
(30) does not quantify over any situation or event involving a bartender whatsoever, otherwise the sentence would almost never be true; rather, there is an implicit restriction to situations or events involving bartenders in which something is served (or in which drinks are served). In this way, the domain is restricted by a domain which is a function of the scope, and precisely what function that is a function of context.

> **Alternative Source 3:** The general feature of question-sensitivity exhibited by A-quantifiers might explain, in whole or in part, the context-sensitivity at issue.[27]

Let us now eliminate these alternatives as sources for the context-sensitivity in Cases 1–5. Once eliminated, I take Distinctive to be a viable claim. I will consider the alternatives in turn.

Scanning the cases, only two of them have predicates which are plausibly gradable or vague, and hence, arguably context-sensitive: *floppy* in Case 1 and *yellow* in Case 3. One straightforward way to eliminate Alternative 1 — *i.e.*, to eliminate the possibility that a gradable or vague predicate is responsible for the difference in truth-value between the two contexts — is to test whether a simpler sentence (*i.e.*, an unquantified sentence) containing that predicate varies across the very same contexts. By putting the predicate in a simpler sentence, we help eliminate some of the ``noise'' of other potential sources of

27. This type of context-sensitivity is evidenced by examples like the following adapted from Schaffer and Szabo (2014):
(31) a. Dogs always bite the mailman.
b. Context 1: Each morning, some dog, as opposed to cats, mice, etc. bite the mailman. Ann is wondering what kind of animal bites the mailman when he arrives each morning, and Ann learns that there have been mailman bites and milkman bites, but that some dog has been the one doing the biting every time. So Ann says (31a).
c. Context 2: Each morning, some dog, as opposed to cats, mice, etc. bite the mailman. Ann is wondering what each dog has bitten, and Ann learns that there have been mailman bites and milkman bites, but that a dog has been the biter every time. So Ann says (31a).
In Context 1, (31a) seems true, but in Context 2, (a) seems false. The difference in truth-value seems to be a result of the different inquiries taking place in the two contexts.

context-sensitivity. If the predicate were responsible for the context-sensitivity across the two contexts, then we would expect the difference in truth-value to be preserved. If there is no difference in truth-value, then this is evidence that the predicate is not responsible for the context-sensitivity. Since Case 1 and Case 3 contain plausibly context-sensitive predicates, I will carry out the test on these cases. Consider the following straightforward predications of the same properties in the same contexts:

(32) a. Those dobermans have floppy ears. [The demonstrated dobermans have had their ears clipped.]

b. Context 1: The evolutionary biology context.

Consider (32a) as it appears in the text:

> 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 those dobermans have floppy ears.

c. Context 2: The dog-breeding context. Consider (32a) as it appears in the text:

> While Labradors and golden retrievers have floppy ears, dobermans don't have floppy ears. Dobermans have pointy ears. Those dobermans don't have floppy ears. Those dobermans have pointy ears.

(33) a. Those cabs are yellow. [Demonstrating three cabs which are yellow.]

b. Context 1: Giving practical travel advice to a friend about how to identify cabs.

c. Context 2: Giving a description of the regulation.

(32a) does not vary its truth-value across the contexts outlined in (32b) and (32c). Similarly, (33a) does not vary its truth-value across the contexts outlined in (33b) and (33c). This is evidence that the predicates *floppy ears* and *yellow* do not display any relevant context-sensitivity across the given contexts. Thus, they are not the source of the context-sensitivity displayed by the generics (5) and (10) across the two contexts. This eliminates Alternative Source 1 as a possible source of the context-sensitivity.

Checking Alternative Sources 2 and 3 is somewhat more difficult. To eliminate Alternative Sources 2 and 3 (or some combination thereof), I rely on a version of the A-Quantifier Test proposed above. This test, if passed, provides evidence that precludes these alternatives as sources of the context- sensitivity.[28] Here is the version of the A-Quantifier Test:

> **A-Quantifier Test:** Check whether explicitly A-quantified sentences vary their truth-value across the given contexts. If there is no difference in truth-value, then the alternative sources are not responsible for the contextual variability, and hence, this is evidence for Distinctive.

We already saw that the test is passed for Cases 1–5. This is evidence that the difference in truth-value for the generics in question is not a result the relevance or salience of the content of the preceding text, in settling any contextual domain restriction or any truth-conditional effects of the question under discussion. If any of these were causing the contextual variability at issue, then they would, presumably, be causing contextual variability for the explicitly quantified sentences as well, but they do not, thus we can conclude that there is

28. One might think that the (27) examples already eliminate Alternative Source 2, however, the (27) examples merely show that generics do not typically restrict their domains with a contextually salient restriction. A-quantifiers can be contextually restricted in different ways (cf. footnote 26). As such, here I am arguing for more than what the examples in (27) establish: no matter which way A-quantifiers standardly pick up their contextual restrictions, this way is still not enough to capture the context-sensitivity of generics.

a distinctive type of contextual variability which is exhibited by the generics in Cases 1–5.

This completes my arguments and considerations in favour of Distinctive and Semantic. Thus far, I take myself to have established, at least to a reasonable degree, that *Gen* displays a distinctive form of semantic context-sensitivity. In the next section, I argue that the best account of this context-sensitivity is one where we take *Gen* to be an indexical.

2. Context-Sensitivity and *Gen* as Indexical

We saw that some theorists have provided theories where *Gen* is distinctively context-sensitive. One type of theory takes it that the distinctive context-sensitivity derives from the mechanism of contextual domain restriction: generics and explicitly quantified sentences have different mechanisms which determine their contextual domain restrictions.[29] Another type of theory takes the distinctive context-sensitivity to be a result of the lexical restrictor. The champion of this proposal is Nickel (2008, forthcoming), who very roughly, takes it that *Gen* has the stable meaning of *all normal* and that context-sensitivity arises because what counts as normal varies with context. In other words, the lexical restriction to normal instances has an implicit argument place that needs to be determined as a function of the context of utterance (*e.g.*, in a similar way to how gradable adjectives have a implicit argument place which is determined as a function of context). Though these proposals recognise distinctive context-sensitivity, I think they do not recognise nearly enough of it.

What we need is a theory which allows even more semantic context-sensitivity. In this section, I outline the structure of such a theory and provide arguments for it. To begin with, I outline three ways to recognise more context-sensitivity which derives from components of the logical form of generics and which constitute part of the meaning of *Gen*. After that, I argue that there is variability which derives from

29. See, *e.g.*, Cohen (1996, 2008), Greenberg (2007), Asher and Pelletier (2012), Condoravdi (1997), von Fintel (1996), and Declerck (1991).

each of these components, and so we have at least some reason to think there is semantic context-sensitivity attributable to each of these components. Next, I provide three ingredients which I take as essential to an adequate semantics of generics. One of these ingredients is a metasemantics for *Gen*. This ingredient is especially important since one of the main claims of this paper is Elimitivism about Genericity: no complex notion of genericity is needed to provide a theory of generics since all we need is an adequate metasemantics for *Gen*. The metasemantics is also the main ingredient which allows us to preserve a simple, unified, quantificational semantics for generics. I provide a rough sketch of such a metasemantics and conclude this section with the main argument in favour of treating *Gen* along the lines proposed – *i.e.*, as an indexical.

2.1 Three Views of Gen *as Indexical*

In this section, I will begin to implement the informal idea that *Gen* is an indexical.

It is helpful to begin by asking: what would an implementation of indexical quantification — in particular, indexical A-quantification — look like? With a better characterisation of what is meant by this, we can construct a more precise theory and more precise considerations in favour of the claim of indexicality.

In the case of explicit A-quantifiers, in addition to the context-sensitive components of their meanings, there is a stable semantic contribution made — a stable generalisation or relation between the restrictor and the scope of the quantified sentence which is expressed in every context of utterance. In the case of explicit A-quantifiers, that semantic contribution is represented in logical form by two lexical components:

(i) That which contributes the quantificational force of the generalisation, and;

(ii) that which contributes any (stable) lexical restriction on the domain of quantification.

It is useful to consider a couple of examples to see what is meant by the stable semantic contributions of (i) and (ii). *Sometimes* and *always* are the easiest A-quantifiers with which to illustrate stability across contexts – consider:

(34) a. Sometimes dobermans have floppy ears.

b. Dobermans always have floppy ears.

c. Context 1: The context of evolutionary biology from Case 1.

d. Context 2: The context of dog breeding from Case 1.

The explicit A-quantifier *sometimes* contributes a quantificational force which is existential and it contributes this same existential force across all contexts of utterance. As a concrete example consider (34a) in (34c) and (34d): in both contexts, assuming a situation semantics,[30] (34a) says something like some actual doberman situations are situations where there are floppy-eared dobermans. Further, *sometimes* contributes a lexical restriction to actual situations and this lexical restriction is stable across all contexts of utterance. We can observe that in a similar fashion *always* has a stable quantificational component and a stable lexical restriction over the domain of quantification: the quantificational force is universal and the lexical restriction is again to actual situations. Consider, for example, (34b) in (34c) and (34d).

If *Gen* is an indexical A-quantifier, then at least one of these semantic components is not stable, but rather varies between contexts. Thus, I take it that there are three types of indexical accounts of *Gen*:

> Indexicality 1: The quantificational force of *Gen* varies with context and the lexical restrictor remains fixed.
>
> Indexicality 2: The lexical restrictor of *Gen* varies with context and the quantificational force remains fixed.
>
> Indexicality 3: Both the lexical restrictor and the quantificational force of *Gen* vary with context.

To illustrate what Indexicality 1 amounts to, imagine an A-quantifier *always** whose lexical restriction is still to actual situations, but whose quantificational force is allowed to vary with context, say between all and most. The expression *always**, then, is an indexical because in some contexts it expresses the generalisation all actual, while in other contexts it expresses the generalisation most actual. In fact, some quantifiers are hypothesised to be context-sensitive in a similar way: vague quantifiers like *many*, *often* and *seldom*.[31] Indexicality 2 can be similarly illustrated by imagining an A-quantifier *always*** whose quantificational force is stable — it quantifies over all situations in every context of utterance — but whose lexical restrictor is allowed to vary, say between actual situations and normal situations (where normal is understood as sometimes including non-actual situations). The expression *always*** can express the generalisation all actual in some contexts and all normal in others. To illustrate Indexicality 3, imagine the A-quantifier *always****, which varies its quantificational force in the way *always** does and varies its lexical restrictor in the way *always*** does.

As indicated, I think that Indexicality 3 provides the best account of the truth-conditional variability — or as I have argued, the context-sensitivity — of generics. Why think that Indexicality 3 is the best account? The simple answer is that there are examples where there seems to be variability of both the lexical restrictor and the quantificational force across utterances of generic sentences. (Moreover, as I will argue later on, both the lexical restrictor and quantificational force are semantically underdetermined.)

30. See, *e.g.*, von Fintel (2004) and Kratzer (2014).

31. As an example, take *many*; on a standard contextual analysis (see, *e.g.*, Cohen [2001b]), the sentence *many Ks are F* has a quantificational force which varies with a contextually supplied standard of "manyness" and a fixed lexical restriction to actual members of the domain. If the number of *Ks* that satisfy *F* is greater than the contextually supplied standard, then *many Ks are F* is true.

Variability in the Lexical Restrictor: Here is some reason to think that we need variability of the lexical restrictor.[32] The best candidate for a stable lexical restrictor for generics is to *normal* instances. This is a dominant view amongst theorists (cf. for example, Pelletier and Asher [1997], Asher and Morreau [1995], Asher and Pelletier [2012], and Nickel [2008, forthcoming]). Though a restriction to normal instances might reflect the content expressed in some contexts, it doesn't suffice for all generic utterances. To see examples of why normality, even a context-dependent form of normality, is not a stable component of the generalisations expressed by generics — consider the following discourse involving an explicit question:

(35) A: What's the difference between humans and monkeys?

B: Humans kill themselves.

(36) A: What's the difference between humans and monkeys?

B: All normal humans kill themselves.

(37) B: There exists a normal way of dying such that all humans which are normal in this way, kill themselves.

(35B) sounds acceptable and yet it seems strange to say that normality plays a role in whatever generalisation is expressed. As evidenced by (36), there seems no way to repair B's answer in (36) so that it sounds acceptable. Even a charitable version of Nickel's preferred solution, under (37), doesn't sound like the appropriate modal force for a generalisation that answers A's question in (36); and even if we grant that it is, Nickel would have difficulty distinguishing the contexts in which (35B) is true from the contexts in which it is false: if killing oneself counts as a normal way of dying in one context, then there seems no obvious way to exclude it from being a normal way of dying in other contexts.

As a further consideration in favour of variability of the lexical restrictor, many have noted that there seems to be some intensional component to the meaning of *Gen*. The often cited examples include *Annie handles the mail from Antarctica* and *Orange-crushers crush oranges*. These are intuitively true even in situations where no actual mail has been handled and no oranges have ever been crushed. On the other hand, many generics do not seem to have a strong modal component — take, for instance, *In Scotland, rabbits eat grass*, *Barns around here are red* or simply *Barns are red*, which seem to be purely descriptive generalisations about a salient group of actual rabbits and barns. The inability to pinpoint what the modal component of generic meaning is, has been problematic for theorists. Allowing the lexical restrictor to vary can explain even very subtle differences in the modal properties of different generic utterances.

Variability in the Quantificational Force: Here is some reason to think that we need variability of the quantificational force. Recall the examples at the beginning of section 1. There we saw that generics seem to vary in quantificational force depending on the predicate. One way to account for intuitions behind these cases is to say that the quantificational force varies as a function of the property expressed by the predicate in the context of utterance. It is worth noting that sentences with explicit vague quantifiers, like *many* and *few*, seem to pattern along the same intuitive lines: their quantificational force seems to vary as a function of the predicate in the sentence. The standard account of such quantifiers involves varying their quantificational force as a function of context.[33] This does not entail that *Gen* is simply a vague quantifier, however, I contend that *Gen* also varies its lexical restrictor, and so there

32. To be clear, in section 1.3, when I was "eliminating" the alternative sources of context-sensitivity — in particular, Alternative Source 2 — I was doing so to show that generics exhibit more context-sensitivity than these alternative sources provide. I am advocating that, in addition to variability that is a result of these sources, generics also display variability in their lexical restrictor — which is distinct from their contextual restrictor at the level of logical form — and variability in their quantificational force.

33. See, *e.g.*, Barwise and Cooper (1981), Westerstahl (1985), and Lappin (1988).

will be minimal pairs in which generics and sentences with explicitly vague quantifiers come apart.[34]

In addition, there is variability between utterances of a single generic. Consider the following generics in the given contexts:

(38) a. Lottery tickets are losers.

b. Context 1: Printed in an ad in the newspaper

c. Context 2: While warning a friend to not waste time and money on playing the lottery.

(39) a. Cats are black.

b. Context 1: Parent teaching a child about the general properties of cats.

c. Context 2: A teacher asks the class: What colours are cats?

In normal contexts, (38a) sounds intuitively false since it seems to require that all lottery tickets are losers for it to be true. By contrast, if a speaker utters (38a) while warning a friend not to be wasteful and foolish, (38a) seems intuitively true since most lottery tickets are indeed losers. The intuitive quantificational force of (39a) varies as well between the two contexts given. In regular contexts, (39a) sounds like a claim about all cats, whereas in other contexts, like Context 2, (39a) sounds like a claim about merely some cats.[35]

34. Moreover, I am not committing myself to the claim that generics vary their quantificational force in the same manner as vague A-quantifiers.

35. An anonymous referee for this journal suggested that the case for the variable force of *Gen* would be bolstered by an example where the permissible inference patterns varied between contexts—*i.e.* where some proposition, *P*, followed from the given generic sentence in one context, but not in another. I think this is a very difficult request to fulfill because it is unclear that generics validate any inference patterns: the inference patterns for any quantifier other than the universal or existential are unclear. Moreover, I think that there is much underdetermination in the quantificational force of generics—it is very hard to say what the quantificational force of *Gen* is in a given context, and so getting clear intuitions about inference patterns will be even harder (it is not like having the explicitly articulated *all* or *always* in the sentence). So the best I can do at this point is to consider (38a) in Context 1 and 2 again: try to first get yourself in a frame of mind where you endorse, for the sake of argument, what I say about Context 1 (that the generic has a universal reading, requiring that all lottery tickets are losers), and ask whether it follows that a given ticket is a loser. If I am correct in my description of Context 1, that follows. Next try to get in a frame of mind where you endorse, for the sake of argument, what I say about Context 2, and it doesn't follow that a given ticket is a loser (what does follow is just that it is a very likely waste of money to have bought it). See Pelletier (2009) where some of these inference patterns were studied empirically.

The evidence of the variability in the lexical restrictor and the quantificational force of generics gives us some prima facie, reason to think that *Gen* is an indexical. Granted though, working out a fully fleshed-out formal theory of the indexicality of *Gen* is not easy. In the next few subsections, I will outline how to go about doing it and where the difficulties lie. In the last subsection, I provide an additional argument in favour of the view that *Gen* is an indexical.

2.2 Three Ingredients of Indexical Quantification and the Metasemantics of Gen

I propose that there are three ingredients to a workable theory of generics that endorses the indexicality of *Gen*, they are as follows:

> Ingredient 1: A semantics for A-quantifiers.
>
> Ingredient 2: Representing the quantificational force and the lexical restrictor as free variables at the level of logical form.
>
> Ingredient 3: A *character* or *characters* (or more generally, *metasemantic determinants* or *constraints*) for resolving the value of these free variable(s) in context.

Given the contention that *Gen* is an indexical A-quantifier, Ingredient 1 just says that a semantics for *Gen* should make use of the same semantic resources as the semantics for A-quantifers more generally. If it

turns out that a situation-theoretic account of A-quantifiers is correct,[36] then *Gen* should be taken to quantify over situations. Or, if the unselective binding account of Lewis (1975) is correct, then *Gen* should be taken to quantify over *cases* or *tuples*.

Indexicals, overt or covert, are represented as free variables at the level of logical form.[37] On the indexical approach, *Gen* is no exception: Ingredient 2 says that the lexical components of generics that vary are represented as free variables at the level of logical form. Since *Gen* is an A-quantifier, these components will be the lexical restrictor and/or the quantificational force.

Given that *Gen* is composed of free variables, these variables need to be saturated in some way as a function of the context of utterance. Following Kaplan (1977), I will call the function from contexts to the semantic value of the free variable, a *character*. The character supplies the descriptive meaning of the indexical and encodes the effect *Gen* has on the truth-conditions of generics.

If one thinks of the character of expressions like *I*, it is relatively easy to specify what determines the semantic value for any given utterance of *I*. In other words, the expression *I* has a simple conventional, context independent meaning, and this meaning by itself suffices to fix a semantic value for utterances of *I*. For other indexicals, it is not easy to say what determines the semantic value in context. In particular, pronouns like *he*, possessives like *Bob's book*, demonstratives like *that* and *those* and covert indexicals, like quantifier domain variables and implicit argument places (the argument places of gradable adjectives, predicates of personal taste and some relational expressions) have more flexible conditions for resolving their semantic values in context. Following King (2012), I will call such expressions *supplementives*. King's label emphasises the fact that whatever context independent meaning these expressions have, needs to be supplemented in context in order for the expressions to secure a semantic value. Supplementives, along with *Gen* as I propose we understand it, secure their semantic values as a result of what might be better understood as *metasemantic determinants* or *metasemantic constraints*.

Ingredient 3 is the meat, so to speak, of a theory of generics, but it is also the most difficult to theorise about. In order to get this last ingredient right, we need to find the metasemantic determinants or constraints that fix the semantic value of *Gen* in context. In other words, we need an answer to the following difficult question:

> Metasemantic Question for *Gen*: In virtue of what does *Gen* have the semantic value (or content) that it has in a given context?

This question is quite distinct from the descriptive semantic question: what is the semantic value (or content) of *Gen*? A characteristic feature of the theory or approach proposed here 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 generalisation), the current 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. The account is flexible, in that if one choses to connect generics to some other complex notion (*e.g.*, normality or any one of the above mentioned), one could do that, as part of the metasemantics (though, this is not my preferred strategy; I think whatever complex notion would need to be applicable to the metasemantics of supplementives in general).

As I understand it, the metasemantic question for *Gen* is an instance of the more general question: in virtue of what do supplementives get their semantic values in a given context? In this way, specifying an answer for the metasemantic question for *Gen* will likely appeal, in part, to the same sorts of resources as the corresponding metasemantic

36. See, *e.g.*, von Fintel (2004) and Kratzer (2011)

37. See, *e.g.*, Kaplan (1989) and Partee (1970).

questions for demonstratives, domain variables, implicit argument places and the like.

2.3 A Metasemantics for Gen

In a recent paper, King provides a unified metasemantics for supplementives. He calls his metasemantics, the *coordination account*. I think the coordination account provides a good basic picture of what a metasemantics for *Gen* might look like.[38] The coordination account is argued by King to deal with many features of supplementives, features which I will argue are shared by *Gen*.

Here is King's metasemantics for demonstratives (and supplementives more generally if the appropriate substitutions are made):

> … I suggest we say that the semantic value of a use of a demonstrative d in a context c is that object o that meets the following two conditions: 1) the speaker intends o to be the value of d in c; and 2) a competent, attentive, reasonable hearer who knows the common ground of the conversation at the time of utterance would know that the speaker intends o to be the value of d in c. We can abbreviate this by saying that an object o is the semantic value of an occurrence of a demonstrative in context just in case the speaker intends o to be the value and the speaker successfully reveals her intention. (2012, p. 102)

King argues that by contrast with its predecessors, the coordination account gets the intuitively correct results in a variety of cases — in cases where it seems the demonstrative secures a particular semantic value, the account predicts this, and in cases where it seems the demonstrative fails to secure a semantic value, the account predicts this as well.

38. Other options include Richard (2004), Glanzberg (2009), and Ludlow (2013). On the more pragmatic end of the spectrum, see: Sperber and Wilson (1995) and Recanati (2003).

I will not rehearse the cases here, as there are an impressive number of different kinds of cases. However, I will discuss one important type of case. The type of case I am interested in is that of semantic underdetermination (or underspecification). A long-standing problem discussed by philosophers theorising about the semantics-pragmatics divide is that of the underdetermination of supplementives.

A paradigm example is that of quantifier domain restrictions.[39] Quantified sentences are underdetermined with respect to the domain of quantification. Suppose Bob and Susan are hosting a party and Bob says, *Every beer is in the bucket*. It is clear that Bob does not mean to be talking about every beer in the world, rather he is talking about some more restricted domain of beers. So, Bob's utterance of *Every beer is in the bucket* is restricted by some further property which is salient in the context of utterance. However, immediately we see a problem: which property? There doesn't seem to be any single property that is salient in the context or that the speaker intends to be talking about: there are a large number of properties that appropriately restrict the domain — *e.g.*, beers in the fridge, in the apartment or that Susan bought for the party, etc. Quantifier domains are, at least often times, semantically underdetermined.

King argues that his coordination account can provide an explanation of cases of semantic underdetermination, and that semantic underdetermination is a general feature of supplementives: even the singular demonstrative can be semantically underdetermined. King's explanation is essentially this: speakers' intentions do not have to be specific or determinate. In this way, a speaker can intend a range of properties, or a non-specific or non-determinate content, so long as the speaker and hearer manage to coordinate on (or jointly attend to) what is being talked about.[40]

39. See, *e.g.*, Buchanan (2010) and King (2012).

40. One could appeal to a more externalist position like Glanzberg (2009), where contextual parameters play a more active role in determining a unique content.

Let us now provide a metasemantics for *Gen* (*i.e.*, an answer to the Metasemantic Question for *Gen*) using the coordination account:

> The semantic value of a use of *Gen* in a context c is the generalisation g that meets the following two conditions:
>
> 1) the speaker intends g to be the value of *Gen* in c; and
>
> 2) a competent, attentive, reasonable hearer who knows the common ground of the conversation at the time of utterance would know that the speaker intends g to be the value of *Gen* in c.

Following King, we can abbreviate this by saying that a generalisation g is the semantic value of an occurrence of *Gen* in context just in case the speaker intends g to be the value and the speaker successfully reveals her intention.

We can also be more specific and break the metasemantics down into the two components of *Gen*, its quantificational force and lexical restrictor. So that coordination occurs on a quantificational force f and a lexical restriction l, instead of a generalisation g.[41]

2.4 Semantic Underdetermination: An Argument for Gen *as Indexical*

Gen seems to be semantically underdetermined in a similar way to how quantifier domain restrictions are semantically underdetermined. Consider the following examples:

(40) a. Norwegians have blue eyes.

b. Context: A speaker asks, *what do Norwegians look like?* and another speaker responds by uttering (40a).

c. Characteristically actual genetically original Norwegians have blue eyes.

d. Typically actual biologically original Norwegians have blue eyes.

e. Significantly, many Norwegians have blue eyes.

(41) a. Mammals lay eggs.

b. Context: A biologist is discussing birds, and their relationship to other species, she utters, *Birds lay eggs. Mammals lay eggs too*.

c. There is a homogeneous subset of mammals such that all of them lay eggs.

d. Several mammals that reproduce in some way lay eggs.

e. Many mammals that have reproductive capacities lay eggs.

In just the same way as we saw above, in the case of quantifier domain restrictions, if a speaker utters the generic (40a) in the context specified in (40b), then there are many available candidates for what the speaker said, some examples are given under (40c)–(40e). Another similar example is (41).

The metasemantics for *Gen* provided above can explain the semantic underdetermination in just the same way as it did for quantifier domain restrictions. The speaker needn't intend that a determinate generalisation is expressed by *Gen*. The conversation may not demand this, rather the speaker might simply intend some range of generalisations, so long as the speaker and hearer manage to coordinate on or attend to an appropriate generalisation. (Or, an appropriate range

41. I am here relying on King's account and it goes beyond the scope of this paper to fully assess and defend that account. An anonymous referee for this journal raises an important question: should it also be required that the speaker intend for all of 2) to be true? How one answers that question will depend on how one assesses a wider range of data and also how Gricean one's overall theory of communication is. I leave the question open for the purposes of this paper.

of quantities that act as the quantificational force, and an appropriate range of properties that can act as the domain.)

The fact that a metasemantics provides the best explanation of the semantic underdetermination of generics, provides an argument that *Gen* is an indexical.[42] Traditional quantificational accounts of *Gen* do not predict semantic underdetermination since on such accounts *Gen* has a determinate meaning. Moreover, since it is both the lexical restrictor and quantificational force which is underdetermined, we have evidence for Indexicality 3.

In the next section, I will raise a salient objection and provide a reply. After, I will end the paper, by arguing that understanding *Gen* as an indexical with the metasemantics outlined above can account for some additional properties of generics, that have been argued to be fundamental problems for traditional quantificational theories.

2.5 An Objection and Reply: Overgeneration

One quite general worry is that the indexical approach is simply not constrained enough. If generics are allowed to express many different types of generalisation, then doesn't the indexical approach predict that many intuitively false generics (or generic utterances) are in fact true, or that many intuitively true generics (or generic utterances) are in fact false?[43] To illustrate the worry, consider:

(42) a. Primes are odd.

b. Generally, primes are odd.

(42a) is intuitively false in many contexts and yet it is intuitively true when we add an explicit A-quantifier like *generally*. The worry can be phrased like this: how does the indexical approach ensure that the generalisation in (42b) is not expressed and that an appropriate one, which makes (42a) come out as false, is expressed?[44]

First, it is worthwhile to point out that there are contexts in which (42a) does express intuitively true generalisations. Consider, for example, a context where a student is looking at a blackboard with numbers on it, and that student is looking for primes amongst the numbers on the board. A helpful onlooker remarks (42a). In such a context, (42a) is intuitively true. Thus, (42a) might indeed express something akin to (42b) in some contexts.

Second, as emphasised in sections 2.3 and 2.4, the metasemantic explanation of what determines or constrains the generalisation expressed by *Gen* and what makes a given generic true or false in a given context will vary from generic utterance to generic utterance. In the case of (42a), a plausible explanation is that most contexts in which prime numbers are being discussed are quite precise mathematical contexts. In such contexts, the relevant standards which play a role in fixing the quantificational force will be quite rigorous; as such the quantificational force will be very strong — akin to *every* — so that (42a) comes out as false on whatever conceivable specifications of the

42. An anonymous referee suggests that underdetermination should be seen as a consequence of my theory, rather than an argument for it — in particular, of the metasemantics proposed in the preceding subsection. The referee is right that it is also a consequence of my theory, however what I want to highlight here is that it can be seen as an argument for my view since I take the underdetermination to be a pretheoretic data point.

43. A version of this objection is given in Krifka et al. (1995) against the account of Declerck (1991) (Declerck offers an account where the domain of generics is context-dependent depending on what is relevant):

> Declerck adopted a principle which says that when a statement is made of a "set", the hearer will use his or her world knowledge to restrict the statement to just those members of the "set" to which it can be applied in a suitable way…. One obvious problem with this approach is that the principle, as it stands, can easily justify all kinds of generic sentences – it is easy to find restrictions which would make any quantification as true. (1995, p. 45)

44. Leslie (2007a) discusses a different class of examples (in arguing against the domain restriction strategy of Pelletier and Asher [1997]):
(43) a. Dogs are poodles.
b. Mammals are cows.
All the same points can be made for these cases, but I think these examples are less convincing to bring about worries of overgeneration: where the kinds and subkinds in question are well-defined and well understood, I think the corresponding generics just sound either blatantly false in normal contexts, or infelicitous on the grounds that they result in some kind of presupposition failure.

lexical restrictor one provides for contexts in which genuine mathematical questions are salient.

Third, as mentioned previously, I admit there is room for elaboration in the account given so far. I have offered a potential avenue to go about answering the metasemantic question. This answer delivers constraints on what generalisation is expressed, and delivers at least as good results as existing theories of generics on their own. These theories of course have their share of overgeneration problems, but the indexical approach is no worse off. Moving issues of variability to the metasemantics does not make solving issues of overgeneration any easier. Even if the indexical approach hasn't solved issues of variability, and overgeneration issues remain, I take it that knowing the correct avenue to look for a solution to issues of variability and overgeneration is important in its own right.

Finally, figuring out how to appropriately determine or constrain what generalisation is expressed by a generic utterance is a complex affair, but no more complex, I claim, than figuring out how to appropriately constrain what domain restriction is expressed by a quantified utterance, or what degree or comparison class is expressed by an utterance containing a gradable predicate. So far, the indexical approach to generics is at the same level of progress in answering the metasemantic question as indexical approaches to domain restriction, and the indexical approach to the degree or comparison class structure of gradable predicates. Overgeneration is something that needs to be dealt with, but it needs to be dealt with by everyone. The overgeneration worry is simply a call for more theorising, not a genuine objection to the view.

3. Some Virtues of the Indexicality of *Gen*

Treating *Gen* as an indexical is explanatorily powerful. The indexical approach can explain many important properties of generics. Other approaches face difficulty with one or several of the following[45] whereas the indexical approach has the potential to explain all of the following (or so I will attempt to illustrate). Some virtues I will skip: it is obvious how treating *Gen* as an indexical can explain context-sensitivity. Here I will focus on how treating *Gen* as an indexical can be used to explain three additional properties of generics. The explanatory virtues of treating *Gen* as an A-quantifier are well known and so I merely refer the reader to Krifka et al. (1995), Carlson (1989), and Rooth (1995). I consider each of the three properties in turn.

3.1 Unpronounced

Several authors, I think probably rightly, make a big deal out of the need to explain why *Gen* is never pronounced:

> The unarticulated nature of *Gen* is puzzling, and has not received adequate attention in the literature … it is worth noting that this indicates that *Gen* is not just another everyday quantifier / determiner / adverb, which just happens not to be articulated in English. Were this some accidental fact about English, we would expect to find various other languages in which *Gen* was phonologically realised on a par with other quantifiers, determiners, or adverbs. That the non-articulation of *Gen* appears to be a linguistic universal is an interesting fact that should not be neglected. (Leslie, 2007b, p. 27)

> Standard glosses of *Gen* such as *typically*, *usually* and *generally* fail in cases like [*mosquitoes carry the West Nile virus*] and [*ducks lay eggs*], as well as a host of others. The absence of any pronounced English adverb synonymous with *Gen* is striking, though not nearly as striking as the cross-linguistic data. According to a number of theorists,

45. Standard quantificational accounts face difficulty with each of the properties discussed (*e.g.*, Carlson [1977], Leslie [2007a, 2008], and Liebesman [2011]). Kind-predication approaches and Leslie's disquotational approach face difficulty with context-sensitivity and many of the syntactic and semantic properties of generics (cf. Carlson [1989], Leslie [2013], and Sterken [forthcoming]).

> no known language has a pronounced *Gen* operator. (Liebesman, 2011, p. 414)

Leslie explains the unpronounced nature of *Gen* by providing a theory of *Gen* on which natural languages have no need for a pronounced generic quantifier — in particular, she claims that *Gen* expresses our default mode of generalisation, which is invoked in the absence of explicit modes. Liebesman, on the other hand, uses the fact that *Gen* is never pronounced to argue that the expression doesn't exist — on his view generics are kind-predications.

On the indexical approach, it is somewhat unsurprising that *Gen* is unpronounced: *Gen* is an instance of a certain type of expression in natural language which is frequently unpronounced — *Gen* is a covert indexical which is represented as a free variable at the level of logical form, and several such expressions are never pronounced. Such variables have important and semantically significant roles and therefore, are represented as covert structure in logical form despite the fact that they are never pronounced. Concrete examples include quantifier domain variables and implicit argument places. Like these expressions, *Gen* doesn't contribute a stable semantic value. Moreover, like these expressions, it doesn't need to be pronounced in order for the sentence to be considered grammatical, unambiguous or to draw attention to something in the context of utterance.[46]

If *Gen* is construed as an indexical (or free variable), it is at least unsurprising that it is never pronounced. If something has a stable content across contexts, it is hard to understand why speakers wouldn't just utter that content just like they do for other quantificational expressions. But if there isn't stability (and the expression in question doesn't have some other purpose — *e.g.*, to draw attention to a demonstration in the situation of utterance), it isn't so hard to understand why it is not pronounced. Much of the content of our utterances is not pronounced, and sometimes even never pronounced.

46. By contrast, though *that* has the feature of not contributing a stable semantic value, it is needed for the purposes of grammaticality, disambiguation or to draw attention to a gesture (*e.g.*, a demonstration), as in (44) and (45):
(44) a. That was hard. [Uttered after sitting an exam.]
b. was hard.
(45) a. Give that to me. [Uttered while demonstrating a book on a shelf.]
b. Give to me.

3.2 Generics and the Mind: Recollection and Acquisition

A further important virtue of the indexical approach is that it provides a novel avenue by which to understand the connection between generics and the mind. If *Gen* is represented as an indexical, then in order to fix the semantic value of *Gen* in a given context, indexical resolution needs to take place.[47] This makes the interpretation of generics and their properties interestingly different from explicitly quantified sentences. To illustrate, in what follows I consider the ways in which the indexical approach can provide a new route by which to illuminate two interesting topics related to generics and the mind: recollection and acquisition. I consider each in turn.

Recollection: Leslie and Gelman (2012) present data which supports the claim that adults and preschoolers have the tendency to recall quantified statements as generics. They suggest that this tendency derives from the fact that generics express cognitively default or primitive generalisations and hence, generics express less cognitively taxing generalisations than explicitly quantified generalisations:

> From a theoretical perspective, the question remains why children and adults have this tendency. Leslie (2008) and Gelman (2009) hypothesize that generics express cognitively default generalizations, whereas quantified statements express more taxing and cognitively sophisticated

47. I don't mean to fully commit myself to any particular general view of how indexical resolution takes place, there are numerous options: King (2012), Richard (2004), Glanzberg (2009), Ludlow (2013), Sperber and Wilson (1995), Recanati (2003), among others. I merely mean to point out that there is room to accommodate what many see as important observations in the literature connecting generics and the mind (see, *e.g.*, Leslie [2007a, 2008], Gelman [2003], Carlson [2009], Cohen [2004]) in a way not yet proposed.

> ones. Such a hypothesis would explain why generics are so easy for children to acquire, and why they are the preferred way of expressing kind-based generalizations both in children's speech and in child-directed speech: generic generalizations are the easiest sort of generalization for young children to process. It would also explain the tendency to interpret quantified statements as though they were generics. Because quantified statements involve more taxing, non-default generalizations, people sometimes fall back on the default generic interpretation instead of processing the more taxing one. (2012, p. 188)

Any theory of generics, which can explain why adults and children have the tendency to recall quantified statements as generics, is better off. The indexical approach, I suggest, can explain the recollection facts by appeal to the idea that *Gen* is a covert indexical (supplementive) and the properties of these types of expressions.

Generics need not express cognitively default or primitive generalisations, rather, like other indexicals, their content can be underdetermined or non-specific with respect to the generalisation expressed. The fact that they can express underdetermined or non-specific content makes generics an ideal tool for reporting the "gist" of the generalisation which the speaker cannot recall. It is natural to suppose that if a subject is unsure of or cannot recall what content was expressed in some past situation, then that subject might rely on a underdetermined or non-specific content to communicate an "approximation" of the unrecalled content or somehow rely on context or her interpreters to supply a better "approximation" or indeed, the appropriate content. *Gen* understood as a covert indexical (supplementive) is a good device for doing both of these things.

To illustrate the ways in which underdetermined or non-specific contents are good devices for "approximating" or leaving open contents which a speaker is having difficulty recalling, consider the following example:

> Suppose Sawyer utters *Emily took my cookie*. Jasmine, trying to recall what Sawyer said, can remember that he said that someone took his cookie, but cannot remember whether it was Emily or Sophie or Isabel. Jasmine reports Sawyer's utterance as *Sawyer said that someone took his cookie. I think it was either Emily, Sophie or Isabel*.

In this example, Jasmine uttered the non-specific content that someone took Sawyer's cookie. This content leaves open the content Jasmine cannot recall and communicates the most accurate and informative proposition she can recall. To see an example with an indexical (supplementive) or underdetermined content — consider:

> Suppose Sawyer said to Jasmine yesterday that a certain group of people had funny accents. His claim was about people in the county of Fife. The next day Jasmine cannot recall whether Sawyer's claim was about a group of people in the county of Fife, in the region of East Neuk, in the town of St Andrews, or simply the people in their immediate vicinity at the time of Sawyer's utterance. Jasmine, not recalling which group Sawyer was talking about, reports what Sawyer said by uttering *Sawyer said that the people around here have funny accents*.

One candidate explanation, for the fact that Jasmine uses the sentence *the people around here have funny accents* is that it expresses an underdetermined content with respect to which region and group of people Sawyer was talking about, and thus, Jasmine is not detectably committed to any particular determinate region or group of people. Jasmine can rely on context or her interpreter to fill in that content or leave it open if the interpreter cannot do so.

What I am suggesting is that generics are used in a similar way to how non-specific or underdetermined contents are used to report what the speaker does know (*e.g.*, that some generalisation holds

between the kind and property in question) while leaving open just what generalisation was actually expressed. Thus, if *Gen* is understood as a covert indexical (supplementive), there is a natural explanation of the tendency supported by the Leslie and Gelman study.

Acquisition: In Leslie (2008), one of the considerations motivating her cognitively based theory of generics is the Paradox of Acquisition, which she characterises 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 indexical approach provides a simple explanation for the Paradox of Acquisition. Children do not need to learn what *Gen* means since it has no fixed meaning. *Gen* is like other supplementives — for example, quantifier domain variables, implicit argument places (*e.g.*, the standard or comparison class variables of the predicates *tall* and *smart*), and demonstratives. I propose that the acquisition path of *Gen* is similar to such expressions. Minimally, then, the requisite abilities to acquire generics are the cognitive or conceptual ability to generalise in some way, and the ability to saturate or resolve the value of free variables (of the appropriate semantic type) in some way.

Leslie (2008) proposes a solution to the Paradox. She outlines three principles for the acquisition of generics which make them easier to acquire than quantified sentences.

> The child's innate language endowment would then only need to provide the learner with three principles for the acquisition of generics to proceed:
>
> 1. All variables must be bound for an LF to be interpretable.
>
> 2. Variables that are free in the Restrictor are bound by a default operator.
>
> 3. This default operator invokes the conceptual system's default means of generalising.
>
> If the acquisition of generics proceeded even roughly along these lines, we can begin to see why generics are so easy to acquire; they correspond most closely to what the child already knows how to do. (2008, p. 28)

On the indexical approach, acquisition would need something along the following lines in order for the acquisition of generics to proceed:

1. All variables must be bound for an LF to be interpretable.
2. Variables that are free in the Restrictor are bound by the *Gen* variable, which has the semantic type of an A-quantifier.
3. The *Gen* variable invokes a process of indexical resolution which employs (broadly) pragmatic and conceptual abilities to arrive at a generalisation expressed.

The important point of departure from Leslie is of course principle 3. Whereas Leslie's solution to the Paradox is grounded in the cognitive mechanism of primitive, default generalisation, the solution of the indexical approach is plausibly grounded in the linguistic properties of generics and the mechanism of saturating an indexical (supplementive).

What indexical resolution involves will depend on the metasemantics one endorses for supplementives. In section 2.4, I proposed a metasemantics for *Gen* based on King's coordination account. Such an account has two important features which are useful in explaining the early acquisition of generics. First, on the coordination account, the content of *Gen* is, in part, determined by the speakers' intentions. Intention reading is developed as early as 9–12 months of age and is a key, if not the key, component of usage based theories of language acquisition, where language acquisition is seen as more integrated with other conceptual, pragmatic and social skills.[48] Second, on the coordination account, the content of *Gen* is, in part, determined by the ability of a competent, attentive, reasonable hearer to know the common ground of the conversation and to appropriately read the speaker's intentions. As such, the content of *Gen* will be calibrated to the level of the child, making generics especially good devices for communicating generalities to children. As children's knowledge of language and the world evolves, so will the contents of generic generalisations.

The indexical approach provides an alternative explanation of the Paradox of Acquisition. *Gen* is acquired before explicit quantifiers, because the minimal metasemantic and conceptual abilities are available at an early stage. Whether this is so, is to some extent, an open empirical question. Much will depend on how the metasemantic and conceptual abilities are understood, but given the early acquisition of, for example, demonstratives and gradable predicates with implicit argument places (such as *tall* and *smart*), there is good reason to think that the foregoing is a viable explanation.[49] Note that on such an understanding, we need not, though we still could, follow Leslie and Gelman in thinking that there is anything like a distinctive primitive or default generalisation which generics express.[50]

48. See, *e.g.*, Tomasello (2001, 2003, 2006).

49. See, *e.g.*, Smith, Cooney, and McCord (1986), Barner and Snedeker (2008), and Syrett, Kennedy, and Lidz (2010).

50. Also note that the indexical approach can, but needn't follow Leslie in thinking that our minds possess anything like a *primitive default cognitive mechanism of generalisation*. Indeed something much less dedicated and specific may be going on.

4. Conclusion

In this paper I've defended the positive view that the unpronounced quantifier expression *Gen* in the logical form of generics is an indexical, in particular what King (2012) calls a *supplementive*. The paper argues that a given generic sentence expresses very different generalisations in different contexts of utterance. This view offers a novel approach to generics and an explanatorily powerful one. It offers a new way to look at and solve the problems and puzzles of generics. With the realisation that *Gen* is a covert indexical, one can see that many of these puzzles are instances of more general puzzles to do with metasemantics and implicit, context-sensitive communication.

A characteristic feature of the view 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, the proposal is that those complexities are best dealt with in a metasemantic theory. The view provides a new spin on the investigation of generics that I hope will inspire further work on the topic. Some remaining open questions are as follows: what is the appropriate metasemantics for *Gen*? How much of the apparent truth-conditional complexity of generics can in fact be handled by answering the metasemantic question for *Gen*? Do we, in addition, need to appeal to traditional Gricean pragmatics or truth-conditional pragmatics[51] to provide a full account of the complexity of generics? How does the indexical approach affect our theories of generic thought and reasoning? I provided a glimpse into some psychological consequences in section 3.2, but there are surely many more consequences.[52]

51. See, *e.g.*, Recanati (2002, 2004, 2010), Sperber and Wilson (1995), Carston (2000, 2002), Bach (2003), among others.

52. This paper has benefited from discussions with Derek Ball, Einar Duenger Bohn, Herman Cappelen, Josh Dever, Olav Gjelsvik, Ephraim Glick, Torfinn Huvenes, Sarah-Jane Leslie, David Liebesman, Alda Mari, Bernhard Nickel, Jeff Pelletier, François Recanati, Jennifer Saul, Andreas Stokke, Brian

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