The Radical Account of Bare Plural Generics

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1. Introduction

I use 'bare plural' to refer to generic sentences of the form 'Ks F', where 'F' is a predicate and 'K'—loosely speaking—is a kind term. ^{1,2} For example, 'Ducks lay eggs', 'Cars have wheels', and 'Philosophers are crafty' are all bare plurals.

It is unclear how to provide a uniform semantics for bare plurals. There is no consensus on what semantics to assign bare plurals.³ And yet, bare plurals pervade natural language. Bare plurals have even been put to substantial philosophical work.⁴ It would be philosophically fruitful, then, to understand how they work.

Are bare plurals really all that puzzling? Many are initially attracted to a "simple" account of bare plurals, on which 'Ks F' is true iff, normally, all Ks F. After all, many bare plurals seem to express information about what is normal for a member of the kind in question. This simple account is, however, susceptible to various counterexamples. The bare plural 'Ducks lay eggs' seems true, but it is false that, normally, all ducks lay eggs. After all, there is nothing abnormal about a duck's being male. But no male duck ever lays eggs. Moreover, the bare plural 'Mosquitoes transmit malaria' seems true and yet it is false that, normally, all mosquitoes transmit malaria. Less than 1% of mosquitoes have ever transmitted malaria. Only an abnormal mosquito transmits malaria. Therefore, the simple account is untenable (Leslie 2007, p. 380).

Semantic theorizing about bare plurals is not easy. I proceed, in §2, by systematically observing the many ways in which we use bare plurals. This "messy" feature of bare plurals is, I think, the key to theorizing about them. In §3, I develop a novel account that promises a simple, uniform semantics for bare plurals. On this view, bare plurals fail to semantically ex-

² I restrict my attention to *individual-level* bare plurals. What are excluded from my purview are *kind-level* bare plurals. Intuitively, an individual-level bare plural is about the individual members of some kind. A kind-level bare plural is about the kind itself. For instance, 'Bachelors are unmarried' is an individual-level bare plural, whereas 'Dinosaurs are extinct' is a kind-level bare plural. Individual bachelors are unmarried. But individual dinosaurs are not rare. For some discussion of this distinction, see Krifka (1987) and Leslie and Lerner (2016).

¹ For convenience, I omit corner quotes in favor of single quotation marks.

³ For a recent overview of the literature on the semantics of bare plurals, see Sterken (2017).

⁴ For instance, see Asher and Bonevac (1996), Cheng (2011), Haslanger (2010), Haslanger (2014), Johnston and Leslie (2012), Lerner and Leslie (2013), Leslie (2017), Nickel (2010), Sorensen (2012), and Wasserman (2011).

press propositions. Nonetheless, speakers still utter them in order to make assertions. Finally, in §4, I reply to objections.

2. The Variety Data

There is a wide range of non-figurative uses that bare plurals may be put to. This phenomenon, which I call 'the variety data', must be accommodated by any satisfactory account of bare plurals. I will present a novel and systematic taxonomy of this variety. There are four different classes falling under the variety data: homoplural statistical variety, heteroplural statistical variety, homoplural use variety, and heteroplural use variety.

2.1 Homoplural Statistical Variety

Homoplural statistical variety is the phenomenon by which different tokens of the same bare plural type are used to assert different statistical generalizations.⁵ For example, suppose that John desperately needs money by the end of the month and earnestly asks Sally if it is a good idea for him to buy lottery tickets. Sally replies by uttering 'No, lottery tickets are losers'. It seems that by uttering 'Lottery tickets are losers', Sally asserts something true—that *almost all* lottery tickets are losers.

Contrast this case with one in which Donald is a wealthy billionaire who, for some peculiar reason, believes that *all* lottery tickets are losers. Donald is so confident in this belief that he signed a legal contract stating that he is to give any future lottery winners a billion dollars. Donald's close friend reprimands him for making this decision. In reply, Donald utters 'Lottery tickets are losers'. By uttering this generic, it seems that Donald asserts, falsely, that *all* lottery tickets are losers.

I have provided two cases in which 'Lottery tickets are losers' differ in truth-value. In one case, 'Lottery tickets are losers' is used to assert that *almost all* lottery tickets are losers. In another case, it is used to assert that *all* lottery tickets are losers. We have before us two tokens and two different statistical generalizations. Therefore, homoplural statistical variety exists.

2.2 Heteroplural Statistical Variety

Heteroplural statistical variety is the phenomenon by which different tokens of different bare plurals are used to assert different statistical generalizations. Such variation is evident upon considering the three generics 'Sharks kill bathers', 'Barns are red', and 'Prime numbers are odd'. A speaker easily asserts a truth by uttering 'Sharks kill bathers'. Such speaker might assert, for instance, that *a few* sharks kill bathers. A speaker also easily asserts a truth by uttering 'Barns are red'. Such a speaker might assert, for instance, that *many* barns are red.⁷ On the other hand, a speaker cannot easily assert a

⁵ Statistical generalizations are expressed by quantified sentences.

⁶ These cases are variants of cases that Sterken (2015a, p. 18) develops.

⁷ If only a few barns were red, it seems the speaker speaks falsely.

truth by uttering 'Prime numbers are odd'. Such a speaker might assert the falsehood that *all* prime numbers are odd. (After all, 2 is an even prime.)

I have provided different bare plurals that used to assert different statistical generalizations. Therefore, heteroplural statistical variety exists.

2.3 Homoplural Use Variety

Homoplural statistical variety is the phenomenon by which different tokens of the same bare plural are used to assert different sorts of propositions altogether. Consider the bare plural 'Ravens are black'. Suppose that all ravens have been painted white earlier today. Now consider the following two cases.

First, Oliver is an ornithologist giving a lecture on the properties that ravens are, in general, biologically disposed to have. By uttering 'Ravens are black', he seems to assert something true. In this context, the bare plural is used to assert the true proposition that, *under normal circumstances*, almost all ravens are black.

Second, Mary is playing a game in which she is to guess the color of a randomly chosen raven. She does not know that any ravens have been painted white. She, then, asserts something false by uttering 'Ravens are black'. After all, Mary is only interested in the actual color of ravens. In this context, she asserts the false proposition that most ravens are black by uttering 'Ravens are black'.

I have provided two cases in which 'Ravens are black' is used to assert different sorts of propositions. In the former case, the speaker asserts a proposition about what is normal for ravens. In the latter case, the speaker asserts a statistical generalization over actual, presently existing ravens. Therefore, homoplural statistical variety exists.

⁸ I largely leave the notion of a "sort" of proposition at an intuitive level. Here are some examples to help illustrate what I mean by 'sort of proposition'. 'All bachelors are unmarried' expresses (1) a statistical generalization, 'Under normal circumstances, most turtles die young' expresses (2) a proposition about what is normal, and 'Ideally, everyone is virtuous' expresses (3) a proposition about what is ideal. These are all different sorts of propositions.

⁹ Countless other instances of homoplural use variety could be given. Here is another pair of cases. First, suppose that Jim believes that (i) all boys should cry but also that (ii) no boys, in fact, cry. Jim utters 'Boys don't cry' in the presence of an attentive audience that is fully aware of Jim's odd belief that (ii). Jim thereby asserts, falsely, that *all* boys don't cry—a statistical generalization. Second, suppose that Dale is a mean-spirited father who firmly believes that no boy should ever cry. One day, Dale sees his young son crying and utters 'Boys don't cry'. Dale thereby asserts that, *ideally*, all boys don't cry. In the former case, a statistical generalization is asserted. In the latter case, a proposition about what is ideal is asserted. (I intend to use 'ideally' in an intuitive manner, but, as suggested by a reviewer, I would have no problem understanding 'ideally' in the technical, kind-relative sense employed by Leslie (2015b).)

2.4 Heteroplural Use Variety

Heteroplural use variety is the phenomenon by which speakers use different tokens of different bare plural types in order to assert different sorts of propositions. Some bare plurals, for example, are used to assert what it is to be a member of a kind. For example, 'Round squares are round' may be used to assert the proposition that, by definition, all round squares are round. Bare plurals are also sometimes used to assert propositions concerning what is normal. For example, 'Ravens are black', in certain contexts, is used to assert some proposition about what is normal for ravens. Additionally, bare plurals can be used to assert normative claims. For example, 'Boys don't cry' is used, in some contexts, to assert some (false) proposition about what ought to be the case. Finally, bare plurals may be used to assert some proposition about the capacities of the members of a kind. For instance, it seems that an overprotective parent may utter 'Tabletop corners hurt babies' in order to assert that, in general, tabletop corners can hurt babies.

2.5 The Import of the Variety Data

As the variety data indicates, bare plurals are non-figuratively used to assert a wide range of propositions. That is, speakers are able to—without speaking figuratively—use bare plurals to make a wide range of assertions. Any adequate account of bare plurals must provide some explanation of this variety data. But many influential accounts of bare plurals struggle to accommodate the variety data. I survey some such views below.

Roughly, Ariel Cohen (1999, pp. 55–56) claims that any bare plural 'Ks F' is true just in case either (i) most Ks F or (ii) the probability that a randomly chosen K Fs is higher than the probability that a randomly chosen individual that has an alternative property to being a K itself Fs.¹⁰ Cohen's account then incorrectly predicts that 'Prime numbers are odd' is true. Not only are most prime numbers odd, the probability that a prime number is odd is much higher than the probability that a non-prime number is odd. So, the relevant instances of both (i) and (ii) are true. So, Cohen is committed to claiming that 'Prime numbers are odd' is true. But, intuitively, this bare plural can be straightforwardly used to assert, falsely, that *all* prime numbers are odd. Cohen's account, then, fails to accommodate statistical variety.

Roughly, Bernhard Nickel (2016, p. 64) claims that *Ks F* just in case there is a normal way of being a *K* such that all *Ks* that are normal in this way *F*. But then Nickel cannot accommodate homoplural or heteroplural use variety. Consider a case in which almost all ravens have been painted white and Alice, who is unaware of the painting, utters 'Ravens are black' in order to assert the (false) statistical generalization that almost all ravens are black.¹¹ Nickel incorrectly predicts that 'Ravens are black' is true in that context, since being black is a normal way of being a raven such that all ra-

¹⁰ Clause (ii) provides simplified truth conditions for what Cohen calls a 'relative generic'. Nothing of importance here rests on this simplification.

¹¹ Perhaps Alice is playing the color-guessing game Mary played in §2.3.

vens that are normal in this way are black. Utterances of 'Ks F' are not always about what is normal for the Ks.

David Liebesman (2011, p. 417) treats all bare plurals as direct-kind predications. That is, *Ks F* just in case the kind *K* itself *Fs*. For example, Liebesman would claim that 'Tigers are striped' is true just in case the tiger kind (*Panthera tigris*) is itself striped. This account, however, leaves heteroplural statistical variety completely unexplained. 'Prime numbers are odd' seems false even though almost all prime numbers are odd; on the other hand, 'Mosquitoes transmit malaria' seems true even though almost no mosquitoes transmit malaria. Liebesman (2011, 420) tells us that "[t]he relationship between kinds and their members is...unsystematic." But this is utterly mysterious. It would be much more preferable to give a deeper explanation of why we have the intuitions we do about, for instance, 'Prime numbers are odd' and 'Mosquitoes transmit malaria'.

Sarah-Jane Leslie (2007, p. 382) claims that bare plurals express cognitively primitive generalizations. But what is crucial for our purposes is that she gives a purely disquotational semantics for Gen, a commonly posited binary operator that relates the restrictor and scope in a bare plural:

Gen x [Restrictor(x) [Scope(x)]

However, as Rachel Sterken (2015b, p. 2503) points out, a purely disquotational semantics of Gen does not predict context-sensitivity. All we are told is that 'Ks F' is true iff Gen x [K(x)][F(x)], but we are not told anything else about the semantics of Gen. But context-sensitivity appears to be precisely what homoplural statistical and use variety suggest exists. Therefore, the variety data is left unexplained on Leslie's account.

If we were to revise Leslie's account to make it predict context-sensitivity, we would turn Gen into an indexical. After all, as Sterken (2015a) has argued, bare plurals are context-sensitive in a way that the corresponding sentences containing overt adverbs of quantification like 'typically' or 'generally' are not. But now we are considering Sterken's (2015a) view, on which Gen is an indexical. This account can—at least in principle—readily accommodate the variety data, but, as we shall see in §3, I think the variety data can be explained without positing Gen. As I will elaborate on at the end of §3, doing without Gen is an advantage.

3. The Radical Account

I will defend a novel account of bare plurals, which I call 'the radical account', that explains the variety data pragmatically. This aspect of the view, I hope, will prove appealing. One striking commitment of the view is that *all* bare plurals are semantically incomplete. That is, no bare plural expresses a proposition.¹²

¹² The radical view starkly contrasts with previously developed views, on which bare plurals do express propositions. For a sample of such views, see Asher and

Before returning to the virtues of the radical account, I must introduce the pragmatic notion—Kent Bach's (1994) impliciture—that it appeals to. It is a familiar idea that speakers often do not mean what they, *strictly speaking*, say.¹³ Speakers can speak figuratively. Moreover, speakers can implicate things by meaning what they say *and* something else in addition to what is said. This is well-trodden territory.¹⁴

What is less familiar is the idea that speakers can mean just one proposition by meaning everything they say, *plus* some additional content. In such cases, what is meant is partly constituted by what is said. In these cases, the speaker implicites—not implicates—what she means. A speaker speaks in a subtly non-literal way whenever she implicites something. What she means is distinct from, though very closely related to, what is said. What is meant—and asserted—is conceptually built out of what is said. What is added to what is said is determined by the speaker's communicative intentions.

In the cases of impliciture that interest me here, the speaker utters a *semantically incomplete* sentence. Semantically incomplete sentences fail to express any proposition whatsoever in any context.¹⁵ What is said by uttering a semantically incomplete sentence does not constitute a proposition. What is said in these cases is a mere *propositional radical*. In such cases, the speaker *completes* what is said to assert a proposition. The speaker relies on the fact that her audience expects her, the speaker, to make a relevant conversational contribution. Given this fact, the speaker intends her audience to ascertain what she means by an utterance.

Consider the following sentence, (Ready):

(Ready) Ann is ready.

(Ready) is a sentence, but does not express any proposition. It only expresses a propositional radical. Ann cannot be ready *simpliciter*. Nonetheless, a speaker may utter (Ready) in order to make an assertion. For instance, if the speaker and her audience are in the midst of making dinner plans, this speaker may utter (Ready) in order to assert that Ann is ready *to attend dinner*. The speaker completed what is said to make an assertion (Bach 1994, 128).

Pelletier (1997), Cohen (1999), Krifka et al. (1995), Leslie (2007), Liebesman (2011), Nickel (2009), Nickel (2016), Sterken (2015a), and Wasserman (2011).

¹³ I will henceforth use a strict notion of what is said so that a speaker S says P in context c by uttering e iff the semantic content of e in c is P. Similarly, I henceforth use will 'express' so that e expresses P in context c iff the semantic content of e in c is P.

¹⁴ For the seminal work on this topic, see Grice 1989b.

¹⁵ I am assuming that the semantic minimalism of Cappelen and Lepore (2005) is false. I deny that every declarative sentence expresses some proposition. See Bach (2006) and Carston (2008) for critical discussion of semantic minimalism.

One objection to the claim that completion sometimes occurs is Jason Stanley's (2000) variable binding argument. In the sentence 'Whatever Mary wants to do, Ann is ready', the expression 'Whatever Mary wants to do' seems to bind some variable that takes on—as its semantic value—activities that Ann is ready for. The variable binding argument concludes that the unembedded sentence 'Ann is ready' simply expresses different propositions in different contexts—the variable ranging over activities Ann is ready for just takes on, as its semantic value, whatever activity is contextually salient. The variable binding argument, if sound, seems to generalize to any purportedly semantically incomplete sentence.

A detailed discussion of the variable binding argument is outside the scope of this paper. The argument has received much critical discussion. See, for instance, Bach (2000), Carston and Hall (2017), Recanati (2002), Cappelen and Lepore (2002), Hall (2008), and Sennet (2008). I will only briefly mention one reason why one might be skeptical of the variable binding argument: It is unclear if the bound reading is a genuine semantic reading of the sentence as opposed to something that is merely easily conveyed by that sentence. Consider 'Whatever Mary wants to do, Ann is ready' once again. Suppose that Mary is Ann's archenemy and tries her hardest to foil Ann's plans. Moreover, suppose that Ann is preparing feverishly for an important speech. An informed speaker can utter 'Whatever Mary wants to do, Ann is ready' in order to assert that, whatever Mary wants to do, Ann is ready to give her speech. Here, what it is claimed that Ann is ready for is not determined by what Mary wants to do; in fact, Mary—being Ann's archenemy—may want that Ann not give her speech. The bound reading of the sentence may simply be the content of what is asserted given a common completion: to do that thing. The proponent of the variable binding argument assumes that the bound reading of a quantificational sentence is a genuine semantic interpretation of it, but this may precisely be what we should reject.16

Let us put aside the variable binding argument and return to our general discussion of completion. Only some completions are allowed. It would seem be an instance of figurative speech, for instance, to utter 'Ann is ready' and to thereby assert that Ann is *not* ready *to attend dinner*. Why is this so? A good question, but one I do not propose to answer here. What I require for my purposes is that speakers sometimes complete what they, strictly speaking, say. I leave it to future work to develop a general account of which completions are allowed for any given propositional radical.¹⁷

¹⁶ This is effectively Bach's (2000) response. For the case of Ann and Mary considered here, I am indebted to Troy Cross.

¹⁷ And lest you become skeptical that speakers ever complete what they say, I ask you to consider subsentential expressions. Suppose that Alice is at a restaurant in Spain, that the only word of Spanish Alice recognizes and understands is 'agua' (Spanish for 'water'), and that Alice knows that her waiter does not recognize or understand any English whatsoever. Alice may nonetheless utter 'agua' in order to assert that *she wants* water. The word 'agua' clearly expresses a mere propositional

(Though she works in a relevance-theoretic framework, Hall's (2008) suggestion that completion—or as she calls it, pragmatic enrichment—is constrained by "a process of local [and minimal] adjustments of logical form to warrant [relevant] implicatures" (p.542) may be promising.)¹⁸

On the radical account of bare plurals, all bare plurals are semantically incomplete. They only express propositional radicals. Speakers complete what is said in order to make assertions. The speaker's communicative intentions determine what is added to what is said.

Here is a case that provides some evidence that bare plurals are semantically incomplete. Suppose that it was recently discovered that there are things called 'zorks' and an activity called 'flibbetting'. Supposing that any sentence may be used literally and that bare plurals express propositions, 'Zorks flibbet' should express a proposition. But it is unclear that it does. What does the world have to be like in order for this bare plural to be true? Do all zorks have to flibbet? Just some? Or, under normal circumstances, all zorks? Or something else? Especially in light of the variety data, I do not have any clear intuitions as to what the world would have to be like so that zorks flibbet *simpliciter*. ¹⁹ This is naturally explained if all bare plurals are semantically incomplete. Nothing evaluable for truth is expressed by any bare plural.

It seems that what is missing in 'Zorks flibbet' is a quantifier expression. How many zorks is the speaker talking about? The speaker must contribute a quantifier if she is to make an assertion. She does so through completion.

But sometimes, something else besides a quantifier is added by completion. This arises when the speaker is asserting something besides a pure statistical generalization. For example, the speaker may be asserting something about what is normal for the members of the kind being dis-

radical, and yet Alice may complete it in order to make an assertion. Observe that, even here, not just any completion is allowed. Alice cannot (non-figuratively) assert that she does *not* want water by uttering 'agua'. For an objection to the view that subsentential expressions can be used to make assertions, see Stanley (2000, pp. 407–409). For replies, see Elugardo and Stainton (2004) and Stainton (2006).

¹⁸ Work such as Hall's (2007) aims to address Stanley's (2002) concern that pragmatic approaches overgenerate readings.

¹⁹ Notice the analogy between 'Ann is ready' and 'Zorks flibbet'. Without sufficiently rich mutual background beliefs about Ann (and what activities are of conversational relevant), one cannot successfully convey a proposition to her audience by uttering 'Ann is ready'. Analogously, without sufficiently rich mutual background beliefs about zorks and flibetting, one cannot successfully convey a proposition to her audience by uttering 'Zorks flibett'. These observations are straightforwardly explained if 'Ann is ready' and 'Zorks flibbet' are both semantically incomplete.

cussed. In such cases, the content of a sentential operator or a modal verb—in addition to a quantifier—is added to what is said.²⁰

Below are seven examples of possible completions:²¹

- (1) [A few] mosquitoes transmit malaria.
- (2) [Many] barns are red.
- (3) [All] prime numbers are odd.
- (4) [Under normal circumstances, almost all] ravens are black.
- (5) [By definition, all] round squares are round.
- (6) [Ideally, all] boys don't cry.
- (7) [All] orange crushers [can] crush oranges.

A speaker may utter 'Mosquitoes transmit malaria' in order to assert that a few mosquitoes transmit malaria. Similarly, a speaker may utter 'Barns are red' in order to assert that many barns are red. Moreover, an imprudent mathematics student may utter 'Prime numbers are odd' in order to assert that all prime numbers are odd. These three bare plurals are used to convey mere statistical generalizations.

When a speaker is concerned with the properties that ravens are intrinsically disposed to have as a result of their genetic endowment, she may utter 'Ravens are black' in order to assert that, under normal circumstances, almost all ravens are black. This bare plural is used to assert a proposition about what is normal for ravens. Furthermore, when a speaker is concerned with what it is to be a round square, she may utter 'Round squares are round' in order to assert that, by definition, all round squares are round. This bare plural is used to assert a proposition about what it is to be a round square. (This is especially plausible because it is impossible for anything to be a round square.) Moreover, when a speaker is concerned with what is ideal for boys, she may utter 'Boys don't cry' in order to assert that, ideally, all boys don't cry. This bare plural is used to assert a (false) proposition about what is ideal. Finally, even if no orange crushers have ever been used to crush oranges, a speaker may utter 'Orange crushers crush oranges' in order to assert that all orange crushers can crush oranges. This bare plural is used to assert a proposition about the capacities of orange crushers.

The seven completions in (1)–(7) are not the only completions possible. Sufficiently vary conversational goals and the mutually held beliefs of the speaker and audience, and the completions will vary too.

Allow me to outline the advantages of this account of bare plurals. It easily accommodates the feature of bare plurals in need of explanation—the variety data. The speaker's communicative intentions determine which

²⁰ I believe Bach (1994) would have us appeal to a sort of impliciture he calls 'expansion'—in addition to completion—when something besides a quantifier is added to the content of a bare plural. In order to ease discussion, however, I gloss over this complication.

²¹ The material in brackets indicates the content that is added by completion.

proposition is asserted, or communicated.²² Just as the speaker's communicative intentions may differ wildly across different contexts, the proposition communicated by uttering a bare plural may differ wildly across different contexts.

The radical account has a distinct methodological advantage over standard accounts of bare plurals. The radical account makes room for a simpler semantics.²³ It does not posit covert syntactic structure that other accounts posit.²⁴ Standard accounts of bare plurals posit Gen, a supposedly covert quantifier, which is mysteriously never pronounced in any natural language (Leslie 2008, p. 4; Liebesman 2011, pp. 414–415). The semantics for Gen are also incredibly controversial. The radical account allows us to do away with this vexed will-o'-the-wisp altogether. I thus agree with Liebesman's claim that "Gen has proven [semantically] intractable for a very simple reason: it doesn't exist" (2011, p. 411).

Instead of Gen, the radical account merely appeals to the contents of familiar quantifier expressions (e.g. 'many' and 'all'), sentential operators (e.g. 'under normal circumstances', 'by definition', and 'ideally'), and modal verbs (e.g. 'can') that commonly appear in natural language. We *already* had to develop a semantics for such expressions. The radical account is thus appealingly parsimonious.

This is, by the way, the main advantage that the radical account has over Sterken's (2015a). On her account, Gen is an indexical that is context-sensitive enough to accommodate the variety. However, it still posits Gen, which I find costly enough to warrant preferring the radical account. But, at the very least, the radical account should be taken as a serious contender in the debates over the semantics and pragmatics of bare plurals.

4. Objections

I reply to nine objections to the radical account. The first four objections concern pretheoretic intuitions about the semantics of bare plurals. The fifth objection concerns language acquisition. The next three objections concern seemingly syntactic evidence for Gen. The final objection concerns the explanatory power of the radical account.

²² Of course, for the speaker's communicative intention to be reasonable, she must reasonably believe that her audience can ascertain what she intends to communicate. For more discussion of this point, see §4.2.

²³ Grice's Modified Occam's Razor—a principle stating that "senses [semantic meanings] are not to be multiplied beyond necessity" (Grice 1989a, p. 47)—thus favors the radical account. For detailed discussion of Grice's Modified Occam's Razor, see Bontly (2005).

²⁴ With that said, the radical account is distinct from Liebesman's (2011) account, which also does not posit covert syntactic structure. For some critical discussion of Liebesman's view, see Leslie (2015a) and Sterken (2016).

4.1. Bare Plurals Without Truth-Value

One obvious objection is that bare plurals clearly have truth-values. 'Bachelors are unmarried' is true! Bare plurals have truth-values, and the radical account denies this obvious fact.

This initially plausible objection can be met. I will provide an error theory for why we have the intuition that bare plurals have truth-values. These intuitions are not to be explained, but to be explained away. People are largely sensitive to non-semantic facts. Concerning communication, our intuitions are primed to allow us to ascertain what the speaker means by saying what she said. In general, what sentences mean is of less communicative importance than what the speaker means. The use of sentences serves to facilitate communication. In everyday conversation, we are primarily interested in what our conversational partners are trying to communicate, not the semantic meanings of the linguistic expressions they utter. Importantly, in communicating, we need not be reliable at (consciously) distinguishing between semantic and non-semantic information in order to be sensitive to *semantic* information. Hence, our seemingly semantic intuitions that ostensibly concern the meanings of sentences are, in fact, often intuitions concerning what is ordinary communicated by uttering those sentences.²⁵

Arguably, in assessing what it takes for a sentence to be true, people generally imagine the sentence's being uttered in ordinary contexts and then see what is required for the truth of what is communicated. As a result, it is unsurprising that we would have the intuition that bare plurals have truth-values even if, in fact, they do not. After all, bare plurals are ordinarily used to communicate truth-apt propositions.

One might wonder why this explanation does not overgeneralize to subsentential expressions that clearly fail to express propositions but can nonetheless be used to make assertions.²⁶ For example, if someone sees smoke, she might utter 'fire' in order to assert that the smoke is caused by some fire. But clearly, 'fire' does not express a proposition; it is obvious to any competent English speaker that 'fire' is neither true nor false. But this may seem problematic for my suggestion that we often confuse the content of what is asserted by uttering an expression with that expression's semantic content. Why is it so obvious that 'fire' does not express a proposition?

I reply my explanation is only intended to apply to declarative sentences. The relevant difference between a bare plural and 'fire' is that the former is a sentence and the latter is not. Semantically incomplete sentences—which express mere propositional radicals—that are often used to make assertions can often be mistaken for semantically complete sentences that do express propositions. The word 'fire', and other subsentential expressions, however, "wear" their semantic incompleteness on their sleeves: Of course they do not express propositions! In natural language, only sentences ex-

²⁵ For further discussion of this point, see Bach (2002, pp. 24–26); Bach (2001b, pp. 26–27); Borg (2005, p. 255); and Soames (2008, p. 460).

²⁶ Thanks to an anonymous reviewer for bringing this worry to my attention.

press propositions. As youths, we are taught that sentences express full, complete thoughts whereas individual words do not. We often mistakenly believe that bare plurals, but not 'fire', express propositions for a simple reason: Bare plurals are much more similar to the paradigmatic example of a semantically complete sentence (e.g. 'All bachelors are unmarried') than 'fire' is.

4.2. Excessive Truth

It may be objected that the radical account allows intuitively false bare plurals to be straightforwardly used to communicate truths. For example, the bare plural 'Mosquitoes do not transmit malaria' does not seem capable of being used to communicate a truth in any context. But, on the account defended here, this bare plural may be used to communicate a truth if the speaker intends to communicate that *most* mosquitoes do not transmit malaria. In short, it does not seem that a speaker could straightforwardly communicate a truth by uttering 'Mosquitoes do not transmit malaria'. But the radical account denies this.

This objection takes advantage of our intuitions regarding what is communicated by uttering bare plurals in ordinary contexts. Usually, a speaker would not utter 'Mosquitoes do not transmit malaria' unless she falsely believed that *no* mosquitoes transmit malaria. In ordinary contexts, a speaker could not reasonably intend to communicate that most mosquitoes do not transmit malaria by uttering 'Mosquitoes do not transmit malaria'. This is so because she cannot reasonably believe that her audience would interpret her correctly.

However, there are unusual contexts in which a speaker could communicate that most mosquitoes do not transmit malaria by uttering 'Mosquitoes do not transmit malaria'. For instance, suppose that everyone is vaccinated against malaria. As a result, Sam and his audience truly believe that malaria is harmless. Sam may then utter 'Mosquitoes do not transmit malaria' in order to communicate that most mosquitoes do not transmit malaria just as easily as I can utter 'Barns are not yellow' in order to communicate that most barns are not yellow. Given the (unusual) context, we do not have the intuition that Sam communicates a falsehood by uttering 'Mosquitoes do not transmit malaria'.

Other intuitively false bare plurals—such as 'Prime numbers are odd', 'Mammals lay eggs', and 'Chickens are female'—can be similarly accommodated. In most ordinary contexts, the speaker cannot reasonably intend to communicate a truth by uttering such bare plurals, since she does not believe that her audience will interpret her correctly. She must communicate the generalization by (i) using an explicitly quantified sentence or by (ii) being in such an unusual context that she reasonably believes that her audience will correctly ascertain what she means by uttering the bare plural. Therefore, the radical account does not overgenerate truths.

4.3. Indeterminate Meaning

It may be objected that the radical account allows that it is sometimes indeterminate what is communicated by uttering a bare plural.²⁷ For example, usually when one utters the bare plural 'Barns are red', one fails to intend to communicate a specific generalization. Between the two generalizations that *many* barns are red and that *most* barns are red, which did the speaker intend to communicate? It seems indeterminate which proposition is communicated, as the speaker likely did not intend to communicate one proposition over the other. However, it is dubious that what is communicated can be indeterminate.

This objection incorrectly assumes that what is communicated must be determinate. Often, the purposes of a conversation can be met even if what is communicated is indeterminate. After all, we often speak loosely and imprecisely. For example, if one only needs to communicate that red is a common color of barns, it does not matter, when she utters 'Barns are red', whether she intends to communicate that *many* barns are red or that *most* barns are red. As Bach (2001a, p. 259) observes, the speaker "might not mean any one thing precisely, and be quite prepared to concede that he did not mean some one of these things as opposed to any of the others." Hence, it is no objection to the account that what is communicated may be indeterminate.

4.4. Collective Action

It may be objected that the account fails to accommodate bare plurals concerning properties of subgroups of the kind in question. For example, 'Geese form gaggles' is a bare plural that is not used to communicate a generalization over individual geese. After all, no individual goose forms a gaggle! Only in groups do geese form gaggles. How can the radical account accommodate this phenomenon? So far, we have only seen how the account handles generalizations over individuals.

This objection, however, is easily met. One who utters 'Geese form gaggles' likely intends to communicate a generalization over groups of geese, not individual geese. Hence, the speaker likely utters the bare plural in order to communicate something like the following proposition:

[Many large groups of] geese form gaggles.

Other bare plurals that are used to communicate generalizations over groups—no individuals—can be handled similarly. Therefore, it is no objection to the account that some bare plurals are used to communicate such generalizations.

²⁷ Thanks to Kent Bach and Ezra Schwartz for helpful discussion on this objection.

4.5. Language Acquisition

It may be objected that the radical account fails to accommodate the empirical fact that children learn how to use bare plural generics before they learn how to use quantifier expressions. As Leslie (2007, p. 380, her emphasis) observes:

Strangely enough, young children find generics *easier* to acquire and master than explicit quantifiers. Generics appear in children's speech very early in development, significantly before explicit quantifiers do... And under some circumstances, it has been found that three-year old children will even interpret explicitly quantified statements as though they were generics... It seems that they find generics so much easier to comprehend than quantified statements, they rely on this easier interpretation at times, rather than attempting to process the more taxing quantificational claim. Explicit quantifiers, whose semantics have proven quite tractable for the theorist, are *more challenging* for the young child than generics...

In response to the observation that children learn how to use generics before they learn how to use explicitly quantified sentences, I insist that children need not learn any quantifier expressions at all in order to *use* generics to communicate generalizations.²⁸ *Perhaps* the quantifiers supplied by completion will even fail to be the contents of any quantifier expressions of English if "generics [can] give voice to our most [cognitively] primitive generalizations" (Leslie 2007, p. 382).²⁹

Some empirical evidence supports the claim that children have a tacit understanding of quantification before ever learning any explicit quantifier expressions.³⁰ David Barner et al. (2007) and Barner et al. (2008) re-

²⁸ That a speaker may (non-figuratively) communicate some proposition without knowing any sentence that would express that proposition is not mysterious. Suppose that Bob is a young toddler who only knows how to use the two words 'I' and 'water'. Importantly, Bob need not know how to use 'want' or any word synonymous with it. Nonetheless, it seems that Bob may communicate that he wants water

by uttering 'I water'.

²⁹ For critical discussion of Leslie's (2007) claim that generics give voice to cognitively primitive generalizations, see Sterken (2015b, p. 2507).

³⁰ Thanks to an anonymous reviewer for not only pressing me to find empirical evidence for the thesis that children can generalize before having the linguistic ability to represent generalization, but also for also helpfully pointing me towards some relevant work in psychology. This same reviewer also wonders if there is good empirical reason to think that children who use bare plurals have the ability to form the communicative intentions the radical account requires that they do. My answer is a tentative 'yes'. Tauzin and Gergeley (2018) find that "pragmatic inferential capacity for communicative mindreading does not depend on verbal capacities and can be induced by purely non-verbal signals that are indicative of ostensive communication

port that "under some circumstances 15-month-old infants and *Rhesus* macaques spontaneously represent the distinction between individuals and sets of multiple individuals" (Carey, 2009, p. 261). If such young, prelinguistic infants and nonlinguistic primates can make some generalizations about pluralities, then it should be no surprise that children are able to competently make generalizations using bare plurals by the time they are two years old. There is no need to posit a linguistic capacity to represent generalizations in order to explain children's ability to generalize; this, in fact, puts the cart before the horse. We should take seriously the result that "we have found another representational ability available to prelinguistic creatures: the capacity for set-based quantification and the distinction between *one* and *some* [and thus the capacity to make generalizations]" (Carey, 2009, p. 263).

In any case, given that the radical account is true, it is unsurprising that children learn how to use bare plural generics before they learn how to use quantifier expressions. Bare plurals are useful for efficiently communicating information about members of a kind. I agree with Sterken's (2015a, p. 26) claim that "the requisite abilit[y] to acquire generics [is] the cognitive or conceptual ability to generalise in some way." Why fix something that isn't broken? If children can convey what they intend to convey by uttering bare plurals, why would they need to bother with first learning how to use quantifier expressions? Even adults often prefer to use bare plurals instead of quantified sentences.

According to the radical account, more semantic content is expressed by a quantified sentence than by a bare plural. For instance, more semantic content is expressed by 'Many barns are red' than by 'Barns are red'. A child needs to know the meaning of 'many' in order to competently use the former sentence, whereas she does not need to know the meaning of 'many' to competently use the latter sentence. So, there is an extra cost—an extra semantic burden—to a child's using a quantified sentence over a generic. Compared to quantified sentences, generics are usually just as effective as conveying what children want to convey and also place a smaller burden on the speaker's implicit understanding of the language. Therefore, it is unsurprising that children learn how to use generics before they learn how to use quantified sentences.

4.6 Bound Variables

It may be objected that the radical account fails to accommodate the fact that the variables in the restrictor and scope are bound (Leslie 2015a, p. 36). Af-

already in 13-month-olds" (p. 6, my emphasis.) Leslie (2008, p.19) observes that children begin using bare plurals by the time they are two years old, but this means that children have the capacity to decipher the communicative intentions of others for almost a year before using bare plurals. Children are, by then, surely able to form communicative intentions. And, as my discussion in §4.3 indicates, the radical does account need not require that such children be able to form specific intentions to communicate determinate propositions; it may be indeterminate what they intend to communicate.

ter all, since Gen is not present in the logical form of bare plurals, there seems to be no quantifier to bind such variables. Consider the bare plural 'Politicians think that they can outsmart their opponents' (Leslie 2015a, p. 36). This bare plural seems to say, roughly speaking, that, for the most part, any given politician₁ thinks that she₁ can outsmart her₁ opponents. With the binary Gen operator, it is easy to accommodate this reading:

Gen x [x is a politician] [x thinks x can outsmart x's opponents]

However, without Gen, it is unclear how one can capture this reading.

I, however, doubt that there is syntactically marked variable binding. The very same sentence, 'Politicians think that they can outsmart their opponents', may be non-figuratively used to assert that most politicians think that most mathematicians can outsmart most philosophers' opponents. Imagine that politicians desire that the philosophers' opponents be defeated. Moreover, suppose that they (the politicians) come to believe that the mathematicians can outsmart their (the philosophers') opponents. Alice, who knows all about the politicians' scheming, might utter 'Politicians think that they can outsmart their opponents' in order to assert that most politicians think that most mathematicians can outsmart most philosophers' opponents.³¹ Such an assertion would have to be figurative, however, if there is variable binding. But this is not the case.³²

But even granting that I am wrong about this, we could resort to representing the variables in the logical form of a bare plural as being bound by some uninterpreted binary operator U:³³

Ux [Restrictor(x)] [Scope(x)]

U is uninterpreted in that it does not semantically express any semantic relation between the restrictor and scope. So, bare plurals still lack truth-values. Via completion, U is "replaced" by some quantifier in what is communicated. For example, if one utters 'Birds fly' in order to communicate that many birds fly, U will be replaced by the quantifier *Many* in the proposition asserted:

Many x [Bird(x)] [Flies(x)]

³¹ I am indebted to Troy Cross for this example.

³² Because I do not think pronouns syntactically bind variables, I also view weak crossover effects as not providing any evidence for Gen. Leslie (2015a), who takes it for granted that pronouns syntactically bind variables, argues that weak crossover effects provide evidence for Gen.

³³ Paul Hovda originally suggested that I posit U in order to regiment my claim that bare plurals are semantically incomplete and are, in some way, "missing" a quantifier expression. I think the real work U does—if we posit it—is syntactic.

Therefore, the radical account can be augmented so as to allow the variable binding that supposedly occurs in the logical form of bare plurals.

It may here be objected that positing U would sacrifice one of the appealing features of the radical account—its promise of a simpler semantics. How is U relevantly different from Gen? Both are binary operators that bind variables. How is positing U supposed to make semantic theorizing any simpler than positing Gen? Some semantics must be given for U.

I, however, insist that positing U allows for a simpler semantics than positing Gen. If we posit Gen, then a character, a function from contexts to semantic contents, must be provided for Gen. The "semantics" for U are much simpler. U has no character. In every context, U is never assigned any semantic content.³⁴ That is all there is to know about U. Hence, any sentence with U in its logical form is semantically incomplete and thus cannot be evaluated for truth. Gen is associated with a character and U is not. Therefore, the semantics for U is more straightforward than the semantics for Gen.

Furthermore, U operates as a placeholder for some quantifier that the speaker has left out. The presence of U in the logical form of a bare plural merely indicates that what is strictly said is in need of completion. U indicates that a bare plural has the "abstract" logical form of a quantified sentence but lacks a complete meaning.³⁵ Gen, on the other hand, is a supposedly full-fledged member of the lexicon with labyrinthine rules governing its semantic contribution to a sentence. Because U merely indicates a gap that Gen rashly rushes in to fill, there is an important sense in which Gen has a meaning and U does not. Any semantic theory that posits Gen thus multiplies meanings unnecessarily.

Again, I want to emphasize that the radical account, as I conceive of it, is noncommittal with regards to the existence of U. I only wish to point out that if we want something to perform the syntactic job that Gen does, we can satisfy this desideratum in a way that is compatible with the radical account. We need only posit U.

4.7 Scope Interactions

It may be objected that the radical account is unable to accommodate apparent scope interactions present in bare plurals. Compare (9a) with (10a):³⁶

³⁴ Characters, à la Kaplan (1989), are functions from contexts to contents. U, being uninterpreted, never receives any content. As a result, U has no character. By the definition of what a function is, there is no function from any non-empty set to the empty set.

³⁵ Thanks to Will Fleisher and Paul Hovda for helpful discussion of this point.

³⁶ For the original articulation of this worry, see Carlson 1989, 170–171. Carlson's famous example is 'Hurricanes arise in this part of the Pacific', which seems to have two readings. I opt for (10a) instead of Carlson's sentence. I find (10a) easier to work with. But analogs of what I say about (10a) will also hold for 'Hurricanes arise in this part of the Pacific'.

- (9a) All boys love some girl.
- (9b) For each boy, there is some girl or other that he loves.
- (9c) There is some girl that every boy loves.
- (10a) Boys love some girl.
- (10b) *Generically many* boys are such that there is some girl or other that he loves.
- (10c) There is some girl that *generically many* boys love.

(9a) clearly exhibits scope ambiguities. It has readings (9b) and (9c). This ambiguity arises because (9a) does not determine whether to give the universal quantifier or the existential quantifier wide scope. (9b) is the reading on which the universal quantifier is given wide scope; (9c) is the reading on which the existential quantifier is given narrow scope.

(10a), a bare plural, also seems to exhibit scope ambiguities. It has readings (10b) and (10c). This ambiguity is naturally explained if—contra the radical account—Gen exists. Gen has the syntax of a quantifier expression. If Gen exists, we may explain the ambiguity by insisting that (10a) does not determine whether to give Gen or the existential quantifier wide scope. (10b) is the reading on which Gen is given wide scope; (10c) is the reading on which the existential quantifier is given wide scope.

I reply that if we posit U, we may explain the scope ambiguities present in (10a) just as well as the Gen theorist can. If U exists, we may explain the ambiguity by insisting that (10a) does not determine whether to give U or the existential quantifier wide scope. (10b) is the reading on which U is given wide scope; (10c) is the reading on which the existential quantifier is given wide scope. A syntactic phenomenon calls for a syntactic explanation. Both Gen and U are on a par syntactically.

But I am not convinced that we have a genuinely syntactic phenomenon here. Consider the following case of Elugardo and Stainton's (2004, p. 442 fn1, their emphasis):

Jose owns a grocery store. On Fridays, a peculiar looking man comes in, picks up a fruit and sniffs it; he then picks up a different fruit and sniffs it; he then leaves. The man seems to have no preference about which fruit he sniffs: sometimes it's an apple and a kiwi, sometimes it's a grapefruit and a pear, etc. Jose's daughter has seen this happen several times. After one such visit by the peculiar looking man, Jose says to his daughter: 'Every Friday'. He could thereby assert: [Every x: Friday][There are two y: fruit][He sniffs y on x]...Indeed, there can...be binding with scope interactions, without syntactic variables in the expression used. Thus if we alter the scenario slightly, such that the man always sniffs the same two fruits, Jose could use 'Every Friday' to assert a proposition that has [There are two fruit y: fruits]

taking wide scope over [Every x: Friday], instead of vice versa.

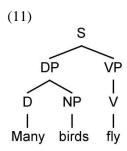
In this case, there is—as it were—scope ambiguity at the level of what is asserted. Let 'Stan' name Jose's fruit sniffer. Jose can utter the subsentential expression 'Every Friday' and complete it in either of two ways:

- (11) Every Friday, there are two fruits that Stan sniffs.
- (12) There are two fruits such that, every Friday, Stan sniffs them.

But it is not as though there is a covert quantifier expression in the logical form of 'Every Friday'. Scope interactions can be introduced pragmatically. But then the alleged scope ambiguities present in (10a) need not be explained by appeal to Gen. Just as (11) and (12) present distinct readings of 'Every Friday' even though it lacks covert quantifier expressions, (10b) and (10c) can present distinct readings of (10a) even if it lacks covert quantificational structure. And, on the radical account, it is to be expected that both (10a) and 'Every Friday'—as used in Elugardo and Stainton's case—seem to exhibit scope ambiguities. Speakers complete both expressions by adding, at least, a quantifier to what is said. That a quantifier is contributed pragmatically—by completion—is the source of the scope ambiguities.³⁷

4.8 Grammaticality

It may be objected that, on the radical account, it is mysterious why bare plurals are syntactically well-formed sentences.³⁸ Consider (11), a phrase structure for 'Many birds fly':³⁹

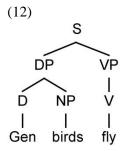


³⁷ Elugardo and Stainton's case also tells against the previous objection. In their case, there seems to be—as it were—pragmatically introduced binding at the level of what is asserted. Therefore, just because 'Politicians think they can outsmart their opponents' has a reading on which there seems to be binding, it does not follow that there is *syntactic* binding.

³⁸ Thanks to Mark Hinchliff for helpful discussion here.

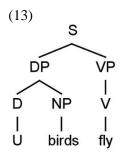
³⁹ I use Heim and Kratzer (1998, p. 146) as my guide here.

On the model of (11), Gen theorists might see (12) as an adequate phrase structure for the bare plural 'Birds fly':⁴⁰



The difference between (11) and (12) is that they contain different determiners. In (11), it is 'many'. In (12), it is Gen. (11) and (12) share their syntactic structure. Clearly, 'Many birds fly' is a syntactically well-formed sentence. So, for a Gen theorist, 'Birds fly' is too.

But how does the radical account secure the syntactic well-formedness of bare plurals? It cannot appeal to Gen. The answer depends on whether U is accepted. If a proponent of the radical account helps herself to U, then she can give the same sort of answer as the Gen theorist. Consider the phrase structure (13):

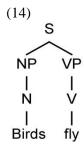


U is a determiner just as much as 'Many' is. Unlike 'Many', however, U is not semantically rich enough to contribute to the truth conditions of a sentence it is a part of. As such, if (13) represents the syntactic structure of 'Birds fly', then 'Birds fly' is syntactically well-formed even if it does not express a proposition. 'Birds fly' expresses a mere propositional radical.

vations concerning variable binding or (ii) observations concerning scope interactions. See §4.6 and §4.7 for my views on such alleged syntactic evidence.

⁴⁰ It is common to view Gen as an *adverb* of quantification, but I put that view aside in order to simplify discussion. If Gen is an adverb, some analogs of what I say below still hold. Moreover, if Gen is an adverb, the objection considered in this section becomes less compelling. Adverbs are—for the most part—thought to be optional. This would explain why Gen theorists who believe Gen is an adverb of quantification are at pains to provide syntactic evidence for Gen through either (i) obser-

Instead suppose that the proponent of the radical account chooses not to help herself to U. I think she should then view (14) as an adequate phrase structure for 'Birds fly':



Objection: Why is 'Birds fly' syntactically well-formed? In contrast to 'Birds fly', the bare singular sentence 'Bird flies' is not well-formed. 'Bird flies' is missing a determiner. '*The* bird flies', for instance, is well-formed. Why would it be any different with 'Birds fly'? It seems mysterious that 'Birds fly' could be a well-formed sentence without a (covert) determiner. But if we do not help ourselves to U (or Gen), where is the determiner?

One possible reply: It is—as it were—a general syntactic rule of English that bare plural noun phrases need not be preceded by any determiner. If we go this route, we make a tradeoff in syntactic theorizing. On the one hand, we posit an additional rule that applies to just bare plural noun phrases.⁴¹ On the other hand, we eliminate the need to posit covert determiners that precede bare plural noun phrases. To alleviate any sense of *ad hocery*, note that we already have to posit local syntactic rules to explain why some sentences are well-formed but others are not:⁴²

- (15a) Al finished.
- (15b) # Al completed.
- (16a) One is here.
- (16b) # A is here.

There seems to be no semantic or pragmatic explanation for why (15a) and (16a) are felicitous but (15b) and (16b) are not. And no general syntactic principle seems to explain this either. It is just, as it were, a brute syntactic rule that (15a) and (16a) are well-formed but (15b) and (16b) are not. Likewise, we might think it is a brute syntactic rule that, in English, bare

⁴¹ But perhaps there are more exceptions than just bare plural noun phrases. Mass nouns, pronouns, and most proper names do not require pronounced determiners.

Effectively, I am proposing that there are some exceptions to the DP hypothesis, which was first advanced by Abney (1987). The DP hypothesis is the syntactic hypothesis that all noun phrases are headed by some determiner. The DP hypothesis is controversial. Thanks to Kent Bach for helpful discussion.

⁴² For a brief discussion of (15a) and (15b), see Bach (1994, p. 128). I learned of (16a) and (16b) from John Hawthorne, who attributes them to Barbara Partee.

plural nouns need not be preceded by determiners. One nice additional consequence is that we can also accommodate why (17a) is well-formed but (17b) is not. In (17a), a bare plural noun (i.e. 'books') plays the grammatical role of object, whereas, in (17b) a bare singular count noun (i.e. 'book') plays this role:

(17a) Ann owns books.(17b) # Ann owns book.

(17b) is ungrammatical because 'book'—unlike the plural 'books' in (17a)—has to be preceded by a determiner like 'the'.

A second possible reply: In English, bare plural sentences are syntactically well-formed because bare plural noun phrases are, syntactically speaking, proper names of kinds.⁴³ Bare plural sentences are just as syntactically well-formed as simple object-predicate sentences. But bare plural noun phrases₁ get semantically type-shifted down so as to express properties when they₁ are followed by individual-level predicates.⁴⁴ Compare sentences (18) and (19):

- (18) Dinosaurs are extinct.
- (19) Birds fly.

(18) says, of the kind *dinosaur*, that it is extinct. (19), on the other hand, is a characterizing sentence that is used to make a generalization over individual birds. Kinds do not fly. Individual birds fly. Nonetheless, (18) and (19) share their syntactic structure. Each is as syntactically well-formed as the other. The difference is semantic. In (19), 'birds' is type-shifted down so as to pick out a property of individuals. There is no type-shifting in (18).

Therefore, we have not been given conclusive reason to believe that the radical account—with or without U—cannot secure the syntactic well-formedness of (characterizing) bare plural sentences.

4.9 Unification Under Gen?

It may be objected that the radical account misses out on a powerful uniform treatment of generics that Gen can provide. Gen is standardly appealed to in the semantics for bare plural, definite singular, and indefinite singular generics. Gen theorists will likely see the scope of linguistic expressions that can be given a semantics with Gen as an advantage of positing Gen. The radical account, however, does not say anything about definite singulars or indefi-

⁴³ For an early view on which bare plural noun phrases always behave semantically as proper names of kinds, see Carlson (1977). Liebesman (2011) also defends this view.

⁴⁴ For a seminal discussion on semantic type-shifting, see Partee (2002). For discussion on type-shifting down bare plural noun phrases, see Chierchia (1998), Cohen (1996), Cohen (2007), and Leslie (2015a).

nite singulars. It is unclear whether the radical account can generalize to definite singulars and indefinite singulars. It is not as obvious that standard uses of such expressions exhibit the variety data nearly as strongly as bare plurals do.⁴⁵ As a result, one may believe that a Gen theory is preferable to the radical account on the grounds that a Gen theory covers more expressions.

I, however, do hold out some hope that the radical account may be extended to definite and indefinite singular generics. While I must concede that such singular generics appear to display the variety data less strongly than bare plurals, this is not to say that singular generics fail to display the variety data at all. And if singular generics display the variety data at all, there is some motivation to extend the radical account to such expressions. On this extended account, speakers can straightforwardly make assertions by uttering singular generics only by completing what is said—a mere propositional radical.

Here, I will only provide some evidence for "homosingular" use variety, whereby different tokens of the same indefinite or definite singular type is used to (non-figuratively) communicate different sorts of propositions.

First, consider the indefinite singular 'A man is pale'. Suppose that Steven has never seen or heard of any non-pale man. Steven might utter 'A man is pale' in order to communicate that, *under normal conditions*, all men are pale. ⁴⁶ This is a claim about what is normal for men. On the other hand, suppose that Alice lives in a society in which paleness is deeply valued. In this hypothetical society, no men are in fact pale. Nonetheless, pale men are thought to be particularly attractive. Alice might utter 'A man is pale' in order to communicate that, *ideally*, any man is pale. This is a claim about what is ideal for men. Therefore, a speaker might utter 'A man is pale' in order to communicate either a claim about what is normal *or* a claim about what is ideal. ⁴⁷ Therefore, indefinite singular generics display at least some homosingular use variety.

⁴⁵ For instance, it is not obvious to me that 'The raven is white' or 'A raven is white' may be used to communicate a mere statistical generalization over ravens. Utterances of such expressions do not seem appropriate even if all ravens were painted white earlier today. On the other hand, a speaker may clearly utter the bare plural 'Ravens are white' in order to communicate a mere statistical generalization over ravens. The range of standard uses of definite and indefinite singulars seems more constrained than the range of standard uses of bare plurals.

⁴⁶ I have the intuition that Steven would be more likely to convey a normality claim rather a mere statistical generalization over men. If all men are forced to undergo some medical procedure that makes them temporarily tan today, Steven may still continue to felicitously utter 'A man is pale'. This is naturally explained if Steven is asserting some (false) claim about what is normal for men. After all, Steven believes it is normal for all men to be pale.

⁴⁷ One might think that Steven, in the first case, is also making a claim about what is ideal when he utters 'A man is pale'. However, a variant of the case makes it clear that Steven is not making such a claim about what is ideal. Suppose Steven is dis-

Now, consider the definite singular 'The mosquito transmits malaria'. In an ordinary context, Alan might utter this generic in order to communicate that *a few* mosquitoes transmit malaria. This is a statistical generalization over mosquitoes. On the other hand, suppose that everyone has been vaccinated against malaria such that malaria is completely harmless. Suppose that Beth incorrectly believes that it lies in the essence of mosquitoes that they transmit malaria. We may even suppose that she knows that her friend Suzy knows that she, Beth, has this strange essentialist belief about mosquitos. In a conversation with Suzy, Beth might utter 'The mosquito transmits malaria' in order to communicate the (false) proposition that *all* mosquitoes *essentially* transmit malaria. This is a claim about the essence of mosquitoes. Therefore, a speaker may utter 'The mosquito transmits malaria' in order to communicate a statistical generalization over mosquitoes *or* what lies in the essence of mosquitoes. Therefore, definite singular generics display at least some homosingular use variety.

Given this homosingular use variety, there is some reason to extend the radical account so as to cover definite and indefinite singular generics.⁴⁸ If so, then it seems that Gen theories have no advantage in explanatory power over the radical account.

We should be interested in the prospects of extending the radical account. If it can be done, then we may simplify semantic theorizing by dispensing with Gen, a mysterious quantifier expression that is never pronounced in any natural language. I concede that I have not provided knockdown evidence that the radical account may be so extended. But I have provided some evidence—homosingular use variety. Therefore, there is some reason to believe that the account may be so extended. I leave it up to future work to fully investigate the matter.

gusted by paleness and thinks that it would be ideal if everyone were tan, not pale. Still, Steven might utter 'A man is pale' in order to communicate that, under normal conditions, any man is pale.

⁴⁸ I also am optimistic that the radical account may even be extended so as to cover bare singular generics (e.g. 'Gold is yellow) and habituals (e.g. 'Donald smokes'). 'Gold is yellow' may be used to either to make a make a mere statistical generalization over most gold stuff *or* to make a claim about what it is to be yellow. (Kant, for instance, allegedly took 'Gold is yellow' to be analytic.) This is an instance of homosingular use variety. On the other hand, in ordinary contexts, 'Donald smokes' may be used to communicate that Donald *sometimes* smokes; in the presence of chain smokers, 'Donald smokes' may be used to communicate that Donald *frequently* smokes. This is an instance of "homohabitual" statistical variety. I am optimistic, then, that the radical account may be extended to handle definite singulars, indefinite singulars, bare singulars, and habituals. This would be a powerful account. I leave the task of defending such an ambitious view to future work. I do not discuss bare singulars or habituals in the main text in order to ease discussion. Bare plurals, definite singulars, and indefinite singulars have attracted the most attention in the literature on generics.

And the radical account might be defensible even if it cannot be extended to cover definite and indefinite singulars. A bare plural generic may be felicitous even if its corresponding definite singular generic or indefinite singular generic is not (Krifka et al. 1995, pp. 11–13):⁴⁹

- (20) a. Madrigals are popular.
 - b. # A madrigal is popular.
- (21) a. Green bottles have narrow necks.
 - b. # The green bottle has a narrow neck.
- (22) a. Women from Seattle are left-handed.
 - b. # The woman from Seattle is left-handed.
 - c. # A woman from Seattle is left-handed.

(20a) is felicitous, but (20b) is not. (21a) is felicitous, but (21b) is not. I claim, there is at least one context such that (22a) is felicitous but neither (22b) nor (22c) is.⁵⁰ Suppose that, by pure accident, that the majority of women from Seattle are left-handed. If Alice has surveyed Seattleites and has determined that most women from Seattle are—by pure accident—left-handed, then Alice can easily report her findings by uttering (22a), but not (22b) or (22c). We are intuitively inclined to say that (22b) or (22c) would be true only if there was some non-accidental correlation between being a woman from Seattle and being left-handed. Whereas Alice may felicitously follow up on (22a) with 'and this is so by pure accident', it does not seem she can do so with either (22b) or (22c). Even if (22b) or (22c) could—in some unusual context—be non-figuratively used to convey the information that Alice uses (22a) to convey, there are still contexts in which only (22a)—and neither (22b) nor (22c)—will do the job. This is all I require.

One possible explanation of this phenomenon is that the semantics for bare plurals is distinct from that of definite singulars are indefinite singulars. A Gen theorist could accommodate this by positing Gen_{BP} (for bare plurals), Gen_{DS} (for definite singulars), and Gen_{IS} (for indefinite singulars) such that $Gen_{BP} \neq Gen_{DS}$ and $Gen_{BP} \neq Gen_{IS}$.⁵¹ If this is the Gen theorist's

⁴⁹ Restrict your attention to the generic—or characterizing—readings of the definite and indefinite singulars below. There is, for instance, a reading of (21b) on which it is asserted that a contextually salient green bottle has a narrow neck. But this is not a reading I am interested in here. That is not a generic reading of (21b).

⁵⁰ As Wasserman (2011, 432) notes, the linguistic orthodoxy seems to be that (22a) cannot be felicitous unless there is some non-accidental correlation between being a woman from Seattle and being left-handed. But the Gricean cancellation test suggests that such a connection need not exist in order for (22a) to be felicitous (Wasserman 2011, p. 449 fn30). 'Women from Seattle are left-handed, and this is so by pure accident' is—at least in certain contexts—felicitous.

⁵¹ A natural way of understanding Greenberg's (2003, p. 300) view that only bare plurals can express "descriptive" generalizations—whereas indefinite singulars and bare plurals can both express "in virtue of" generalizations—is to see her as claiming that $Gen_{BP} \neq Gen_{IS}$.

view, then the radical account of *bare plurals* need not be extended so as to cover definite singulars and indefinite singulars. The radical account need only deny the existence of Gen_{BP} . A proponent of the radical account could even accept the existence of Gen_{DS} and Gen_{IS} if she so wished.

There are, then, at least two ways for the proponent of the radical account to respond to the following objection: Her account cannot be extended so as to cover definite singulars and indefinite singulars. First, she could argue that the radical account can, in fact, be extended so as to cover such expressions. Second, she could argue that the radical account need not be so extended. I believe that it is prudent for the radical account to be—officially speaking anyways—noncommittal as to which approach is better.

5. Conclusion

The radical account is worthy of serious attention. This novel approach promises to shed light on a class of puzzling, and yet commonplace, sentences in natural language. And the radical account does this while dissolving—not entering—the vexed debates over the semantics of Gen. The variety data is not to be explained semantically, but by the varying communicative intentions of speakers in different contexts. This is all to the good.

I close with some remarks on broader significance of the radical account. I have met some philosophers who are skeptical of the importance of semantic theorizing about bare plurals. To them, the topic is nothing but a mere toy for the bored philosopher to play with and then discard without a second thought.

Unsurprisingly, I reject this caricature. Bare plurals constitute a ubiquitous class of expressions in ordinary language. It would be narrow-sighted of us to regard such a pervasive piece of language as unworthy of serious theorizing.

Moreover, Leslie (2014, p. 209) observes that "generic language may be implicated in the transmission of beliefs that form the backbone of social prejudice." It certainly is. Many socially prejudicial claims are asserted by bare plural generics. It would be wrong to be willfully tone-deaf to this use of bare plurals. We should be interested in investigating language that can sometimes be put to such socially harmful uses. We might learn how to better combat the pernicious effects of such language.

The radical account is suggestive of an intuitive picture of these socially prejudicial uses of bare plurals. ⁵² Call a bare plural in which the kind term picks out a social group a 'social-kind bare plural'. Suppose that 'K' picks out some social group and that 'F' picks out some undesirable property. A speaker who utters 'Ks F' in isolation leaves it open—for example—that she means that, in general, Ks are inherently disposed to F. After all, it is common knowledge that social-kind bare plurals are often used to convey such socially prejudicial beliefs. If the speaker wishes to convey a mere sta-

⁵² Thanks to Troy Cross for helpful discussion here.

tistical generalization, she must immediately qualify what she meant. For example, consider the following dialogue:

Cathy: Ks F.

Doris: You do realize that Ks are no more likely to F than

non-Ks, right?

Cathy: Sure. But I only meant that some Ks F.

Doris: Oh, of course that is true. But by those standards,

non-Ks F too.

Doris—justifiably—initially interpreted Cathy to mean that *Ks* are disproportionately disposed to *F*. Suppose, that this was indeed what Cathy originally meant. But if Cathy aimed to have a congenial conversation with Doris, Cathy can easily (and surreptitiously!) retract her claim without obviously contradicting herself. This is so because, on the radical account, no bare plural expresses any proposition. If all Doris has to go on is the semantic content of what Cathy uttered,⁵³ then Cathy has plausible deniability. There is some sense in which Cathy was free to tell Doris that she, Cathy, merely meant a mere statistical generalization over *Ks*. This would be a conversational sleight of hand on Cathy's part, but one that is difficult to detect.

Contrast this above dialogue with the following one:

Elaine: Ks F.

Freida: You do realize that Ks are no more likely to F than

non-Ks, right?

Elaine: No, that is wrong. Ks are more likely to F. It lies in

their nature.

Freida: That is a ridiculous thing to believe.

Elaine was in a more confrontational mood than Cathy. Unlike Cathy, Elaine did not (even surreptitiously!) retract her bigoted assertion. Social-kind bare plurals, like 'Ks F', often allow the bigot to pick and choose her fights. In the face of resistance, she can—as Elaine did—voice disagreement. Or, she can—as Cathy did—retreat to a mere statistical generalization. But there is more. Contrast the above two dialogues with the following one:

Gene: Ks F.

Hugo: I know, right? Ks are horrible.

Gene: Tell me about it. It lies in their nature to *F*. Hugo: I am happy to learn you feel that way too.

⁵³ It is not strictly speaking true that all Doris has to go on is the semantic content of what Cathy uttered (i.e. ' $Ks\ F$ '). Of course, Doris also has the background belief that that Cathy speaks English, that Cathy uttered ' $Ks\ F$ ', that Cathy is human, etc. Importantly, however, Doris does not antecedently believe that Cathy believes that, in general, Ks are inherently disposed to F.

In this dialogue, Gene engages in a congenial conversation with his fellow bigot, Hugo. As I hope is evident, social-kind bare plurals are a useful conversational tool for the bigot. They allow bigots to easily pick and choose their fights and to befriend fellow bigots. This flexibility is easily explained if bare plurals are semantically incomplete. Speakers, after all, choose how to portray their communicative intentions to their audiences. It is *because* bare plurals are semantically incomplete that they can be put to toxic purposes. Perhaps Leslie (2014, p. 226) is right to claim that "it would…be potentially very beneficial to cease to use generic language when discussing social phenomena."

The radical account also has some implications for philosophical theories that appeal to bare plurals. For instance, Nickel (2010, p. 22) has argued that "some cp-laws [ceteris paribus laws] are most naturally stated by the use of characterizing sentences." And the characterizing sentences he appeals to are bare plurals.⁵⁴ If we accept this part of Nickel's view *and* the radical account, then we are committed to the following surprising claim: Ceteris paribus laws are neither true nor false. Of course, when a speaker utters a bare plural expressing a ceteris paribus law, she makes some assertion. But we cannot read the content of her assertion off of the semantic content of the bare plural she uttered.⁵⁵

Just to be clear, I am not endorsing this view of ceteris paribus laws. I merely wish to point out that the radical account has philosophical implications outside of the philosophy of language.

The radical account, then, is not an idle cog in a pointless machine. The cog is not idle. Nor is the machine pointless. Mere curiosity in bare plurals is motivation enough to be interested in the radical account. But the account has impact on our philosophical theorizing even outside of semantics. ⁵⁶

⁵⁴ Nickel (2010, p. 11) explicitly states that he will "focus on sentences with bare plural subjects."

⁵⁵ Thanks to Ellie Cohen for helpful discussion here.

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