

# Generics

Jeff Speaks  
PHIL 43916

December 8, 2014

1	Two distinctions . . . . .	1
2	Generics as having the form of quantified sentences . . . . .	2
	2.1 Some initially appealing but false interpretations . . . . .	3
	2.2 Normalcy . . . . .	3
	2.3 Domain restrictions . . . . .	3
	2.4 Comparative interpretations . . . . .	5
	2.5 Leslie’s theory . . . . .	5
3	Assimilating I-type to D-type generics . . . . .	6
4	The Port Royal puzzle . . . . .	7

## 1 TWO DISTINCTIONS

Consider the following sentences, which superficially appear to be of the same form:

- Dogs have four legs.
- Dogs are eating the turkey you just cooked.
- Dogs are widespread in North America.

Intuitively, the first sentence says that dogs ‘in general’ have four legs, whereas the second is just the existential claim that some dogs are eating the relevant turkey. The discovery that normal dogs have three legs would falsify the first sentence, whereas the discovery that normal dogs don’t eat turkey would not falsify the second. This suggests that the semantic treatment of the first sentence should be quite different than our treatment of the second.

Two tests to distinguish between these readings: (i) a sentence which consists of a bare plural followed by a VP is existential iff the position occupied by the  $N_c$  is upward-entailing — which means that the sentence will entail any sentence obtained by substituting in an  $N_c$  whose semantic value is a superset of the original. For example, consider a substitution of ‘mammals’ into the first two sentences. (ii) Sentences like the first one above are roughly synonymous with sentences obtained by adding to them an adverb of quantification like ‘usually’, whereas existential sentences like the second are not.

One might wonder what determines whether a given sentence of this form is interpreted existentially or in a way more like the first sentence. One prominent idea is that the explanation is given in terms of the VP that is attached to the bare plural. We can distinguish between stage-level VPs – which intuitively express properties which one might have for only a short period of time – and individual-level VPs — which intuitively express properties that individuals have either permanently or for longer durations. In a large class of classes, stage-level VPs trigger the existential interpretation, and individual-level VPs trigger the first (generic) interpretation.

Now consider the contrast between the first and the third. Can the third be interpreted as a kind of generalization about normal dogs? Can we say, of some particular more or less average dog, that it is widespread?

Sentences like the first are often called ‘I-type generics’, and are taken to express some sort of generalization. Sentences like the third are often called ‘D-type generics’, and are usually taken to be statements about kinds rather than generalizations about members of the kind.

Again, we might wonder how to draw a principled distinction between I-type and D-type generics; and again it is natural to appeal to the relevant VP. One might think, for example, that some VPs are such that they only make sense as applied to kinds, and that these force the D-type interpretation.

We’ll return below to the question of whether there really is a distinction here. But for now let’s accept the distinction. If we do, it looks like I-type generics are the really hard case — since D-type generics seem to be simple sentences of the form [S N VP] — and that’s what we’ll focus on below.

I-type generics come in three main forms, which are illustrated by the following sentences:

- Dogs have four legs.
- The dog has four legs.
- A dog has four legs.

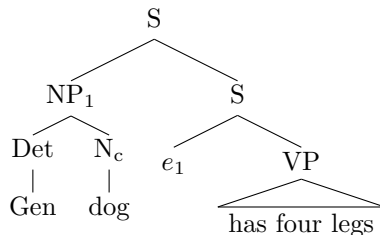
We’ll be focusing on the first, bare plural, use in what follows.

## 2 GENERIC AS HAVING THE FORM OF QUANTIFIED SENTENCES

A natural thought is that generics are quantified sentences which are roughly of the same form as sentences like

- All dogs have four legs.
- Most dogs have four legs.
- Few dogs have four legs.

The difference is just that, in the case of generics, the relevant determiner is unpronounced. As is standard, I will call this unpronounced determiner ‘Gen.’ On this view our tree for the first sentence above would be



The question then is: what is the correct semantics for Gen?

### 2.1 *Some initially appealing but false interpretations*

It is obvious that ‘Gen’ does not mean ‘every’, since not all dogs have four legs. A better idea is that ‘Gen’ means ‘most’. But this is not right either, since

Ducks lay eggs.

is true even though only half of the ducks (the female ones) lay eggs, and

Books are paperbacks.

is false, even though 80% of books are paperbacks.

This shows that we cannot determine whether a given generic sentence is true just by looking at the proportion of the members of the semantic value of the  $N_c$  which are in the semantic value of the VP.

### 2.2 *Normalcy*

Many generics seem in some sense to be about normal examples of, e.g., dogs. So one might think that the meaning of ‘Gen’ is something like: ‘All normal.’ The fits the book/paperback example nicely, since there is nothing abnormal about hardback books. It also fits our initial ‘dog’ example well.

But it does not fit the ‘duck’ example well, since there is nothing abnormal about a male duck.

### 2.3 *Domain restrictions*

A plausible thought is that Gen, like other determiners, often involves some sort of contextually determined domain restriction. So one might take ‘Gen’ to mean something like

‘All normal in the contextually relevant domain.’ The idea would then be that, in the ‘ducks’ sentence above, only female ducks are contextually relevant, and that it is indeed true that normal female ducks lay eggs.

But then one wonders why

Ducks are female.

is false. To answer this question, we would need some good theory of what contextual factors fix the relevant domain restriction. The account also runs into problems with sentences like

Mosquitoes carry the West Nile Virus.

which is true despite the fact that most normal mosquitoes do not carry the virus.

However, one might reasonably push back a bit against this example, on the grounds that ‘carries the West Nile virus’ is plausibly stage-level rather than individual-level. This suggests that it might just be existential rather than generic. Notably our intuitions about truth conditions seem to change if we form a corresponding individual-level VP:

Mosquitoes carry, at some time in their lives, the West Nile Virus.

And the context of ‘mosquitoes’ in the first sentence seems to be upward-entailing, since the truth of that sentence seems to entail

Insects carry the West Nile virus.

On the other hand, the sentence

The mosquito carries the West Nile virus.

seems to be true — and it typically existential readings of bare plurals seem false (or just very odd) when turned into the corresponding definite sentence.

On yet another hand, the sentence

A mosquito carries the West Nile virus.

seems, unlike

A mosquito feeds on blood.

to be false.

## 2.4 Comparative interpretations

A different suggestion is that in at least some cases a generic sentence is true iff the probability that a member of  $\llbracket \text{Nc} \rrbracket \in \llbracket \text{VP} \rrbracket >$  the probability that a member of other contextually relevant kinds is an element of  $\llbracket \text{VP} \rrbracket$ . This handles the mosquito case well, since mosquitoes are more likely to have the virus than other randomly selected insects.

## 2.5 Leslie's theory

Leslie (2008) suggests instead that a generic sentence is true (roughly) in case one of the following three conditions is met:

1. Every counterinstance to the generic is negative, and
2. One of the following three conditions is met:
  - (a) If F is a characteristic dimension of K, then some K's are F;
  - (b) If F is a striking/dangerous/important characteristic, then some K's are F and others are disposed to be (capable of being) so; or
  - (c) Conditions (a) and (b) are not met and almost all K's are F.

(Here I set aside for simplicity an important condition requiring that counterinstances to the generic be 'negative'.)

The characteristic dimension of a kind depends on what kind of kind it is – characteristic dimensions of animal kinds may include animal noises, diet, and mode of reproduction, whereas characteristic dimensions of artifact kinds include the role or function of members of the kind.

(a) handles the duck examples, and (b) handles the mosquito examples. Leslie motivates condition (1) with the following plausible thought:

Alternatively, consider the true generic 'peacocks have fabulous blue-green tails'. Female peacocks are unfortunate creatures that drably lack tails. Yet were they to have fabulous pink tails instead of the stumps they actually have, then 'peacocks have fabulous blue-green tails' would not be true.

Some problems for this view:

- Suppose that there were an East Nile virus, just as dangerous as West Nile, but incompatible with it. This would then be a positive counterinstance to our mosquito sentence, but would not falsify it.
- Being a psychopathic killer is a striking/dangerous property. Jeffrey Dahmer is a member of the kind 'Wisconsinite', but 'Wisconsinites are psychopaths' is not true. (Or, if most are not capable of being psychopaths, 'Wisconsinites are killers' is not true.

- Suppose that one lucky dog one time ate caviar. Does that make ‘Dogs eat caviar’ true?

### 3 ASSIMILATING I-TYPE TO D-TYPE GENERICS

A very different approach is to deny that there really is a difference between the right semantics for I-type and D-type generics, and to say instead that I-type generics, as much as D-type generics, are simple [s N VP] sentences about kinds.

Liebman (2011) defends a view of this sort. Two arguments for this view:

1. The following inference appears to be valid:

Dogs are widespread.

Dogs are four-legged.

---

Dogs are widespread and four-legged.

But how is this to be explained unless both sentences are predicating some of the kind, dog?

2. The Gen determiner is unpronounced in English; but also appears to be unpronounced in any language. If it is real, why should this be so?

A natural question is how, if we adopt this view, we are supposed to understand the claim that a certain kind is four-legged. Here Liebman appeals to analogy with things and their parts. Consider the following sentences:

That table is touching the wall.

That table is wooden.

The first requires that at least one part of the table touch the wall, and the second requires that most parts (but not all parts) of the table be wooden. This difference does not cause us to have revisionary views about the logical forms of such sentences. Perhaps we can say parallel things about the relationship between kinds and their members.

A problem for this view, posed by Leslie (2013), is that sentences like

Tigers are kinds.

The tiger has members.

seem false.

## 4 THE PORT ROYAL PUZZLE

A further puzzling fact about generics is that inferences like the following can be invalid:

Croats are good basketball players.  
Croats are basketball players.

Do any of the theories that we have discussed explain this?

### REFERENCES

- Sarah-Jane Leslie, 2008. Generics: Cognition and Acquisition. *Philosophical Review* 117(1):1–47.
- Sarah-Jane Leslie, 2013. Generics Oversimplified. *Noûs* 47(3).
- David Liebesman, 2011. Simple Generics. *Noûs* 45(3):409–442.