

Generic NPs and Kind-Reference

Jeff Pelletier

What sort of NPs are Generic?

- The Lion is a predatory cat
 - Lions are predatory cats
 - Gold is a precious metal
 - The World Wildlife Organization decided to protect a large cat, namely the Siberian Tiger
 - A metal, namely titanium, moved up sharply on the world market yesterday
- (These last two are “taxonomic”)

Generic NPs

- Are there *any* NPs that *must* be generic NPs?
 - In English...maybe *Man* (the NP, not the CN)?
 - Man has lived in Africa for more than two million years
 - John saw people/*man in the street

The Philosophical Logic Issue

- What is the “logical form” of NPs that are generic?
- (This is maybe not as logically exciting as the similar question about generic sentences, but there are a number of interesting facets to the question.... especially, what is the relation between “ordinary individuals” and generic NPs?)

The Natural Hypothesis...

- Generic NPs refer to **Kinds**
- Kinds are abstract objects that are “related to” physical things
 - by the “exemplification relation”?
 - by any other relations?
- Investigating the variety of generic NPs may throw some light on this

Kind-Selecting Predicates

- Predicates such as die out, be extinct select for kind-denoting subject terms
- Predicates such as invent select for kind denoting direct object terms
 - The dodo/dodos/*A dodo is/are extinct
 - Shockley invented the transistor /
*a transistor / *transistors
(Last two ok as taxonomic generic NPs)

Making reference to kinds

- It is not possible to form kind-referring NPs with just *any* nouns (Vendler 1967, Nunberg & Pan 1975, Carlson 1978, Dahl 1985)
 - The German shepherd is a faithful dog
 - The Coke bottle has a narrow neck
 - ?? The German fly is a lazy insect
 - ?? The green bottle has a narrow neck

Making reference to kinds

On the other hand:

A green bottle usually has a narrow neck

Green bottles usually have a narrow neck

So, the underlined NPs cannot refer to kinds (can they?) in these generic sentences.

Making reference to kinds

- Basically, the noun (or complex N') must somehow be “semantically connected with” a **well-established kind**
- When does a language/society promote an NP to be kind-referring?
 - Are kinds created/destroyed by our use of language??

Related to this....

and equally difficult to explain: “generic predication” has to be in some way essential to the subject, unless the subject directly refers to a kind:

The diagram consists of a vertical line with several horizontal arrows pointing to it from the right. The arrows are labeled: "essential", "accidental", "Generic predications", and "good if an individual". The first three arrows point to the first four sentences on the left, while the fourth arrow points to the last sentence.

The madrigal is polyphonic
The madrigal is popular
Madrigals are polyphonic
Madrigals are popular
A madrigal is polyphonic
?? A madrigal is popular

“essential”
“accidental”
Generic predications
good if an individual

Reasons to believe “natural theory”

1. The class of kind-referring NPs contains some proper names

Ailuropoda melanoleuca will soon be extinct

2. Some kind-referring NPs are “almost just like” proper names

Homo Sapiens/Man has lived in Australia for at least 40,000 years

More reasons to believe

3. A conceptual relationship between kind-referring NPs and proper names
 - both are definite, referring expressions
4. Kind referring NPs behave like proper names in “so-called” constructions:

The Incredible Hulk was so-called because of his shape

The liger is / **Ligers** are so-called because it / they are the offspring of a lion and a tiger

??**This fat man** is so-called because he is corpulent

Alternatives to the natural theory

1. They are quantificational (Bacon 73,74)

The lion is ferocious ,**All/most/typical lions**
are ferocious

But: how to handle:

The lion/dodo is extinct?

Also, what about “empty kinds”? Are **The Tyrannosaurus** and **The Brontosaurus** the same??

More alternatives...

2. They are ambiguous between a 'naming' and a 'quantificational' use (Frege)

Das Pferd is ein Vierbeiner

Der Türke belagert Wien

Not elegant; and anyway, the ambiguity
obviously depends on the verb phrase.

More alternatives...

3. Denote the **Sense/Intension** of the predicate (solves “empty kind” problem)
--Mayer 80, Martin 86)

But...doesn't it make

The rat reached Australia in 1770

say that **an intension** reached Australia in 1770??

More alternatives...

4. They denote the mereological sum of entities to which predicate applies (solves the “intensional rat” problem?) Sharvy 80, Kleiber 90, Ojeda 91

(similar to some accounts of the semantics for mass terms)

Alternative 4, cont'd...

- A problem is that not every predicate that holds of the collection of examples of the kind holds of the kind itself
 - The sum of all existing snails weighs more than 10,000 tonnes
 - The Snail weighs more than 10,000 tonnes
 - Snails weigh more than 10,000 tonnes

Do not say the same thing

Taxonomic Kind-Reference

The dolphin is **a whale**

The dolphin and the porpoise are **whales**

One whale / This whale, namely the blue whale, is nearly extinct

Two whales, namely the blue whale and the fin whale, have been declared endangered

The whale which was most recently declared endangered is the blue whale

Every whale (from the pygmy whale to the blue whale) is protected by UN law.

Further taxonomic kind-reference

- Mass terms used as count
 - Two red wines are produced in Württemberg: Lemberger and Trollinger
- Some count nouns seem only to have a taxonomic reading: species, halogen, metal, alloy
 - Chlorine is a halogen
 - There was chlorine/?halogen in the water

An Ambiguity in taxonomy...

- But what is it an ambiguity in??
 - Endangered species are common
 - Endangered species are rare

(due to Barbara Partee)

The many ways to refer to kinds

- Reference is not simple; at least reference to kinds is not simple
- A direct reference to kinds occurs in
 - **The dodo** is extinct
- But there are many sorts of “indirect” reference, and they are characterized by differences in the VP (or culture??)
- These differences are very difficult to understand, but here’s a classification

Indirect reference to kinds

- Characterizing Property Interpretation
 - The potato contains vitamin C
- Distinguishing Property Interpretation
 - The Dutchman is a good sailor
 - Dutchmen are good sailors
- Collective Property Interpretation
 - Linguists have more than 8000 books in print
 - The German consumer bought 11,000 BMWs last year
- Average Property Interpretation
 - German teenagers watch 4 hours of TV daily
 - The American family contains 2.3 children

More indirect reference...

- Internal Comparison Interpretation
 - The wolves are getting bigger as we travel north
- Representative Object Interpretation
 - In Alaska we filmed the grizzly
 - Look children: this is the reticulated giraffe
 - Quiet!! -- The lion is roaming about!
- Avant-garde Interpretation
 - Man set foot on the Moon in 1969
 - Man learned to solve cubic equations in the 13th C.

Comments on Interpretations

- Direct Kind Interpretations can involve a taxonomy
 - The dinosaurs are extinct
- With Characterizing Interpretations, indefinite can be used with the same meaning
 - A potato contains vitamin C

Unlike the Average Interpretation, the expectation is that all/most/the typical instances will manifest the property

More comments...

- Distinguishing Interpretations are different from both Characterizing and Average ones
- Note that the corresponding sentences with indefinites are false
 - **Italians** are good skiers vs. **An Italian** is a good skier
 - **Frenchmen** eat horsemeat vs. **A Frenchman** eats horsem(indefinites mean “**A typical or randomly chosen ---- will (probably)....**”)
- Distinguishing means
 - **The Dutch** are known to have good sailors
 - **The Dutch** distinguish themselves from comparable nations by having good sailors

More comments...

- Average vs. Collective Interpretations
 - The Canadian family used less water this year than last
- Internal Comparison Interpretation
 - ??A wolf is getting bigger as we travel north
(cf. The road is getting rougher as we travel north)
(involves a comparison of the specimens of a kind along a certain dimension of their occurrence...but the comparison is still attributed to the kind)
- Representative Objects
 - The fox broke into the chicken house again
 - Mr. Fox broke into the chicken house again

More comments...

- Avant-garde Interpretations
 - ?? **Man** broad-jumped over 8.8m in 1968
 - ????**Man** ate 128 pretzels in one hour in 1976
 - ??**The American** set foot on the Moon in 1969
 - ??**The Primate** set foot on the Moon in 1969

Notions, Concepts, Pseudo-kinds

- In medieval times, **the child** didn't exist
- In medieval times, people didn't have the notion of 'child'
- Can't use **children** or **the children**
- Notion-reference distinguished from kind-reference by **The notion of--**, **The concept of...**

More concepts, pseudo-kinds

- Definite plural NPs differ from definite singular NPs in ability to refer to kinds
- Recall that definite sing. NPs are restricted to well-established kinds. But not so definite pl.
 - The lions that have toothaches are especially dangerous
 - ?The lion that has toothaches is especially dangerous
- Definite plurals that are nominalizations of well-established kinds refer to the kinds.
- Call the designations of nominalizations of arbitrary predicates concepts.

Concepts, pseudo-kinds

- “Dependent” definite NPs
 - The nose is in the center of the face
 - The meat is more expensive than the fruit
- Express generalization over entities or situations (eating? shopping?)
- It’s assumed that for each face there is a nose-of-that-face. (Maybe also that, for each person [or animal?] in “background world” there is a face-of-that-person [or animal].)
- So these are not kind-referring, just “dependent NPs” -- mere pseudo-kinds

Conclusion

- We've surveyed a number of cases of reference to kinds
- What's striking is how different the background facts about the world can be and still give rise to kind-reference
- There ought to be some moral here about the proper methodology for applying logical tools to natural language phenomena.