Genericity in Natural Language

Graham Katz[1] Roberto Zamparelli[2]

European Summer School in Language, Logic and Information
2005

Course Overview

Monday Introduction

- The problem of Genericity
- Episodic/Characterizing sentences
- Carlson's (1977) theory

Tuesday Kinds

- Definite Generics
- Subkinds
- A-generics

Wednesday Neo-Quantificational Analysis

- Generics and Adverbs of Quantification
- Stage-level/Individual level
- Focus and Genericity

Thursday Genericity and Aspect

- Aspectual Class
- Stativity and Genericity
- Markers of Genericity

Friday Rest

- Wrap-Up

Course Overview

Monday Introduction

- The problem of Genericity
- Episodic/Characterizing sentences
- Carlson's (1977) theory

Tuesday Kinds

- Definite Generics
- Subkinds
- A-generics

Wednesday Neo-Quantificational Analysis

- Generics and Adverbs of Quantification
- Stage-level/Individual level
- Focus and Genericity

Thursday Genericity and Aspect

- Aspectual Class
- Stativity and Genericity
- Markers of Genericity

Friday Rest

- Wrap-Up

Course Overview

Monday Introduction

- The problem of Genericity
- Episodic/Characterizing sentences
- Carlson's (1977) theory

Tuesday Kinds

- Definite Generics
- Subkinds
- A-generics

Wednesday Neo-Quantificational Analysis

- Generics and Adverbs of Quantification
- Stage-level/Individual level
- Focus and Genericity

Thursday Genericity and Aspect

- Aspectual Class
- Stativity and Genericity
- Markers of Genericity

Friday Rest

- Wrap-Up

Course Overview

Monday Introduction

- The problem of Genericity
- Episodic/Characterizing sentences
- Carlson's (1977) theory

Tuesday Kinds

- Definite Generics
- Subkinds
- A-generics

Wednesday Neo-Quantificational Analysis

- Generics and Adverbs of Quantification
- Stage-level/Individual level
- Focus and Genericity

Thursday Genericity and Aspect

- Aspectual Class
- Stativity and Genericity
- Markers of Genericity

Friday Rest

- Wrap-Up

Course Overview

Monday Introduction

- The problem of Genericity
- Episodic/Characterizing sentences
- Carlson's (1977) theory

Tuesday Kinds

- Definite Generics
- Subkinds
- A-generics

Wednesday Neo-Quantificational Analysis

- Generics and Adverbs of Quantification
- Stage-level/Individual level
- Focus and Genericity

Thursday Genericity and Aspect

- Aspectual Class
- Stativity and Genericity
- Markers of Genericity

Friday Rest

- Wrap-Up

Outline of the day

- The idea that English Bare Plurals (BP) unambiguously denote kinds and that the type of predicate determines the quantificational properties of a BP subject/object is central for the theory of Carlson (1977).
- However, BP do not exhaust the range of linguistic objects that can apparently be kind-denoting and/or appear in Characterizing Sentences (CS).
- The exam of these cases reveals a more complicated picture, and ultimately gives reason to reevaluate and modify Carlson's original theory.

Mass (uncountable) nouns behave like bare plural count nouns.

(1) a. Water is H_2O. *Universal*
b. Water was on the floor. *Existential*

(2) a. Hydrogen is {common / widespread} *frequency predicates*
b. Bronze was invented / first created 5000 years ago. *verbs of creation (also episodic)*
c. Beer comes in many different types. *subtype predicates*

(3) a. Jack didn't find gold $\neq$ *there was gold Jack didn't find*
b. Jones wants to buy furniture $\neq$ *There is furniture that Jones wants to buy*

These facts can be accommodated by assuming that bare mass nouns also natively denote kinds. Carlson's theory applies to them without major modifications.

Mass (uncountable) nouns behave like bare plural count nouns.

(1) a. Water is H_2O. *Universal*
b. Water was on the floor. *Existential*

(2) a. Hydrogen is {common / widespread} *frequency predicates*
b. Bronze was invented / first created 5000 years ago. *verbs of creation (also episodic)*
c. Beer comes in many different types. *subtype predicates*

(3) a. Jack didn't find gold $\neq$ *there was gold Jack didn't find*
b. Jones wants to buy furniture $\neq$ *There is furniture that Jones wants to buy*

These facts can be accommodated by assuming that bare mass nouns also natively denote kinds. Carlson's theory applies to them without major modifications.

The following sentences are near-synonyms, and illustrate other ways to kind reference.

(4)
a. [Tigers] are in danger of extinction. *bare plurals*
b. [The tiger] is in danger of extinction. *definite generic*
c. [This kind of animal] (*pointing to a tiger*) is in danger of extinction. *"kind" construction*
d. [A predatory cat], namely the tiger, is in danger of extinction. *taxonomic subkind*

Cases (b)-(d) are also discussed in Carlson 1977, but no conclusive proposal is advanced.

In English (in contrast with Romance languages), the plural definite article is not used for nouns that refer to kinds (5-a), but the *singular* definite generic article (**SDG**) with count nouns can be (5-b).

(5) a. [(??The) dogs] turned out to be the perfect companions for [(??the) ancient hunters].
b. [The dog] turned out to be the perfect companion for [the ancient hunter].

(6) a. [The panda] has various subspecies / is almost extinct
b. Many chinese biologists study [the panda].

The use of the SDG has various limitations both in the nominal restriction and in the range of predicates it accepts.

SDG: constraints on the restrictor

- Nominals which are “too general”.

(7) a. [The {toaster / ??gadget}] is very common in American households.
b. [The {parabula / ??curve}] is easy to draw.
c. [The {sphere / ??solid object}] is tridimensional.

- Nominals that refer to “non-canonical” objects.

(8) a. [The {Coke / ??green} bottle] is easy to recycle.
odd as a statement about green bottles in general
b. [The {??wounded / Bengali}] tiger is dangerous.
c. ??[The old shoe] is common in [the city river]

- Human kinds (cf. ‘human roles’).

(9) [The ?(perfect) thief / The ?(real) lawyer] looks like a gentleman.

SDG: constraints on the restrictor

- Nominals which are “too general”.

(7) a. [The {toaster / ??gadget}] is very common in American households.
b. [The {parabula / ??curve}] is easy to draw.
c. [The {sphere / ??solid object}] is tridimensional.

- Nominals that refer to “non-canonical” objects.

(8) a. [The {Coke / ??green} bottle] is easy to recycle.
odd as a statement about green bottles in general
b. [The {??wounded / Bengali}] tiger is dangerous.
c. ??[The old shoe] is common in [the city river]

- Human kinds (cf. ‘human roles’).

(9) [The ?(perfect) thief / The ?(real) lawyer] looks like a gentleman.

- These limitations do not hold for bare-plural-based kinds:

(10) a. Curves are easy to draw.
b. Gadgets are very common in American households.
c. Solid objects are tridimensional

(11) a. Green bottles are simple to recycle.
b. Old shoes are common is city rivers.

(12) Thieves look like gentlemen.

In general, BP may be arbitrarily complex:

(13) [People who have taken medication X for more than 4 days] develop rushes.

How to characterize the class of SDG nominals, vs. bare plurals?

- “Natural”/ “well-established kinds” vs. “kinds” (possibly, novel ones).
- Lexical vs. Productive Nominals (Beyssade 2005).
- True Kinds vs. Individual Concepts (i.e. the nominalization of arbitrary predicates).

Two caveats on the restrictions on SDG:

- Technical discourse or a suitable contexts can make many impossible BSG restrictions possible. What counts as "canonical/well-established kind" is context dependent.
- Other definite determiners (especially demonstratives) can lead to a kind interpretation when it is used to refer to a entity (object or kind), introduced in the discourse:

(14) If we do not do all we can to save the panda$_i$, [{this animal$_i$ / the poor, cute teddy bear-like creature$_i$}] will soon become extinct.

- A definite can refer to a kind by mentioning its instances. Bare plurals cannot.

(15) *Context: A cage containing only gorillas*

a. [The animal in that cage] is almost extinct.
b. ??[Animals in that cage] are almost extinct.

Kinds from instances

(16) [This animal / the furry pet under this table] [*pointing to a tiger*] is in danger of extinction / is not widespread any more.

But what is the level of abstraction?

(17)
a. Dogs come in many, very different breeds.
b. The dog comes in many, very different breeds.
c. ?This dog [*pointing to a dog*] comes in many, very different breeds.
d. ?This [*pointing to a dog*] comes in many, very different breeds.
e. *Fido (my dog) comes in many, very different breeds.

How salient is the type/subtype?

SDG: Constraints on the predicate

SDG can go in argumental positions that select for kind entities.

(18) a. [The lemur] evolved from [the tree shrew]
b. Edison invented [the lightbulb]

They can also appear as arguments of object-level predicates in CS:

(19) a. [The swan] lives up to 40 years in captivity
b. [The lion] has a bushy tail

Frequency/quantity predicates give mixed results with SDG:

(20) a. The tiger is rare / is common / is widespread / comes in several varieties
b. *The tiger is {numerous / everywhere} in this region.

According to Krifka (2003), SDG cannot be used (in English) in characterizing sentences that express *rules or regulations*, including definitions (cf. Carlson 1995).

(21) a. ?The gentleman open the door for ladies
b. ?The bachelor is an unmarried adult male human being.
c. ?The period ends a written affermative sentence

This particular restriction does not seem to be active in other languages (e.g. Italian). Also, improvements with *the perfect gentleman...* ("roles"?)

(22) a. Lo scapolo è un uomo non sposato
the bachelor is a man not married
b. Il punto termina una frase affermativa scritta.
the period ends a sentence affirmative written

According to Krifka (2003), SDG cannot be used (in English) in characterizing sentences that express *rules or regulations*, including definitions (cf. Carlson 1995).

(21) a. ?The gentleman open the door for ladies
b. ?The bachelor is an unmarried adult male human being.
c. ?The period ends a written affermative sentence

This particular restriction does not seem to be active in other languages (e.g. Italian). Also, improvements with *the perfect gentleman...* ("roles"?)

(22) a. Lo scapolo è un uomo non sposato
the bachelor is a man not married
b. Il punto termina una frase affermativa scritta.
the period ends a sentence affirmative written

Frequency predicates with SDG (Kleiber 1990, Chierchia 1998)

(23) The rat is common/*numerous

(23) might suggest that the SDG has a “mass” behavior. Dayal (2004) proposes that it has the status of a collective noun (like “family”, “group”). Cf.

(24) The German customer bought 11000 BMWs last year.

However:

(25) a. {Water / *the rat} is abundant on Earth.
b. {??Il topo / il gruppo} era numeroso (*Italian*)
{??the rat / the group} was numerous
c. *Dogs are numerous / millions

Frequency predicates with SDG (Kleiber 1990, Chierchia 1998)

(23) The rat is common/*numerous

(23) might suggest that the SDG has a “mass” behavior. Dayal (2004) proposes that it has the status of a collective noun (like “family”, “group”). Cf.

(24) The German customer bought 11000 BMWs last year.

However:

(25) a. {Water / *the rat} is abundant on Earth.
b. {??Il topo / il gruppo} era numeroso (*Italian*)
{??the rat / the group} was numerous
c. *Dogs are numerous / millions

The main difference between the SDG and the BP appears in combination with episodic predicates. The BP takes an *indefinite* existential reading, the SDG falls back in the object-level *definite* reading.

(26) The dog / Dogs bark(s) *CS: quasi-universal reading*

(27) a. Dogs are barking right now. *ES: $\exists$ = "there are dogs barking r.n."*
b. The dog is barking right now. *ES: definite $\neq$ "there is a dog that is barking"*

The only exception is cases where the episodic predicate applies to a specimen of the kind as a "representative" for the whole kind. The property must be exceptional for members of that kind.

(28) a. The rat reached Australia in 1880
b. The quagga was last spotted in the wild in 1970.

(Carlson's "Avant Guard reading")

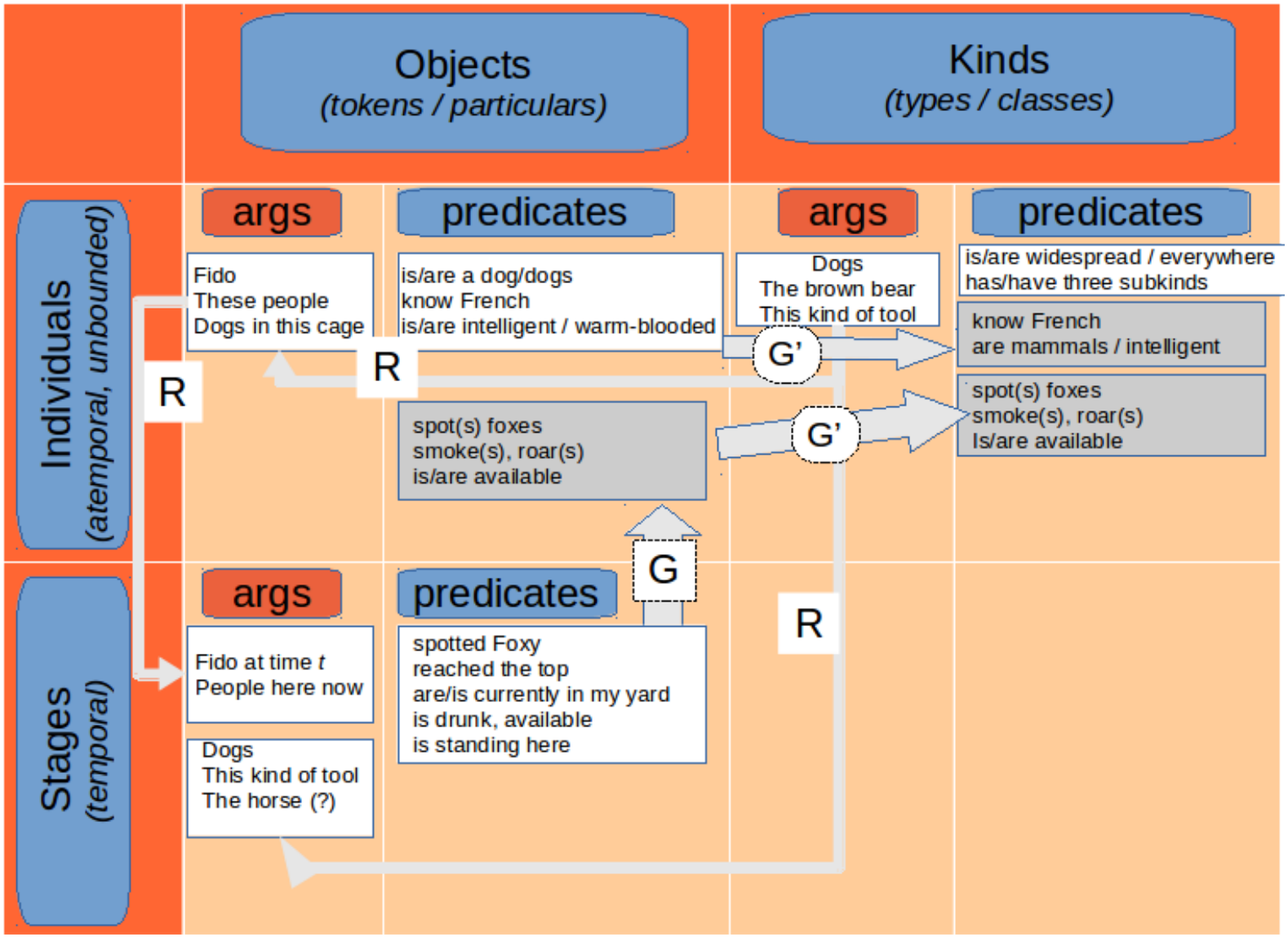
- The (perhaps unsurprising) lack of an indefinite reading for SDG in episodic contexts, is problematic if SDG denote kinds just like BP and the existential reading is obtained "automatically" when an object level predicate applies to a kind.

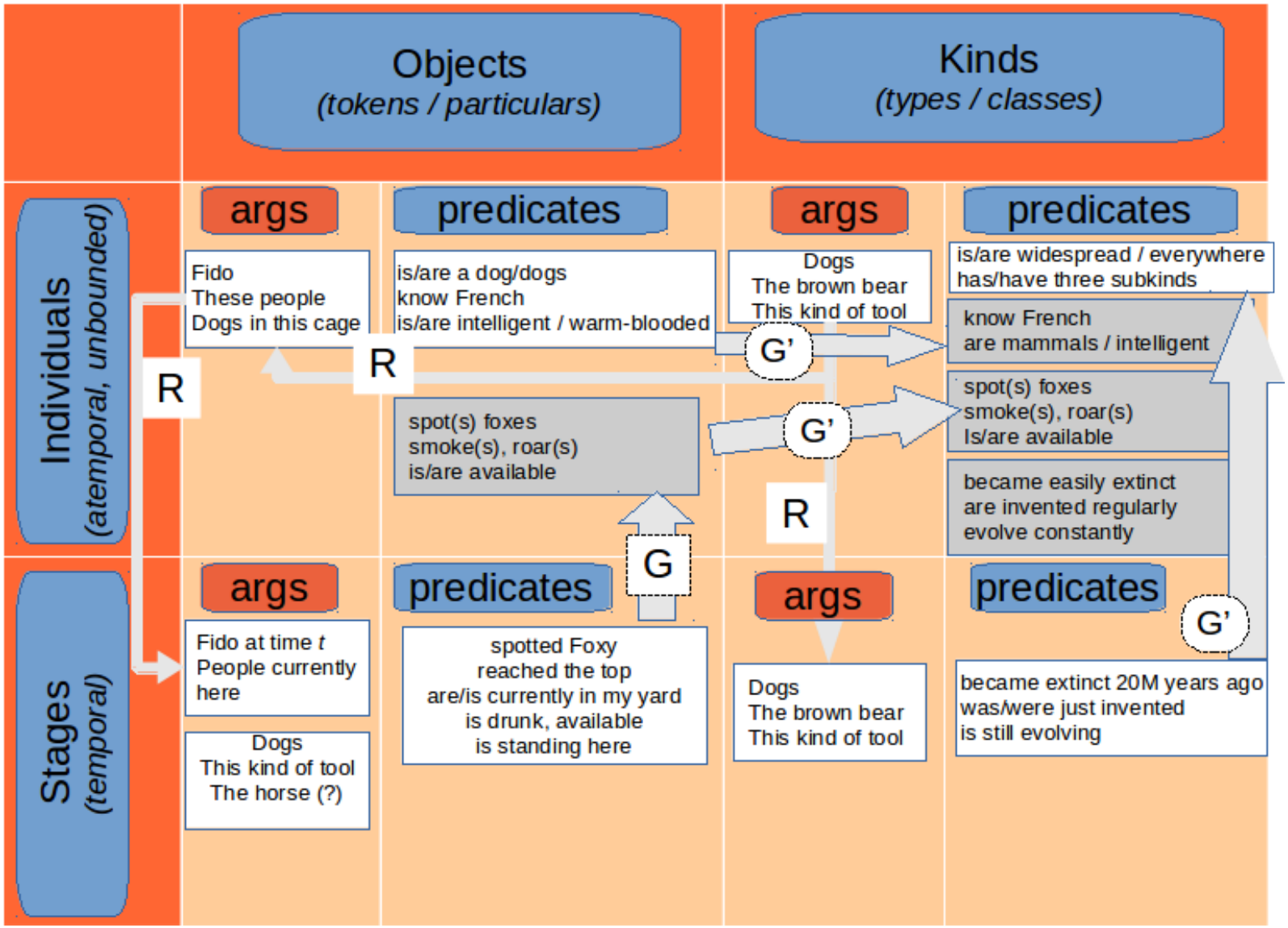
(29) a. [Dogs]^k are asleep.
b. $\lambda P \exists\, x^s\, [\mathbf{R}(x^s,P) \wedge \mathbf{asleep}(x^s)](\mathbf{dogs}^k)$ $\rightarrow$
c. $\exists\, x^s\, [\mathbf{R}(x^s,\mathbf{dog}) \wedge \mathbf{asleep}(x^s)]$

- An indefinite existential reading seems to be obtainable from the *plural count* kind-referring nominals found in Italian and other Romance langages (see e.g. Italian).

(30) L' altra settimana [i ladri / ??il ladro] hanno/ha
the last week [the burglars / the burglar] have/has
svaligiato la mia casa.
robbed the my house
"Last week burglars robbed my house"

The existence of existential readings for the SDG and the plural DG is particularly interesting, because it opens the possibility that stages of kinds might actually differ from stages of objects.


Objects
(tokens / particulars)
Kinds
(types / classes)
Individuals
(atemporal, unbounded)
Stages
(temporal)
args
predicates
args
predicates
Fido
These people
Dogs in this cage
is/are a dog/dogs
know French
is/are intelligent / warm-blooded
Dogs
The brown bear
This kind of tool
is/are widespread / everywhere
has/have three subkinds
know French
are mammals / intelligent
spot(s) foxes
smoke(s), roar(s)
is/are available
spot(s) foxes
smoke(s), roar(s)
Is/are available
R
R
G'
G'
G
R
args
predicates
Fido at time t
People here now
spotted Foxy
reached the top
are/is currently in my yard
is drunk, available
is standing here
Dogs
This kind of tool
The horse (?)


Objects
(tokens / particulars)
Kinds
(types / classes)
Individuals
(atemporal, unbounded)
Stages
(temporal)
args
predicates
args
predicates
Fido
These people
Dogs in this cage
is/are a dog/dogs
know French
is/are intelligent / warm-blooded
Dogs
The brown bear
This kind of tool
is/are widespread / everywhere
has/have three subkinds
know French
are mammals / intelligent
spot(s) foxes
smoke(s), roar(s)
Is/are available
became easily extinct
are invented regularly
evolve constantly
spot(s) foxes
smoke(s), roar(s)
is/are available
R
R
G'
G'
R
G
args
predicates
args
predicates
G'
Fido at time t
People currently
here
Dogs
This kind of tool
The horse (?)
spotted Foxy
reached the top
are/is currently in my yard
is drunk, available
is standing here
Dogs
The brown bear
This kind of tool
became extinct 20M years ago
was/were just invented
is still evolving

Taxonomic Subkinds

(31)
a. [Most crustaceans] evolved separately
b. [Every car sold in the USA] undergoes thorough crash tests
c. [This animal] is almost extinct
d. Professor Ogilvy invented [a new hydrogen pump].

Here the quantifiers/determiners in the bracketed DPs tend to range over *subkinds of thing*.
This can be made explicit using words like *kind / type / species / sort / model*, etc.:

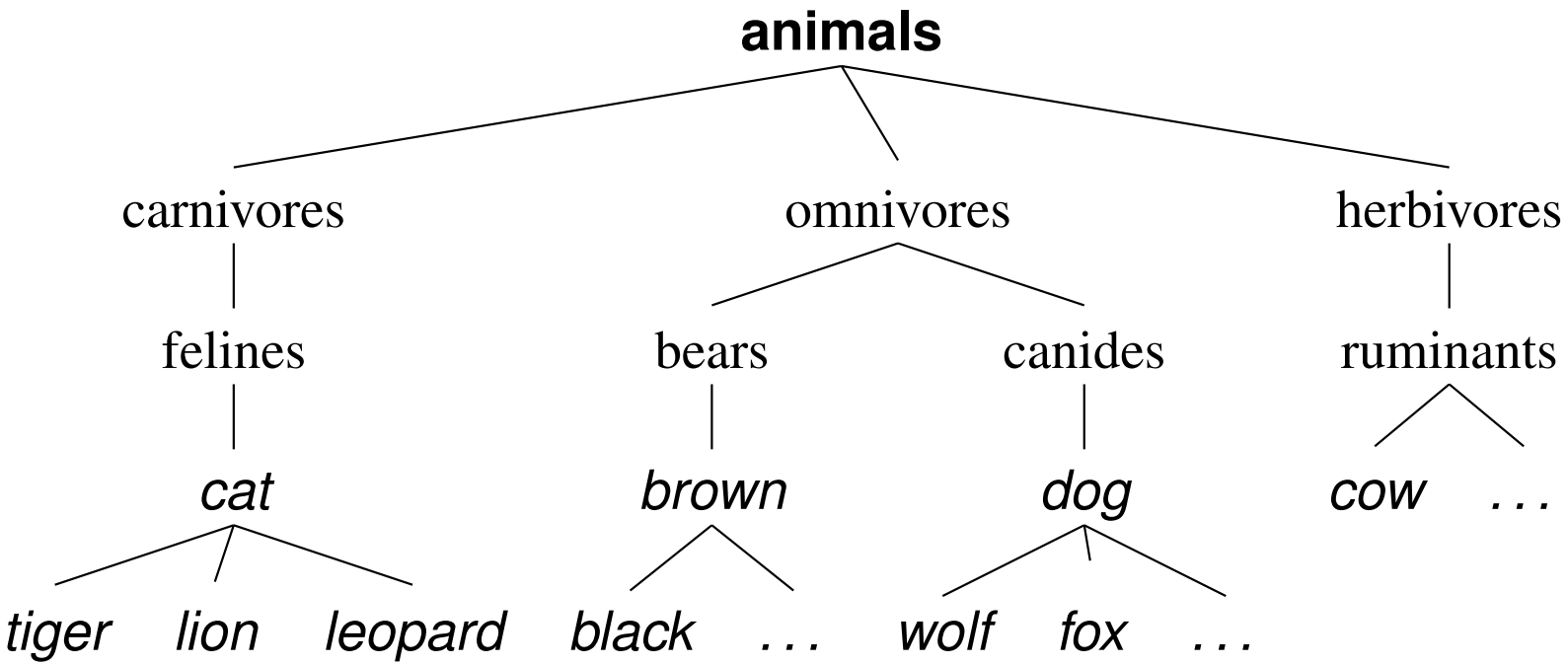
(32)
a. [Most *species of* crustaceans] evolved separately
b. [Every *model of* car sold in the USA] undergoes thorough crash tests
c. [This *kind of* animal] is almost extinct
d. Professor Ogilvy invented [a new *type of* hydrogen pump].

- The common noun alone (or the NP, in a DP framework) appears to be ambiguous between an object-level and a kind-level interpretation.
- The use do *kind of / type of ...* etc. (the *kind construction*, Wilkinson 1995, Zamparelli 1998) disambiguates in favor of kinds.
- The ambiguity of common nouns does not require a quantifier (see kind-denoting *predicate nominals*)

(33) a. Being [dogs], [Fido and Lara] are [mammals]
b. [These Australian marsupials] are [mammals] (e.g. *kangaroos and wallabies are subtypes of mammals*)

- With simple common nouns the ambiguity is much more perceivable with words that belong in a taxonomic (biological, functional, ...) hierarchy.

Example: “animals”:



An account of the subkind reading requires common nouns to have denotations either in the *object* or in the *kind* domain:

- N as *properties of objects*

  (34) $[\![\textbf{dog}]\!]^{w,t} \Rightarrow$ {Fido, Lassie, Rin Tin Tin, Pluto, ...}

  This is the denotation used for e.g. *Every dog was chewing a bone*

- N as *properties of kinds*

  (35) $[\![\textbf{dog}]\!]^{w,t} \Rightarrow$ {German shepard^k, Bobtail^k, Golden Retriever^k, ...}

  This is the denotation used for e.g. *Every dog has been selected for its special features.*

Note that uncountable (mass) nouns must also have a denotation in the domain of (countable) subkinds:

(36) a. Every mineral water has different sodium contents.
$[\![\textbf{water}]\!] = \{\text{Perrier}^k, \text{Ferrarelle}^k, \text{Evian}^k, \text{Gaudianello}^k, \ldots\}$

b. Most wines are made with black grapes.
$[\![\textbf{wine}]\!] = \{\text{Cabernet}^k, \text{Merlot}^k, \text{Pinot Noir}^k, \ldots\}$

c. Some woods have soft grain
$[\![\textbf{wood}]\!] = \{\text{pine wood}^k, \text{oak wood}^k, \text{sapient pear wood}^k, \ldots\}$

Objects can have more than one taxonomic subkind hierarchy (e.g. depending on biology, size, function, etc.)

(37) $[\![\textbf{dog}]\!]$ = {German shepard^k, Bobtail^k, Golden Retriever^k, Labrador^k, Pitbull^k, . . . }

(38) $[\![\textbf{dog}]\!]$ = {company dogs^k, watch dogs^k, hunting dogs^k, truffle dogs^k, . . . }

Context selects. As Carlson observes, subkinds cannot overlap, not even across different taxonomies.

(39) *Assume:* Fido is an animal, a mammal, a dog, a German shepard, a watch dog. He is in that room.

(40) a. #There are three kinds of animal in that room. [*a mammal, a dog, a German shepard*]
b. #There are two kinds of dog in that room. [*a German shepard, a watch dog*]

Question: does every object have subkinds?

- **A1:** No, just those that naturally belong in taxonomies:

(41) a. #Every hydrogen has slightly different nuclear properties.
b. #Most dodos has evolved together.

- **A2:** Yes, but in some (pragmatically difficult) cases it might be difficult to get them by simply quantifying over the common nouns. The alternative is using the kind construction:

(42) a. [Every type of hydrogen] has slightly different nuclear properties.
b. [Every kind of dodo] has evolved together.

(43) $[\![\text{kind of hydrogen}]\!]$ = {hydrogen which has been extracted from water, hydrogen which has been derived from methane, hydrogen that is free in the universe, . . . }

An answer depends on the analysis of the kind construction (Zamparelli, in proegress)

Question: does every object have subkinds?

- **A1:** No, just those that naturally belong in taxonomies:

(41) a. #Every hydrogen has slightly different nuclear properties.
b. #Most dodos has evolved together.

- **A2:** Yes, but in some (pragmatically difficult) cases it might be difficult to get them by simply quantifying over the common nouns. The alternative is using the kind construction:

(42) a. [Every type of hydrogen] has slightly different nuclear properties.
b. [Every kind of dodo] has evolved together.

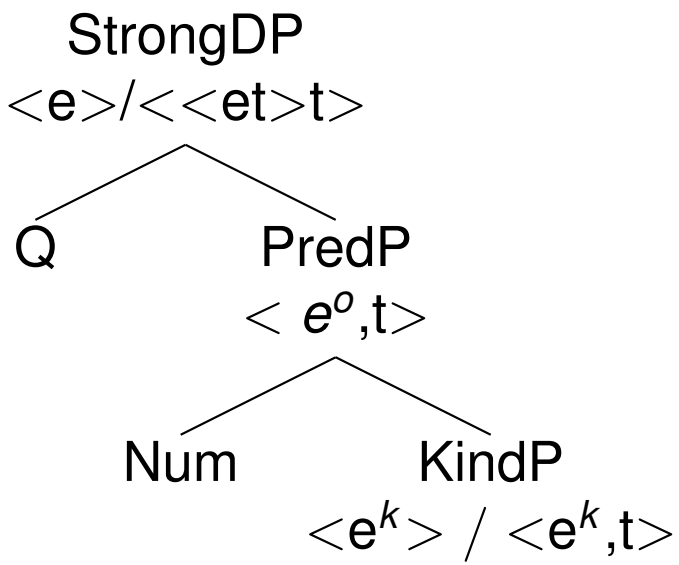
(43) $[\![\text{kind of hydrogen}]\!]$ = {hydrogen which has been extracted from water, hydrogen which has been derived from methane, hydrogen that is free in the universe, . . . }

An answer depends on the analysis of the kind construction (Zamparelli, in proegress)

Kinds in the Determiner Phrase

Where do kinds come from?
A1: Common Nouns denote kinds (or sets of subkinds); they are converted to sets of objects at a higher layer (Zamparelli 1995/00, Krifka 95, see also McNally and Gemma 2004, McNally 2015, Grimm and McNally 2015).

(44)



Problem: compositionality of kinds.

(45) [carps which have been fished three times] become stressed

Kinds in the Determiner Phrase

McNally (2015):

- the innermost layer of DP has a non referential meaning which corresponds most closely to *distributional meanings*.
- Reference appears higher up (see also Carlson 2009 on the relation between 'kinds' and 'concepts')

But the question of how to properly interface formal and distributional semantics remains open (see the DSALT workshop, and McNally/Umbach workshop this week).

The “A-generic”

CS based on object-level predicates can easily have indefinites with overt articles as subjects.

(46) a. A decent bookshelf has steel shelves
b. A dog has four legs

The indefinite is singular in the cases considered here (the **A-generic** construction), but this is not a necessity:

(47) a. Two roosters compete for supremacy
b. Three people in a long-distance boat trip always end up fighting

A-generic is excluded with predicates that only apply to kinds:

(48) a. A dog was selected in prehistoric times.
$\neq$ *dogs were selected in prehistoric times*

b. A dinosaur is extinct.
$\neq$ *dinosaurs are extinct*

c. A cockroach becomes bigger as one travels South.
$\neq$ *Cockroaches become bigger as one travels South.*

A-generic is possible only with certain frequency predicates:

(49) a. A bear with blue eyes is {common / rare / ?frequent / *widespread / *numerous}
b. *Finding* a bear with blue eyes is {common / rare / ?frequent / *widespread / *numerous}

Longobardi (2001): perhaps such predicates are not good tests for kind-denotation.

Hypothesis:"A bear with blue eyes is common" can be interpreted as "The event of finding a bear w.b.e. (within certain spacial interval) is common/frequent/*numerous"

A-generic is possible only with certain frequency predicates:

(49) a. A bear with blue eyes is {common / rare / ?frequent / *widespread / *numerous}
b. *Finding* a bear with blue eyes is {common / rare / ?frequent / *widespread / *numerous}

Longobardi (2001): perhaps such predicates are not good tests for kind-denotation.

Hypothesis:"A bear with blue eyes is common" can be interpreted as "The event of finding a bear w.b.e. (within certain spacial interval) is common/frequent/*numerous"

Syntactically, the A-generic does not seem to be available in non-subject positions:

(50) a. In vacation I (always) pick a mushroom. $\neq$ *. . . mushrooms*
b. As a hobby, I photograph a bird $\neq$ *. . . birds*

(51) a. A real movie star resembles Marilyn Monroe.
b. Marilyn Monroe resembles a real movie star.

Semantically, A-generics seem to be mostly used to state definitions, or express rules or regulations (Lawler 1973, Burton-Roberts 1977)

(52) a. A table has four legs.
b. *To be a table is to have four legs.*
c. *A table must have four legs to be a real table.*

Krifka (2013): A-generic is mainly used to talk about *language*, not reference:

(53) A *wampimuk* is a mythical beast popular in distributional semantics.

Syntactically, the A-generic does not seem to be available in non-subject positions:

(50) a. In vacation I (always) pick a mushroom. $\neq$ *. . . mushrooms*
b. As a hobby, I photograph a bird $\neq$ *. . . birds*

(51) a. A real movie star resembles Marilyn Monroe.
b. Marilyn Monroe resembles a real movie star.

Semantically, A-generics seem to be mostly used to state definitions, or express rules or regulations (Lawler 1973, Burton-Roberts 1977)

(52) a. A table has four legs.
b. *To be a table is to have four legs.*
c. *A table must have four legs to be a real table.*

Krifka (2013): A-generic is mainly used to talk about *language*, not reference:

(53) A *wampimuk* is a mythical beast popular in distributional semantics.

BP-based CS seem to allow a wider range of meanings:

(54) a. A madrigal is polyphonic / ??popular
b. Madrigals are polyphonic / popular

(55) a. An Italian restaurant is expensive / ??closed tonight. *(Greenberg 2002)*
b. Italian restaurants are expensive / closed tonight.

Like BP, A-generics are non monotonic:

(56) a. Berber lions are well-adapted to cold weather. $\not\Rightarrow$ Lions are well-adapted to cold weather.
b. A Berber lion is well-adapted to cold weather. $\not\Rightarrow$ A lion is well-adapted to cold weather.

BP-based CS seem to allow a wider range of meanings:

(54) a. A madrigal is polyphonic / ??popular
b. Madrigals are polyphonic / popular

(55) a. An Italian restaurant is expensive / ??closed tonight. *(Greenberg 2002)*
b. Italian restaurants are expensive / closed tonight.

Like BP, A-generics are non monotonic:

(56) a. Berber lions are well-adapted to cold weather. $\not\Rightarrow$ Lions are well-adapted to cold weather.
b. A Berber lion is well-adapted to cold weather. $\not\Rightarrow$ A lion is well-adapted to cold weather.

A-generic can be accompanied by an adverb of quantification (Lewis 1975: *always, usually, rarely, never, . . .*). The quantification force of the sentence varies depending on the adverb:

(57)
a. A sentence always contains a noun. ⇒
All sentences contain a noun.
b. A sentence usually contains a verb. ⇒
Most sentences contain a verb.
c. A sentence rarely contains a hash sign. ⇒
Few sentences contain a hash sign.
d. A sentence never contains two periods. ⇒
No sentence contains two periods.

- Lewis' (1975) analysis of adverbs of quantification as *unselective quantifiers* can apply to there cases:

(58)
a. A sentences always contains a noun. ⇒
ALWAYS x [x is a sentence][∃y, y is a noun and x contains y]
b. A sentences usually contains a verb. ⇒
OFTEN x [x is a sentence][∃y, y is a verb and x contains y]
c. A sentences never contains two periods. ⇒
No x [x is a sentence][∃y, y ar two periods and x contains y]

- The indefinite *a sentence* must be analyzed as introducing a *free variable* which is bound by the adverbial.
- Possibility of a *covert* adverbs of quantification, (GEN) with a "*quasi-universal*" meaning.

- Lewis' (1975) analysis of adverbs of quantification as *unselective quantifiers* can apply to there cases:

(58)
a. A sentences always contains a noun. ⇒
ALWAYS x [x is a sentence][∃y, y is a noun and x contains y]
b. A sentences usually contains a verb. ⇒
OFTEN x [x is a sentence][∃y, y is a verb and x contains y]
c. A sentences never contains two periods. ⇒
No x [x is a sentence][∃y, y ar two periods and x contains y]

- The indefinite *a sentence* must be analyzed as introducing a *free variable* which is bound by the adverbial.
- Possibility of a *covert* adverbs of quantification, (GEN) with a "*quasi-universal*" meaning.

- Lewis' (1975) analysis of adverbs of quantification as *unselective quantifiers* can apply to there cases:

(58)
a. A sentences always contains a noun. ⇒
ALWAYS x [x is a sentence][∃y, y is a noun and x contains y]
b. A sentences usually contains a verb. ⇒
OFTEN x [x is a sentence][∃y, y is a verb and x contains y]
c. A sentences never contains two periods. ⇒
No x [x is a sentence][∃y, y ar two periods and x contains y]

- The indefinite *a sentence* must be analyzed as introducing a *free variable* which is bound by the adverbial.
- Possibility of a *covert* adverbs of quantification, (GEN) with a "*quasi-universal*" meaning.

Relevace of A-generic for BP

- A-generic can appear with CS based on episodic and lexically characterizing predicates (*smokes*, *is intelligent*), but not with predicates that only apply to kinds (*is extinct*).
  $\Rightarrow$ A-generics are not kind-denoting
- In CS, A-generics have the quantificational variability of BP.
- Quantificational variability was one on the main reasons against a quantificational analysis of BP and in favour of a uniform analysis as kinds.
- A-generics show that there must be an alternative explanation to quantificational variability than the use of kinds:
- the quantificational approach proposed by Lewis plus the idea that indefinites introduce free variables.
- The same method could be applied to BP, if they are also treated as indefinites that introduce free variables.
  $\Rightarrow$ The idea that BP unambiguously denote kinds is undermined.

Relevace of A-generic for BP

- A-generic can appear with CS based on episodic and lexically characterizing predicates (*smokes*, *is intelligent*), but not with predicates that only apply to kinds (*is extinct*).
  $\Rightarrow$ A-generics are not kind-denoting
- In CS, A-generics have the quantificational variability of BP.
- Quantificational variability was one on the main reasons against a quantificational analysis of BP and in favour of a uniform analysis as kinds.
- A-generics show that there must be an alternative explanation to quantificational variability than the use of kinds:
- the quantificational approach proposed by Lewis plus the idea that indefinites introduce free variables.
- The same method could be applied to BP, if they are also treated as indefinites that introduce free variables.
  $\Rightarrow$ The idea that BP unambiguously denote kinds is undermined.

Relevace of A-generic for BP

- A-generic can appear with CS based on episodic and lexically characterizing predicates (*smokes*, *is intelligent*), but not with predicates that only apply to kinds (*is extinct*).
  $\Rightarrow$ A-generics are not kind-denoting
- In CS, A-generics have the quantificational variability of BP.
- Quantificational variability was one on the main reasons against a quantificational analysis of BP and in favour of a uniform analysis as kinds.
- A-generics show that there must be an alternative explanation to quantificational variability than the use of kinds:
- the quantificational approach proposed by Lewis plus the idea that indefinites introduce free variables.
- The same method could be applied to BP, if they are also treated as indefinites that introduce free variables.
  $\Rightarrow$ The idea that BP unambiguously denote kinds is undermined.

Relevace of A-generic for BP

- A-generic can appear with CS based on episodic and lexically characterizing predicates (*smokes*, *is intelligent*), but not with predicates that only apply to kinds (*is extinct*).
  $\Rightarrow$ A-generics are not kind-denoting
- In CS, A-generics have the quantificational variability of BP.
- Quantificational variability was one on the main reasons against a quantificational analysis of BP and in favour of a uniform analysis as kinds.
- A-generics show that there must be an alternative explanation to quantificational variability than the use of kinds:
- the quantificational approach proposed by Lewis plus the idea that indefinites introduce free variables.
- The same method could be applied to BP, if they are also treated as indefinites that introduce free variables.
  $\Rightarrow$ The idea that BP unambiguously denote kinds is undermined.

Relevace of A-generic for BP

- A-generic can appear with CS based on episodic and lexically characterizing predicates (*smokes*, *is intelligent*), but not with predicates that only apply to kinds (*is extinct*).
  $\Rightarrow$ A-generics are not kind-denoting
- In CS, A-generics have the quantificational variability of BP.
- Quantificational variability was one on the main reasons against a quantificational analysis of BP and in favour of a uniform analysis as kinds.
- A-generics show that there must be an alternative explanation to quantificational variability than the use of kinds:
- the quantificational approach proposed by Lewis plus the idea that indefinites introduce free variables.
- The same method could be applied to BP, if they are also treated as indefinites that introduce free variables.
  $\Rightarrow$ The idea that BP unambiguously denote kinds is undermined.

Relevace of A-generic for BP

- A-generic can appear with CS based on episodic and lexically characterizing predicates (*smokes*, *is intelligent*), but not with predicates that only apply to kinds (*is extinct*).
  $\Rightarrow$ A-generics are not kind-denoting
- In CS, A-generics have the quantificational variability of BP.
- Quantificational variability was one on the main reasons against a quantificational analysis of BP and in favour of a uniform analysis as kinds.
- A-generics show that there must be an alternative explanation to quantificational variability than the use of kinds:
- the quantificational approach proposed by Lewis plus the idea that indefinites introduce free variables.
- The same method could be applied to BP, if they are also treated as indefinites that introduce free variables.
  $\Rightarrow$ The idea that BP unambiguously denote kinds is undermined.

Summary

- The singular definite generic article and its restrictions;
- The subkind meaning of NPs
- The kind construction
- The A-generic: Nominals that have quantificational variability but not kind-reference

Homework

- Are all determiners possible in the kind construction? (*A dog of this kind, this kind of dog*)
- *For speakers of Romance languages*: in what cases are bare plurals possible in your language? Test various syntactic positions.

Burton-Roberts, N. (1977).
Generic sentences and analiticity.
Studies in Language 1, 155–196.

Carlson, G. (2009).
Generics and concepts. to appear in (ed.) . in the series, oxford.
In F. J. Pelletier (Ed.), *Kinds, Things and Stuff*, New Directions in Cognitive Science. Oxford Univ Press.

Carlson, G. and F. Pelletier (Eds.) (1995).
The Generic Book.
Chicago, IL: University of Chicago Press.

Carlson, G. N. (1995).
Truth conditions of generic sentences: Two contrasting views.
See Carlson and Pelletier (1995), pp. 224–237.

Chierchia, G. (1998).
Reference to kinds across languages.
Natural Language Semantics 6, 339–405.

Dayal, V. (2004).
Number marking and (in)definiteness in kind terms.
Linguistics and Philosophy 27(4), 393–450.

Greenberg, Y. (2002).
Two types of quantificational modalized genericity, and the interpretation of bare plural and indefinite singular nps.
In B. Jackson (Ed.), *Proceedings of SALT XII*, Cornell University. Cornell Linguistics Circle.

Grimm, S. and L. McNally (2015).
The -ing dynasty: Rebuilding the semantics of nominalizations.
To appear in: Proceedings of SALT 25.

Kleiber, G. (1990).
L'article LE générique. La généricité sur le mode massif.
Number 23 in Langue et Culture. Droz.

Krifka, M. (2003).
Bare NPs: Kind-referring, indefinites, both or neither?

In *Proceedings of Semantics and Linguistic Theory (SALT) 13*, Cornell. CLC Publications.

Krifka, M. (2013).
Definitional generics.
In A. Mari, C. Beyssade, and F. D. Prete. (Eds.), *Genericity*. Oxford University Press.

Lawler, J. (1973).
Studies in English Generics.
University of Michigan Papers in Linguistics 1(1).

Lewis, D. (1975).
Adverbs of quantification.
In E. Keenan (Ed.), *Formal Semantics of Natural Language*, pp. 3–15. Cambridge: Cambridge University Press.

Longobardi, G. (2001).
How comparative is semantics? A unified parametric theory of bare nouns and proper names.
Natural Language Semantics 9(4), 335–369.

McNally, L. (2015).
Kinds, descriptions of kinds, concepts, and distributions.
Submitted to a volume of papers from the BRIDGE-14 Workshop.

McNally, L. and B. Gemma (2004).
Relational adjectives as properties of kinds.
In 179-196 (Ed.), *Empirical Issues in Syntax and Semantics 5, pp. 179-196 [Abstract, PDF, BIB]*, pp. 179–196.

Wilkinson, K. (1995).
The semantics of the common noun *kind*.
See Carlson and Pelletier (1995), Chapter 10, pp. 383–397.

Zamparelli, R. (1998).
A theory of Kinds, Partitives and OF/Z Possessives.
In A. Alexiadou and C. Wilder (Eds.), *Possessors, Predicates and Movement in the Determiner Phrase*, pp. 259–301. Amsterdam: John Benjamins.