Fickleness

Erik Hoversten

Fickleness is revealed in the discourse dynamics of generic discourse.

Generics are susceptible, which is to say that they tend to be used in a way that projects conjecture (force beyond the evidence for it).

But they are also resilient. There is room for a speaker to retrench on their use.

Put together, these suggest an open endrdness, or indeterminacy, in how generics are used. And settling the openness is a matter of negotiation among the parties to the discussion.

Negotiation is sometimes trivial, with the hearer either accepting the proposal outright or denying it and refusing to entertain alternative proposals on the issue.

But it is sometimes a nontrivial, extended process involving a back and forth discussion. This process requires a space in which to occur. And it needs an element of stability. An Archimedean point that stays fixed and around which the negotiation is centered. The protected negotiation space I call a sandbox, and it's limits are specified by the nature of the archimedean point, itself a proportional radical accepting different saturationds. The identity of the saturation is the point of negotiation.

It's well known that generics are quirky

- Some require that most members of the subject kind satisfy the predicate
- Some survive even with a large number of counterinstances

But it is less frequently acknowledged that they are subject to varying degrees of fragility.

- Fragility is a contextual property of uses of generics in discourse.

How is fragility measured?

- Standards: interests determine a threshold for satisfying the quantifier
  - A little odd that high standards would make Mosquitoes carry west nile more easily satisfied, while bees lay eggs would be harder
  - Standards are usually set at the level of discourse, so "Mosquitoes carry West Nile and bees lay eggs"
- QUD: discourse issues create a partition space
  - The quantifier becomes inert at this point. Proportions aren't really playing a role
- The metaphysical account that Liebesman relies on can't sustain this?
- Variable accessibility relation?
  - cf. Gillies on variably strict?

Ambiguity dimensions

- Generics are divided into apparent kind denoting, existential, and characterizing forms
- Plural predicates are divided into distributive and non-distributive forms
  - this distinction crosses the generic one
- Koslicki's characterization of the I/D distinction makes it a form of dist/non-dist
  - she reduces both to the plural reference side, but this involves an extremely complicated method of capturing the non-distributive, kind referring side
- Liebesman reduces both to the kind referring side
  - but this requires a shoving much of the analysis into the metaphysics of instantiation
- I say that the closure approach can capture the I/D distinction in a simple way
  - The key is, as with Gillies on conditionals, understanding the way that pragmatics factor into the analysis
  - Happily, the closure approach provides exactly the avenue needed for the kind of pragmatics we need to enter.

First, it's important to recognize that the I/D distinction crosses the distrib/non distinction

- Bees lay eggs
  - Often seen as a general claim about individuals; one that requires few actual witnesses

- – But with contextual priming, we can get it to seem more like a claim about the class
    - ∗ I can't remember which anaimals give live birth. Do all of bears, bees, and bobcats give live birth?
    - ∗ No, bees lay eggs.
- Characterizing vs. accidental generalizations

Second, contextual influence is pervasive

- The same sentence can be interpreted either I or D like (as with Bees lay eggs)
- But the sentence is also contextually fragile
    - – Susceptibility and resilience

Correcting generic discourse I'm not so convinced of the default position that generics are some sort of quantification over subject class members. Sure, there is the near synonymy with explicitly quantified sentences, but it's notable that generics are not actually synonymous with any of them. And, yes, so much language can fruitfully be analyzed in terms of quantification, or tripartite structure more generally: adverbials, information structure, generalized quantifiers, modals, conditionals. But is's equally notable that there are dissenters for each of these (Gillies). And the unification argument cuts both ways. To treat characterizing generics as quantifiers is to not treat them as plural predications, which other bare plurals are.

Most significantly, generics do sometimes seem to be generalizations over instances. But there isn't much empirically distinguishable between this and abstraction from the whole. The quantifier analysis forces the bottom-up interpretation of generics, but some generics are best understood top-down. The plural predication account leaves the conceptual priority question open. Plus, I find it possible to read even characterizing generics as top-down if given the proper context. Take

- Bees lay eggs
- Worker bees don't, nor do drones

I can imagine a couple different retrenchments one might make against this challenge. There's the backing off response, that seems appropriate for viewing the sentence as some sort of generalization from instances:

- I didn't say all bees do.

3

But there's also the contrastive response, which doesn't at all back down, and seems more relevant if we're coming from a kind-level interpretation:

- Rather than giving live birth they do.
- But that's how they give birth.
- They're the kind of thing that lays eggs rather than giving live birth.

A neutral analysis (such as the plural predication account) can leave this question under-specified, and the direction of fit can be adjudicated in conversation. A split LF, as advocated by the quantificational approach requires the speaker to retract their original quantifier approach and reassert the kind one. Or it posits systematic misunderstanding between interlocutors regarding generics.

This is why the specific form of context-sensitivity (fickleness) that generics exhibit is problematic for the quantifier approach. It posits a systematic ambiguity that fails to track the easy flow of conversation around correcting generic discourse.

Characterizing generics are notoriously difficult to analyze

My goal in this paper is to pull out new features of generics in convo, features that I believe motivate an analysis based on the collaborative update framework.

It is nearly universally accepted that bare plural sentences in their generic sense express a generalized quantificational structure. That is, at LF, generics have a tripartite structure of a quantifier, a restrictor, and a scope:

- Bears are dangerous
- GEN (Bears) (Dangerous)

This being universally accepted (modulo Liebesman), the primary task becomes specifying the truth-conditions of these sentences given their distinctively quirky behavior:

- The principle subject of investigation is the nature of GEN
    - (Leslie) It is a default generalization tool. It can be given a truth specification, but not reductive truth conditions. The specification depends on the psychological objects characterizing dimension and positive/negative counterinstances.

- (Cohen) It is a probability operator. Most situations in the domain that satisfy the subject must also satisfy the predicate. In addition, each sub-class of the partitioned subject must also be such that most of its elements satisfy the predicate. This homogeneity contraint is a psychological; the partition is determined by saliency and involves both the nature of the concepts evoked in the sentence as well as the broader context.
- (Pelletier) It is a modal conditional. It universally quantifies over elements of the subject class, but whether an element is a witness to the quantifier depends on its features across its normal worlds. Normality is a quirky concept.

The predicational analysis of bare plural sentences runs up against a sticky situation. It is often assumed that a quantificational analysis is needed to extract

Liebs' kind level analysis is in this vein, but it struggles with another feature of bare plurals: their fragility

Predication is often analyzed as set membership. John is a pirate is true relative to a domain and interpretation function just in case the individual referred to by John is in the set of individuals assigned by the interpretation function to being a pirate. But plural predication presents a challenge to this idea. A plural subject, one might assume would be treated as a set of individuals. But such a set is not a member of another set of individuals. One way around this is to treat the plural copula as expressing the subset relation instead of membership.

But we can preserve the uniform, set-membership approach if we take take predicates to include both individuals and pluralities and interpret plural subjects as denoting pluralities composed from the members of the set. Plural predicates are supplied with a closure operator that forms all pluralities out of individuals in the extension of the unstarred variant.

Plural predication, however, has two readings, a collective one and a distributive one. The distributive one can be easily derived from the starred predicate, but the collective one is more slippery. Schwarzschild provides a way that treats the two readings as deriving from differences in contextually supplied constraints on the domain. This approach is further supported by the fact that there are intermediate readings between the distributive and collective ones. An ambiguity type approach threatens an explosion of meanings.

The predication analysis of sentences with bare plural subjects comes under threat from another direction as well. For many uses of bare plurals, the generic uses, seem not to require that the entire plurality denoted by the subject be a member of the set. Bears are dangerous is false because Fozzy, who is part of the world-bear, would be a pleasure to meet in a dark alley.

Generics come in two different types: characterizing generics (also called I-generics) and direct kind generics (D-generics). It is commonly held that the class of plural predicates is partitioned into those that predicate properties of kinds directly and those that attribute

properties to the individual members of the kind generally. For direct kind generics are about the group as a whole and often not about typical or normal properties of them (Dinos are extinct). And characterizing generics demand extra structure to capture the diverse ways in which they can be used (Typhoons arise in this area of the Pacific, Cats lick themselves, Donkey sentences).

Generics are quirky, and it is commonly (nigh universally), assumed that capturing their quirkiness requires foregoing the predicational analysis in favor of a quantificational one in which both the subject and predicate denote sets bound by an unpronounced generic quantifier. The subject set is a restrictor and the predicate is the scope.

Liebesman has argued that the quantificational approach is not needed for quirkiness can be relegated to the confines of metaphysics. The instantiation of a property by a kind, Liebesman suggests, is a varied set of relations.

But generics aren't only quirky, their also fragile. And this fragility makes trouble for both quantificational accounts and Liebesman's predicational view. THough the trouble they find differs.

However, Schwarzschild's approach to plurals provides an avenue to handle their fragility. The vehicle we need to traverse the path is that of collaborative update semantics.

Received wisdom has it that bare plural sentences form a deeply fractured class. Sometimes the plural denotes a kind. Other times it and it's predicate are sets governed by an unpronounced existential quantifier. And other times still, the unpronoinced quantifier has an unspecified general force.

Generics, indeed, are quirky. But ambiguity is a serious charge around the semanticist card table. Not one to be taken lightly. It's even more serious given that linguistic context does little to highlight the divide.

Some dispute the charge. Call them the predicational resistance. Lieberman has maintained that the kind reading can capture even the characterizing reading Kloslicki thinks that the general approach does the job working in a predicational jurisdiction.

But received wisdom should be labeled return to sender. Seeing why will take us through a number of elements and require us to get serious about the role of context in interpretation

The real problem for received wisdom and the predicational resistance is that generics aren't just quirky; they're also fragile.

Bare plurals in their characterizing construal involve a distributive reading of the plural predication. In their direct kind construal, they involve non-distributive reading. There are also intermediate construals; ducks lay eggs without each duck laying eggs.

Problem cases for generics are contextual, like in CIA leaks

They are both susceptible and resilient

Sub kinds are key, the conceptual element relies on a linguistic structure provided by collaboration

- metalinguistic negotiation

Primitive generalization: uniformity across the set (similar to universality but, merely that there is no significant distinction in relation to the predicate), serves for both count and mass nouns.

Primitive generalization is easily negotiated, as distinctions are drawn.

Schwarzschild's distribution plurality?

- Bears are dangerous
- The cubs lifted the boulder

The kind can be treated as uniform for the purposes of this discussion

- It is a default in that it draws only the distinctions needed for the QUD
- In disagreeing, one can change the purposes of discussion and require added distinctions within the class

Generics aren't predications to a kind, but they equally aren't just enumerations over the members. They have a holistic quality. This is why "Bees lay eggs" seems true despite a bee population usually having only one egg laying member. The generic makes a claim about the group as a whole; namely, that it's method of procreation involves egg laying.

- In this way, generics behave something like a test. In a default semantics (Veltman 1996), modals are interpreted as tests on a state of information. If the state passes the test, the whole thing goes through; if it fails, the result is the null state.
- A generic suggests that the class of bees is uniform with regard to the property of egg laying. It is perhaps better put in the negative: there is no relevant distinction within the class viz a vis egg-laying.

Thus, generics aren't really quantifiers. But they can be seen, as Leslie (2007) suggests, as representing default or basic faculty of generalization. That is, the default assumption is that a class is uniform with regard to the predication. Drawing distinctions within the class requires added scrutiny.

- (Conservativity) For all M and all A, B M, QM(A, B) QM(A, A B).
- Mosquitoes carry west nile is not equivalent to Mosquitoes are mosquitoes that carry west nile
- The restrictor restricts the domain of inquiry as well

Defaults are both context sensitive and fragile. The domain across which uniformity is presupposed is dependent upon the context. But in addition, this presupposition can be quickly defeated if context changes slightly. Some generics are less fragile than others (Grizzlies are brown v. Bears are dangerous).

Much discussion of generics centers on how to account for the the fact that evaluation of truth varies independently of proportion of the class for which the predicate holds.

- Cohen and Leslie each provide psychological accounts of the variability
- But the unsatisfactoriness of these accounts stems from the fact that generics aren't really quantifiers at all. Genericity is a linguistic tool for expressing a discourse function, and it's implementation in any particular discourse is highly sensitive to the contextual features of that discourse, principally the QUD and the domain of quantification.

Three kinds of plural reference

- Kind reference
- Enumeration over members
- Collective reference (reference to a plurality)

Collective reference is not reference to the kind, but it is not enumeration over members

- Similar to how a set is not a thing over and above its members, but it can be used to refer to them collectively.
- The distinction is best brought out in contrastive contexts, or negative ones (As are F and nothing else).
- When a modal is used in discourse, it makes a claim about the entirety of the information state. The truth-conditional representation of these claims are almost always trivial, but they are still used. And they're useful because they inform the audience about the speaker's conception of the (limits of) the information state.
- We can bypass the question of what it is for a plurality to have a property. There are lots of ways for it to happen, many may be psychological.
- What is interesting for our purposes is the fragility of the attributions, which I suggest is something that can be interestingly captured in a grammatical account.
- What is required is a collaborative structure with defaults and replacements.

I say that generics are true iff the predicate class subsumes the subject class.

- Generics are always true because the speaker's representation of the domain of discourse draws no distinction among the members of the subject class: it is homogeneous for her.
- Generics are always false because their mere invocation in discourse tends to highlight distinctions in the domain.
- Thus, they are fragile.

Cohen's homogeneity and Leslie's default reasoning each play a role in the use of generics in discourse.

- And each of their psychological accounts may be relevant to how discourse evolves in a particular case. Conceptual structuring (Cohen) may determine how salient a distinction becomes when a generic is introduced, and it is likely that there are characterizing dimensions (Leslie) that individuals latch onto as more robust dimensions for generalization.
- But to attempt to use such psychological principles to provide a theory of (or predictions for truth valuations for) generics is beyond the realm of linguistics, and doesn't really inform us about the logical structure of reasoning in discourse.

Probability based assessments (Cohen) and positive/negative counterexamples (Leslie) are misguided because genericity is not comparative enumeration of individuals or cases.

- Genericity also is not, as Peletier would have it, universal quantification over individuals based on their properties across their normal worlds.
- Each of these mislocates the nature of genericity. It is neither actual world quantification nor modal-conditionality.
- It is discourse based refinement of the domain

Negation interacts strangely with generics because genericity does not arise from LF alone. It requires input from inquiry level operations. To say Mosquitoes don't carry West Nile is to say that the plurality lacks the property of carrying West Nile and to say it with a particular distribution over the plurality. It is robustly false perhaps because of psychological features that Leslie outlines.

The predication account requires a way of injecting subtlety

- The tripartite account gets this by allowing extra conditions in the restrictor
- We get it from the collaborative dimension

9

The predication account must be able to deal with self-referentialy examples

- Cats lick themselves is not Lick(cats,cats) or Lick-cats(cats)
- Lions that see a gazelle chase it (donkey anaphora)

Wherein the quirkiness?

- Liebesman: vagaries of kinds instantiating properties
- Leslie: psychology of characterizing dimensions and postive/negative counterinstances
- Cohen: psychology of homogeneity via conceptual structure and determination of alternatives
- Pelletier: vagaries of normality via an individual's modal profile

Whatever generates the quirkiness is not really a semantic issue, but the structure must provide inroads for the quirkiness to exert itself

- Gen provides such structure for variable proportions of the membership
- Restrictor provides structure for context to get in
- Metaphysics provides some room for vagaries of instantiation
- Possible worlds allow for all sorts of accessibility relations in determining normality

But none of these has a specific mechanism to capture the quirkiness associated with fragility.

- For that, we need structure at the level of inquiry
- And once we allow for that, we see that we can get by with just that in capturing full quirkiness.
- At this point, simplicity reigns
- Homogeneity is uniformity wrt level of refinement
- Defaults built in

For schwarzschild, the negative extension of predicates features in the semantics of the non-distributivity operator which is intimately joined to the presupposition of homogeneity associated with plurals

- Can I make use of negative extensions at all?
- A gappy proposition is different from a radical, but maybe a similar emergence of the presupposition can come out of the radical approach?
- The cumulativity operator ensures that a predicate extension includes all pluralities built from individuals in the extension

- Partitionings of a predicate can thus just be selections of pluralities, which correspond to the levels of refinement
- Star is also scopable

Plurals are sensitive to domain selection

- The star operator is defined in terms of CLOSE(A) = {X: X (D A) or X (D A)}
- different contexts force different construals by injecting a restriction on D. Since star is sensitive to D, different interpretations come out
- Isn't domain selection the same thing as partitioned predication?

P(A) is true iff A P

- But a is domain restricted to pick out a subclass relevant in the context
- The subclass is determined by way of an alternative class
- In a default context, it is just the whole class
- But these contexts are unstable, and can be modified by future discourse
- Future discourse doesn't defeat the original statement

  - Instead, it preserves the idea but injects a new domain restriction
  - One that is determined by explicit context

- Via the star operator, the plural has the added structure needed for context to latch onto in order to capture quirkiness

Generics quirkiness

- Type 1 (stickiness): generics allow for counterinstances, sometimes many of them
- Type 2 (fragility): generics are both susceptible and resilient
- Stickiness requires some extra structure, and we should be able to leverage the extra structure to make sense of fragility, too.

A predicational analysis of bare plural sentences treats them in line with standard singular predication

- Fozzy is friendly $\rightarrow$ sings(f) = 1 in c relative to i iff [fozzy]i,c [sings]i,c
- Bears are dangerous $\rightarrow$ dangerouse(B) = 1 in c relative to i iff [bears]i,c [dangerous]i,c

  - This set approach gets us into trouble

– But if plurals denote pluralities, and predicates denote sets of individuals and pluralities closed under plurality formation, then we get: dangerouse(B) = 1 in c relative to i iff [bears]i,c [dangerous]i,c

The argument for the plurality based approach comes from collective inference:

- A is light, B is light, therefore, A and B are light
- Interpreting A and B are light as Anything that is A or B is light fails for A and B belong to different passengers
- Since plural subjects sometimes denote pluralities, and plural predicates can be conjoined, we ought to interpret plural sentences as plurality-based universally.

This raises a puzzle about distributive and collective readings of plural sentences, but both can be captured using the plurality-based approach

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While the completion in the Bears dialogue is a natural one, it certainly isn't the only felicitous response to the initiation. It is open to the responder to challenge the initiation in another way, but interestingly, it is also open to the initiator to retrench in certain ways, as in the following alternate extension of the discourse:

\a.[A:] Bears are dangerous.
\b.[B:] What about Teddy bears?
\b.[A:] I didn't mean *all* bears.

A's retrenchment in *Teddy bears* strikes my ear as an acceptable response to **B**'s challenge. It is similar to the data that Thony Gillies and Kai von Fintel analyze in regard to retraction of *might* claims. Consider the following, drawn from vonfintel2008 (p.81):

a.   [A:] The keys might be in the drawer.
b.   B: (*Looks in the drawer.*) They're not. Why did you say that?
c.   A: I didn't say they *were* in the drawer. I said they *might be* there – and they might have been. Sheesh.

Might claims are sometimes retracted when presented with countervailing evidence available in a different context from the original utterance. But as 1 makes clear, *might* claims are ocassionally *resilient* in the face of such challenges. The felicity of the exchange in **Teddy bears** suggests that correctible initiations exhibit similar resilience.

Resilient Generics are *resilient*. In certain contexts, it is appropriate for the utterer of a correctible to refrain from retracting it in the face of a challenge.

The exchange in **Teddy bears** reveals an additional interesting fact about disputative discourse. Even if it is appropriate for an initiator to refuse to retract a correctible, the challenge provided byt the correction is no less appropriate. The flip-side of the resilience of correctibles is that they are also highly susceptible to challenge.

usceptibility Generics are susceptible to challenge. In certain contexts, it is appropriate for an initiator's interlocutors to challenge their attempted contribution.

The dual observations of *resilience* and *susceptibility* provide an interesting obstacle to an analysis of the semantics and discourse dynamics of disputative language. *Susceptibility* pushes us toward a more strict representation of the content of the initiation to make sense of why it is appropriate to offer a correction to it. That is, it seems that utterances **A** and **B** in *Teddy bears* represent a disagreement, and the most natural way to formalize disagreement is in terms of presentation of conflicting content.

But *resilience* pushes in the opposite direction. The **A**'s retrenchment, in so far as it is appropriate, naturally suggests compatibility between the initiation and the completion, which pushes us toward a less strict interpretation of the initiation content. Navigating between the rock of a correctible's tendency to elicit challenges and the hard place of their ability to withstand those challenges is a particularly interesting puzzle for a linguistic analysis of this type of discourse. But an adequate account should respect all of the observations catalogued above. To make them easier to refer to, all the observations are compiled below.