

# Generic indefinites: evidence for referentiality.

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## Introduction

- Today, I will present three diagnostics that distinguishes *episodic indefinites* from *referential expressions*, mostly based on anaphora.
- Then, I will show that *generic (singular) indefinites* pattern with *referential expressions* with respect to all of these diagnostics.
- I'll conclude by presenting a view of generic indefinites along the lines of [Krifka \(2001\)](#).

## 1 3 diagnostics for referentiality

### 1.1 Definitions

**Generic indefinites** are indefinites that show *quantification variability effect* ; their force is determined by an adverb inside the sentence.

- (1) a. A cat always/often/sometimes/never has white spots on the back.  
b.  $\approx$  All/Many/Some/No cats have white spots on the back.

**Episodic indefinites** are the indefinites found in episodic sentences, as well as the indefinites headed by *some*. They always come with existential force.

- (2) Some cat always/often/sometimes/never has white spots on the back.  $\neq$ (1b)
- (3) I saw a cat yesterday.

**Referential expressions** are proper names and definite descriptions.

With respect to anaphora, referential expressions and episodic indefinites differ from *ordinary quantifiers* in being able to co-vary with a pronoun outside their scope ([Geach, 1964](#)).

- (4) a. Every farmer who saw [a loose donkey]<sub>i</sub> brought it<sub>i</sub> home.  
       = *donkey sentences*
- b. Every farmer who saw [his donkey]<sub>i</sub> brought it<sub>i</sub> home.  
       = *paycheck sentences*

However, I will present 3(+1) diagnostics that set them apart. We will see that in each case, generic indefinites seem to behave as referential expressions rather than episodic indefinites

## 1.2 Diagnostics

### Diagnostic #1: Backwards anaphora.

Referential expressions allow backwards anaphora quite freely, up to condition C and prosody constraints (Bianchi, 2009; Cann and McPherson, 1999).

- (5) a. The person who interviewed her<sub>i</sub> said that Mary<sub>i</sub> was highly qualified for the job.
- b. When he<sub>i</sub> enters a room, John<sub>i</sub> greets everyone in that room.

Backwards anaphora are also possible when the referential expression contains a bound variable, i.e. backwards paycheck sentences exist (Jacobson, 2000)

- (6) Every pilot<sub>j</sub> that shot at it<sub>i</sub> hit [the MIG that was chasing him<sub>j</sub>]<sub>i</sub>

On the contrary, episodic indefinites do not generally allow backwards anaphora.

- (7) a. Every farmer who saw it<sub>i</sub> reported [a donkey]<sub>i</sub> to the authorities  
       ≠ every farmer who saw a donkey reported it to the authorities.
- b. #If it<sub>i</sub> is well-cooked, [some hamburger]<sub>i</sub> can be quite tasty.

But (Chierchia, 1995, ch. 3) notices that backward dependencies are completely fine with generic indefinites.

- (8) If it<sub>i</sub> is well-cooked, [a hamburger]<sub>i</sub> can be quite tasty.

### Diagnostic #2: Subordination.

This diagnostic builds on Roberts (1987). We'll be looking at environments like the following:

- (9) a. Q<sub>1</sub>(restriction<sub>1</sub>)(... antecedent<sub>i</sub> ...)
- b. Q<sub>2</sub>(restriction<sub>2</sub>)(... pronoun<sub>i</sub> ...)

This cases of subordination can be formed, whether the antecedent is a referential expression or an indefinite<sup>1</sup>.

<sup>1</sup>In the sequel, please feel free to replace feminine pronouns by your favorite gender-neutral pronoun.

- (10) a. The next president might be a minor candidate ...  
 ... and she may actually do a good job.
- b. A minor candidate might be elected ...  
 ... and she may actually do a good job. (✓ non-specific)

However, episodic indefinites are restricted in a way that referential expressions are not.

- (11) a. The next president might be a minor candidate ...  
 ... but she also might not.
- b. A minor candidate might be elected ...  
 ... but she also might not. (\*non-specific)

**Subordination generalization.**

In a structure like (12b), the pronoun can co-refer with the indefinite only in case  $Q_2$  is subordinated to  $Q_1$ , i.e.  $\text{restriction}_2 \subset \text{restriction}_1 \cap \text{scope}_1$

- (12) a.  $Q_1(\text{restriction}_1)(\underbrace{\dots \text{antecedent}_i \dots}_{\text{scope}_1})$
- b.  $Q_2(\text{restriction}_2)(\dots \text{pronoun}_i \dots)$

Generic indefinites pattern with referential expressions in not being subject to the generalization above.

- (13) *A: What can you tell me about donkeys? B: Well, they're very empathetic ; for instance:*
- a. In times of happiness, a donkey usually brays in C major.
- b. In times of sadness, it usually brays in D minor.
- c. in times of sadness  $\cap$  in times of happiness =  $\emptyset$
- (14) *I own a farm with multiple donkeys in it.*
- a. In times of happiness, some donkey usually brays in C major.
- b. In times of sadness, it usually brays in D minor. (\*non-specific)

**Diagnostic #3: French clitic dislocation.**

In episodic sentences, French can dislocate referential expressions, but not quantificational expressions, including indefinites (Rizzi, 1986).

- (15) a. *Jean/Le président, je l'ai vu hier.*  
 "John/The president, I saw him yesterday."  
 b. \* *Un ministre/Chaque député/La plupart des maires, je l'ailles ai vu hier*  
 "A minister/Every MP/Most mayors, I saw him/them yesterday."

Generic indefinites pattern with referential expressions in being able to dislocate (Maillard, 1987). When they do, they prefer to use the pronoun *that* rather than a pronoun from the standard set.

- (16) *Un âne, il/ça peut manger trois fois son poids en foin.*  
 A donkey, it/**that** can eat three times its weight in fodder.  
 "A donkey can eat three times its weight in fodder."

- (17) *Un âne, quand c'est content, ça braie.*  
 A donkey, when **that**-is happy, **that** brays.  
 "When a donkey is happy, it brays."

Two notes about (18): first, dislocation is island-insensitive (Cinque, 1990), suggesting base generation of the indefinite. Second, it can dislocate above GEN.

- (18) *Un chat, t'imagines même pas le bazar que ça met dans un appart.*  
 A cat, you-figure even not the mess that **that** puts in a flat.  
 "You can't even imagine the mess that (GEN) a cat makes in a flat."

### 1.3 Questions

- Is this result about generic indefinites compatible with current theories of genericity?
- If generic indefinites are referential, what do they refer to?

## 2 Proposal

The proposal is an adaptation of the proposal of Krifka (2001) to situations semantics.

## 2.1 Basic proposal

**Basic picture.** Adverbs like *usually, always, sometimes* or covert operators like GEN are quantifiers over *situations* with a pragmatically established covert restriction (von Stechow, 1996).

- (19) a. I always<sub>C</sub> go to the SWIMMING POOL on Sundays.  
 ≈ every (minimal) situation [where I go somewhere on Sundays]<sub>C</sub> can be extended to a (minimal) situation where I go to the swimming pool on Sundays.
- b. I always go to the swimming pool ON SUNDAYS  
 ≈ every (minimal) situation [where I go to the swimming pool]<sub>C</sub> can be extended to a (minimal) situation where I go to the swimming pool on Sundays.
- c. William Tell never misses.  
 ≈ no (minimal) situation [where William Tell shoots at something]<sub>C</sub> can be extended to a (minimal) situation where William Tell misses.

Relevant factors for determining the restrictions are: topicality (Beaver, 2004; Krifka, 2001), position of pitch accent (Rooth, 1985), **presuppositions** (Schubert and Pelletier, 1989), etc.

**Quantificational variability effect.** It is minimal situations that create the quantificational variability effect.

- (20) a. A cat always/often/sometimes/never has white spots on the back.  
 b. ≈ All/Many/Some/No minimal situations [where there is a cat]<sub>C</sub> can be (minimally) extended to situations where there is a cat that has white spots on the back.

Given the influence of presuppositions on contextual restrictions, the same effect can be achieved without existential quantification (Krifka, 2001).

- (21) a.  $\llbracket \text{a cat}_{\text{GEN}} \rrbracket = \lambda s : s \text{ contains a unique cat. the unique cat in } s$   
 ≈ “*the cat in } s*”
- b.
- |                                 |   |
|---------------------------------|---|
| $\llbracket (20a) \rrbracket =$ | always/often/sometimes/never  |
| <b>restriction</b>              | $C \rightarrow \text{there is a unique cat}$  |
| <b>scope</b>                    | <u>there is a unique cat.</u><br>the cat in that situation has white spots on the back. |

Under this proposal, the relation that holds between a generic indefinite and a pronoun co-indexed with it can simply be one of coreference, since the generic indefinite is *referential*.

(22) **Backwards anaphora**

- a. When  $he_i$  is happy, Rudolph<sub>i</sub> sings.  
 $\rightsquigarrow \llbracket he_i \rrbracket^g = g(i) = \text{rudolph}'$
- b. When  $it_i$  is happy, [a cat<sub>GEN</sub>]<sub>i</sub> meows.  
 $\rightsquigarrow \llbracket it_i \rrbracket^g = g(i) = \lambda s : s \text{ contains a unique cat. the unique cat in } s = \llbracket a \text{ cat}_{\text{GEN}} \rrbracket$

(23) **Subordination**

- a. In times of happiness, [a donkey<sub>GEN</sub>]<sub>i</sub> brays in C major.
- b. In times of sadness,  $it_i$  brays in D minor.  
 $\rightsquigarrow \llbracket it_i \rrbracket^g = g(i) = \llbracket a \text{ donkey}_{\text{GEN}} \rrbracket$

(24) **French clitic dislocation**

- a. A donkey<sub>GEN</sub>, if that is happy, that brays. (Pseudo-French)
- b. **LF:** [a donkey]<sub>GEN</sub> (TOP)  $\lambda \iota_{se}. \text{GEN}(\text{if } \iota(s) \text{ is happy})(\iota(s) \text{ brays})$

## 2.2 Comparison with other approaches

One might hope that the facts above would follow from two standard assumptions:

1. generic indefinites are existential quantification (Kratzer, 1989)
2. E-type representation of the pronoun (Elbourne, 2005; Heim, 1990)

Assuming base generation and scoping outside generic operator, the approach makes the wrong prediction for French clitic dislocation.

- (25) a. A donkey, **usually**(when that is happy)(that brays)
- b.  $\approx$  there exists a donkey that usually brays when it is happy.

## 2.3 Gaps in the account

**What's the connection between *generic* and *episodic* indefinites?** A similar problem arises with bare plurals, which get kind readings in (26a), but existential readings in (26b).

- (26) a. Dinosaurs are extinct.
- b. I saw dinosaurs crossing the streets yesterday.

A common solution is to use type-shifting (or, equivalently, syncategorematic rules) from one denotation to the other. Those can be designed, but can we do it in a non-stipulative way?

**Are presuppositions really accommodated *automatically*?** Legitimate doubts have been cast to the idea that presupposition determines domain restrictions (Beaver and Clark, 2009; Rooth, 1999, chap 8.9). In particular, it has been argued that presupposition are accommodated when the context is uncertain (many choices of *C*). The effect vanishes when context is set up.

- (27) Every Friday Sandy goes to town. She always realizes that the Harley Davidson she's riding there is going to attract a lot of attention.
- ≠ Whenever she rides a Harley to town and it is going to attract a lot of attention, she realizes it.

### 3 Conclusion

- All the diagnostics from anaphora show that generic indefinites pattern with referential expressions
- Particularly striking is the French datum that a generic indefinite may be interpreted outside the scope of a generic operator.
- Current approaches to genericity -as far as my reading goes- do not predict this.
- An approach along the lines of Krifka (2001) seems to capture referentiality...

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