

# Analyticity and ‘in virtue of’ Generalizations in French

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The traditional analysis of indefinite generics (e.g. Dähl, 1975; Burton-Roberts, 1977; de Swart, 1996; Cohen, 2001) has taught that they are compatible with essential properties (*a dog has four legs*) or must express norms (*a student must sleep at least eight hours per night*). However, as pointed by Greenberg (2001), non-essential properties are also compatible with indefinite generics (*a car costs no less than 5000\$*) and cases involving both essential and non essential properties have to be covered by the theory. One option, independently defended by Dayal (2004) and Dobrovie-Sorin (2004), is to consider that these two cases must be kept apart and that they correspond to quantification over individuals (deductive generalizations) and quantification over events (inductive generalizations). The merit of Greenberg’s (ibid.) has been to show that under a certain interpretation of analyticity, the two cases can receive a unified account according to which indefinite generics express only deductive generalizations. In Greenberg’s terms, this is achieved by an ‘in virtue of’ interpretation: the interpretation specifies in virtue of what property the generalization holds. As we show in detail, this account presents some major shortcomings and we argue for a different **unified theory of analyticity for indefinite generics based on respects** (Nunberg, 1975; Ross, 1997) We claim that indefinite generics express truths that are analytical or primitive under a certain respect and show that they can be involved in non-definitional statements and can support non-essential properties if the respect under which the truth holds is introduced by an overt marker. In an explicit modal framework (Lewis, 1973; Kratzer, 1989), respects are implemented as restrictions on the worlds of the modal basis. In the light of this claim, we show that different devices can introduce respects, including overt expressions of point of views, evaluative adverbs, contrast, focus, subtriggering, *ça* constructions.

The paper is structured as follows. In section 1 we consider the standard theory of generics and the problems that it raises. In section 2 we discuss three amendments to this theory and their shortcomings, focusing on Greenberg’s theory of ‘in virtue of’ generalizations. We present our account in section 3, first defining the notion of point of view informally (3.1) and formally (3.2), and then considering the linguistic devices for setting it (3.3) as well as a non-exhaustive list of other predictions (3.4).

## 1. The problem

Theoreticians of genericity agree that the generic reading of singular indefinites crucially depends on generic quantification. The generic operator GEN is considered to be a modal, unselective quantifier à la Lewis (1975) that relates a restrictor and a matrix whose variables are respectively bound by GEN and by existential closure, if left free by GEN (e.g. Kratzer, 1995; Rooth, 1995). I-level predicates are taken to be inherently generics (hence associated with GEN) both on a syntactic (Chierchia, 1995) and a semantic ground (Kratzer, 1989). In particular, theoreticians assume, following Carlson (1977), that whenever an entity possesses an i-level property in a situation, it possesses it in all possible situations. Subjects of i-level predicates map into the restrictor, are bound by GEN and thus get the generic reading.

- (1) a. A bird flies (in every relevant situation)
- b. GEN  $x,s$  [bird ( $x$ )  $\wedge$  in ( $s,x$ )][flies ( $x,s$ )]

In this paper we consider singular indefinite generics in French and focus on the following

question. Why, if i-level predicates are inherently generics, is (2) ungrammatical, and what is it in sentences (3a)-(3d) that restores grammaticality? For the purposes of this paper, we only consider evaluative predicates, e.g. *intelligent*.

- (2) \*Un chien est intelligent / *a dog is intelligent*
- (3) a. Un chien noir est intelligent / *a black dog is intelligent*  
 b. En cas de danger, un chien est intelligent / *in case of danger, a dog is intelligent*  
 c. Un chien est intelligent, un chat, non / *a dog is intelligent, a cat is not*  
 d. De mon point de vue, un chien est intelligent / *from my point of view, a dog is intelligent*

Since our hypothesis rests on the explicit modal interpretation of GEN, we provide it in (4a). (4b) is the modal interpretation corresponding to (1).

- (4) a.  $\forall w'[[w' \text{ is appropriately accessible from } w] \rightarrow \forall x,s [[P(x,w') \wedge C(s,x,w')] \rightarrow [Q(s,x,w')]]]$   
 b.  $\forall w'[[w' \text{ is appropriately accessible from } w] \rightarrow \forall x,s [[\text{bird}(x,w') \wedge C(s,x,w')] \rightarrow [\text{flies}(s,x,w')]]]$

In particular, much of the discussion focuses on cases involving *NP* modification. In the classical framework, for (5a), (4) is instantiated as in (5c). In section 2, we consider two elaborations/amendments of the classical account, and then present in section 3 our own answer to the question addressed above. Preliminarily, it is worth noting that the standard interpretation associates a unique LF to bare plural (5a') and to indefinite generics (5a).

- (5) a. A grizzly bear is dangerous / a'. Grizzly bears are dangerous  
 b. GEN  $x, s[[\text{grizzly bear}(x) \wedge \text{in}(x, s)]][\text{is dangerous}(x, s)]$   
 c.  $\forall w'[[w' \text{ is appropriately accessible from } w] \rightarrow \forall x,s [[\text{grizzly bear}(x,w') \wedge C(s, x,w')] \rightarrow [\text{is dangerous}(s, x,w')]]]$

*Paraphrase:* in all worlds  $w'$  appropriately accessible from the world of evaluation  $w$ , every grizzly bear, in any contextually relevant situation, is dangerous.

## 2. Constraining the interpretation

Attempts for explaining the ungrammaticality of (2) and the grammaticality of (3) have consisted in constraining the interpretation in (4a).

### 2.1 Quantification over events

It has been independently argued by Dayal (2004) and Dobrovie-Sorin (2004) that otherwise ungrammatical structures are licensed whenever a spatio-temporal parameter can be introduced, a task that is taken to be fulfilled by post-nominal modifiers. In this case GEN counts events and not individuals, which are only indirectly counted via the events in which they are involved. This account rests on the hypothesis that indefinite generics are compatible with two kinds of quantification: quantification over individuals and quantification over events. In the latter case, they express inductive truths and are thus not bound to analytical statements. On the technical side, the Skolem function  $f$  binds individuals to events.

This solution seems appropriate for cases such as (6a):

- (6) a. (=3b) En cas de danger, une chien est intelligent / *in case of danger, a dog is intelligent*  
 b.  $\exists f \text{ GEN } e [\text{danger}(e) \wedge \text{in}(f(e), e)][\text{barks}(f(e))]$

This account, however, raises some major concerns. First, if it fits cases where a temporal adverb is overt (see de Swart, 1996), it is legitimate to wonder what in (3a) triggers the existence of an event (see Vogeleer and Tasmoski, 2005), which would lead to counterintuitive interpretation in (7). Similarly, the grizzly-bear case in (5a) receives the interpretation in (8) which is not satisfactory.

- (7) a.  $\exists f \text{ GEN } e [\text{black}(e) \wedge \text{in}(f(e), e)][\text{intelligent}(f(e))]$   
*Paraphrase:* whenever it is in a situation of being black, a dog is intelligent  
 b.  $\forall w' [w' \text{ is appropriately accessible from } w] \rightarrow [\forall x, e [\text{dog}(x, w') \wedge \text{black}(e, x, w')] \rightarrow [\text{is intelligent}(e, x, w')]]$
- (8) a.  $\exists f \text{ GEN } e [\text{grizzly}(e) \wedge \text{in}(f(e), e)][\text{is-dangerous}(f(e))]$   
 b.  $\forall w' [w' \text{ is appropriately accessible from } w] \rightarrow [\forall x, e [\text{bear}(x, w') \wedge \text{grizzly}(e, x, w')] \rightarrow [\text{is dangerous}(e, x, w')]]$   
*Paraphrase:* in all worlds  $w'$  appropriately accessible from the world of evaluation  $w$ , every bear, in any event of being grizzly, is dangerous.

Second, at least cases (3a,c,d) seem not to involve an event parameter.

Third, this account predicts that cases such as (9a) be acceptable, contrary to fact. It is worth noting however, that sense has to be made on what determines the acceptability of (6) vs. (9).

- (9) a. \*Un chien est intelligent dans un train / *a dog is intelligent in a train*

Finally, the ungrammaticality of (2) is left unexplained.

In the two following sections we consider two alternative accounts which rest on the hypothesis that indefinite generics only express deductive generalizations.

## 2.2 Essential properties andthetic judgments

It has been traditionally argued that indefinite generics express analytic truths and the doctrine about indefinite generics (e.g. Dähl, 1975; de Swart, 1996, Cohen, 2001) has taught that they are only compatible with essential properties, i.e. definitional (*Un chien est un animal intelligent / a dog is an intelligent animal*). If otherwise, they can only express normative statements (*Un chien peut mordre / a dog can bite*).

Along these lines, Cohen (2001) has argued that indefinite generics expressthetic judgments about norms.

However, as the following case reveals, this is not correct.

- (10) a. Des détecteurs de fumée doivent être installés (existential only) / *des smoke detectors must be installed*  
 b. Des détecteurs de fumée ne doivent pas être installés

(10a) can only be interpreted existentially: *devoir (must)* compels to assume the existence of actual students. As the negation test shows, *devoir* triggers athetic judgment in which the subject entity is negated altogether. However, (10a) can only be interpreted existentially and not as a generic, contrary to what is expected. In other words, *devoir*, though expressing athetic judgment and a norm, it is not compatible with the generic reading. We will be assuming that indefinite generics express categoric judgments about entities<sup>1</sup>.

## 2.3 Essential and non-essential properties: 'In virtue of' accessibility relations

Greenberg (2001) crucially points to the fact that indefinite generics are also compatible with non-essential properties: *a carpenter owns very little*. In French, non-essential properties are also admitted, with the same problematic pattern followed by essential ones: *un maçon gagne très peu / en principe, un maçon gagne très peu*.

In accordance with Greenberg we believe that a unified account for generics involving essential

<sup>1</sup>It is worth noting that this is not the case for *pouvoir*: *des détecteurs de fumée peuvent être installés* does not require the existence of actual smoke detectors. The reasons for this dissimetry are outside the scope of this paper.

and non-essential properties can and must be provided.

On the basis of three pieces of evidence (11)-(13), Greenberg proposes to tease apart BE sentences involving bare plurals, from IS sentences, involving indefinites, thus making explicit two interpretations for (5c). The claim is that BE and IS sentences involve two different kinds of accessibility relations.

- (11) a. \*A room is square  
b. Rooms are square
- (12) a. A Norwegian student whose name ends with 'p' wears green socks (salient existential reading)  
b. Norwegian students whose name ends with 'p' wear green socks
- (13) a. \*An Italian restaurant is closed tonight  
b. Italian restaurants are closed tonight

BE sentences are claimed to express regularities which are expected to hold in worlds maximally similar to ours and express descriptive (inductive) generalizations. For the bare plural version of the grizzly bear case (5a-a'), one obtains the interpretation in (14):

- (14) Grizzly bears are dangerous  
 $\forall w'[[w' \text{ is maximally similar to } w] \rightarrow \forall x,s [[\text{grizzly bear}(x,w') \wedge C(s, x,w')] \rightarrow [\text{is dangerous}(s, x,w')]]]$   
*Paraphrase:* the generalization "every grizzly bear is dangerous" is non accidental, ie. It is not limited to the actual world, but is expected to hold in other, non-actual worlds as well.

Contrary to BE sentences, IS sentences are claimed to only be able to express "in virtue" of generalizations, i.e. deductive generalizations. The modal interpretation of indefinite generics accommodates a property in virtue of which the generalization holds. The accommodated property (*S*) is "associated" to the NP property (*P*). The notion of association is defined as in (15):

- (15) Association: *S* is associated with *P* in *w* iff  $\forall xP(x) \rightarrow S(x)$  holds in all worlds epistemically/deontically/stereotypically accessible from *w*

The use of IS sentences is governed by the following rule:

- (16) An IS sentence is true in *w* iff  
 $\exists S \forall w'[\forall x[[P(x,w') \rightarrow [S(x,w') \wedge S \text{ is associated with } P]]] \rightarrow \forall x, s[[P(x,w') \wedge C(s, x,w')] \rightarrow [Q(s, x,w')]]]$

The interpretation of (5a) requires the accommodation of some associated property in virtue of which a grizzly bear is dangerous:

- |  |
|--|
| <p>(17) A grizzly bear is dangerous<br/> <math>\forall w'[\forall x[\text{grizzly bear}(x,w') \rightarrow \text{some associated property}(x,w')] \rightarrow \forall x[\text{grizzly bear}(x,w') \rightarrow \text{is dangerous}(x,w')]]]</math></p> |
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This account raises two major problems. First, the possibility to extend the interpretation of (18) to (2) is not forbidden by the definition of associated property: since the relation between *S* and the property expressed by the VP is vague, (2) is predicted to be acceptable, as the well-formedness of (19) along the lines of (18) leads to conclude.

- (18) a. Un chien a quatre pattes / a dog has four legs  
b.  $\forall w'[\forall x[\text{dog}(x,w') \rightarrow \text{has-a-genetic-makeup}(x,w')] \rightarrow \forall x[\text{dog}(x,w') \rightarrow \text{has-four-legs}(x,w')]]]$

*Paraphrase:* in all accessible worlds where a dog as the associated property of having a certain genetic makeup, a dog has four legs.

- (19)  $\forall w'[\forall x[\text{dog}(x,w') \rightarrow \text{has-a-genetic-makeup}(x,w')] \rightarrow \forall x[\text{dog}(x,w') \rightarrow \text{is intelligent}(x,w')]]$   
*Paraphrase:* in all accessible worlds where a dog as the associated property of having a certain genetic makeup, a dog is intelligent.

Second, and most importantly, this account raises major concerns for modified *NP* cases. Greenberg's framework provides two options for interpreting (20):

- (20) Des leaders violents sont dangereux / 'des' violent leaders are dangerous

The first one is presented in (21) :

- (21) a. Des leaders violents sont dangereux (in virtue of some associated property)  
 b.  $\forall w'[\forall x[[\text{violent leaders}(x,w')] \rightarrow [\text{some associated property}(x,w')]] \rightarrow \forall x,s[[\text{leader}(x,w') \wedge C(s,x,w')] \rightarrow [\text{dangerous}(s,x,w')]]]$

However, as argued in detail by Rooth (1995) and Vogeeler and Tasmowski (2005) what the sentence expresses is that leaders are dangerous in virtue of being violent. Casting this interpretation in Greenberg's framework leads to conclude that leaders are violent by nature.

- (22) a. Des leaders sont dangereux (in virtue of being violent)  
 b.  $\forall w'[\forall x[[\text{leaders}(x,w') \rightarrow [\text{violent}(x,w')]] \rightarrow \forall x,s[[\text{leader}(x,w') \wedge C(s,x,w')] \rightarrow [\text{dangerous}(s,x,w')]]]$   
*Paraphrase:* In all worlds if the leader has the associated property of being violent (in all relevant situations) a leader is dangerous.

Indirectly arguing for the doctrine about generics as expressing primitive truths, we propose a different modal account for the data in (2) and (3).

### 3. A frame-based account of indefinite generics

Our claim is that indefinite generics involving evaluative properties are ungrammatical unless their normative status is reestablished. This is achieved by introducing a respect which justifies the truth of the assertion.

#### 3.1 Respects

The account proposed here stems from Stalnaker/Kratzer notion of restricted modal quantification: e.g. a mathematical statement expresses a law that holds in those worlds in which mathematical laws hold. The notion of *frame* is well-known in the literature under the term of *space* or *media* (see e.g. Nunberg, 1975; Fauconnier, 1984; Charolles, 1997; Ross, 1997). These are considered to be sets of content-coherent propositions. In this paper we adopt a broader notion that includes not only spaces, but also viewpoints that the speaker adopts to draw certain conclusions. Since *frame* is a technical term in modal logic, we will be using the term *respect*.

Respects are felt as contrastive. A proposition is true or relevant in virtue of being considered under a particular perspective, but false under a different one. Charolles (ibid.) has shown in detail that there are two different kinds of respects: spatiotemporal (23a) and epistemic (23b). They preferably occupy the left periphery.

- (23) a. In Europe, people eat five servings of fruits per day  
 b. According to the doctor, you have to stay home

Our claim is then that:

- (24) Analytical truths are primitive truths that are respect relative. For non-definitional analytical truths, the speaker has to justify his/her belief.

Under this view, an evaluation is not a characterization of a fact that holds in all accessible worlds, but expresses a knowledge that is supported by a certain respect.

### 3.2 A modal framework for respects: modal viewpoints

The Kratzerian framework indirectly introduces viewpoints as conversational backgrounds. Kratzer (1981, 1991) proposes that modal doxastic and deontic utterances exploit modal bases, i.e. set of worlds and an ordering relation.  $w' \leq w$  means that  $w'$  is preferred over  $w$  along the dimension with respect to which the worlds in the modal basis  $W$  have been chosen. In the same line of thought, in our account, viewpoints determine the modal basis. Worlds that are selected under a certain viewpoint support the same information i.e. are worlds in which the same (epistemic) laws hold. In other words, worlds that belong to the same modal basis are characterized by a set of coherent propositions. Let us call a pair  $m=(W, \leq)$  a modal viewpoint<sup>2</sup>.

- (25)  $p \rightarrow q$  is true in  $m$  iff for every  $w$  where  $p$  is true, there is a world  $w'$  such that (i)  $w' \leq w$ , (ii)  $p \wedge q$  is true at  $w'$  and for every world  $w''$  such that  $w'' \leq w'$ ,  $p \rightarrow q$  is true at  $w''$ .

The intuition behind (25) is that if  $p$  is true somewhere in  $W$ , there must be a world at least as normal as the world where  $p$  is true and  $p \rightarrow q$  is true there and down through the world sequence. In other words, from  $w$  one can always reach the point where  $p \rightarrow q$  becomes irreversibly more normal than  $p \wedge \neg q$ . (see definition 6, Kratzer, 1991).

- (26) An IS sentence expresses a truth that is analytic under a modal viewpoint.

### 3.3 Setting point of views

(2) is ungrammatical since it expresses an epistemic generalization that is not supported by any evidence or is not justified. (3) is grammatical since the statements are justified on a non-inductive basis.

In the following subsections we show that different linguistic means can introduce point of views, as restrictors on worlds in the modal basis: PPs adjuncts, adverbs, NP modifiers, contrast, focus, polyphonic items. We consider three classes in particular: overt expressions of point of views; overt and covert contrast cases; *ça* constructions.

#### 3.3.1 Overt evaluations and the epistemic interpretation of temporal adverbs

**Point of views.** By specifying that the generic statement holds under his/her point of view, the speaker makes clear that the statement expresses a law that holds in his/her projection of the actual world: i.e. a fictional world to which only the speaker is committed. It is important to note that this is a case different from propositional attitudes under which the speaker expresses a belief/opinion/regret ... about an entity of the actual world, i.e. how an actual entity should/is taken/is preferred to be in all accessible worlds maximally similar to ours (see Ross, 1997; Katz, p.c.).

- (27) a. De mon point de vue, un chien est intelligent  
 b.  $\forall w'[[a \text{ projection of } w \text{ according to speaker's beliefs } (w')] \rightarrow \forall x[\text{dog}(x,w') \rightarrow \text{intelligent}(x,w')]]$

**(Some) temporal adverbs: Epistemic respects?** Some temporal adverbs are interpreted as viewpoints and not as unselective quantifiers (de Swart, 1991):

<sup>2</sup>See Jayez and Masson, 2006.

- (28) a. Un chien est souvent intelligent / *A dog is often intelligent*  
 b. \*Souvent, (je dirais qu') un chien est intelligent / '*Souvent*', (*I would say*) *a dog is intelligent*

*De manière générale* follows the prosodic patterns of evaluative adverbs described by Bonami and Godard (to appear). Accordingly, they set an epistemic viewpoint binding the statement to speaker-endorsed projections of the actual worlds.

- (29) a. \*Un chien est de manière générale intelligent / *A dog is 'de manière générale' intelligent*  
 b. De manière générale, (je dirais qu') un chien est intelligent / '*De manière générale*', (*I would say*) *a dog is intelligent*
- (30)  $\forall w'[[\text{a projection of } w \text{ according to speaker's expectations } (w')] \rightarrow \forall x[\text{dog}(x,w') \rightarrow \text{intelligent}(x,w')]]$

### 3.3.2 Alternatives as restrictions on modal basis

Contrast is a general strategy for providing the relevant aspect/respect under which the truth holds. The contrast entity/ies can be overtly mentioned or recovered in different ways.

**Overt contrast.** The set of alternatives is overtly mentioned in (3c): intelligence is associated with dogness in worlds where non-intelligence is associated with cats. Alternatives restrict the worlds of the modal basis setting a point of view.

- (31)  $\forall w'[[\text{maximally satisfying the ideal that cats are not intelligent } (w')] \rightarrow \forall x[\text{dog}(x,w') \rightarrow \text{intelligent}(x,w')]]$   
*Paraphrase:* in all worlds that maximize the ideal of cats of not being intelligent, if something is a dog, then, it is intelligent.

**Focus.** Since Rooth (1985) it is well-known that focus triggers the presupposition that there exist a set of values, which are alternatives for the focused value (in (32) the dogness property) and which include the ordinary value of the focused phrase plus the alternative values (for (32) properties of animals sharing characteristics with dogs, e.g. domestic animals). Since presupposition restricts the modal basis (see Schlenker, 2004), our account drives the correct prediction that focus can restore grammaticality. In particular, the presupposition introduced by focus restricts the modal basis via the ideals associated with alternatives. For (32) the interpretation in (33) is obtained.

- (32) Un chien<sup>F</sup> est intelligent / *A dog<sup>F</sup> is intelligent*
- (33)  $\forall w'[[\text{maximally satisfying the ideal of domestic animals including that of dogs } (w')] \rightarrow \forall x[\text{dog}(x,w') \rightarrow \text{intelligent}(x,w')]]$

Our account differs from Rooth's (1995) theory in two respects<sup>3</sup>. First, it does not require that an adverb of quantification be overt. Second, it correctly predicts that the focused phrase be the restriction and not the scope value of GEN.

**Nominal modification.** In (3a), NP modification introduces the presupposition that there are different subclasses of dogs. The modal basis is restricted with the ideals associated with the subsets of dogs.

- (34)  $\forall w'[[\text{maximally realizing the ideal of dogs including that of black dogs } (w')] \rightarrow \forall x[[\text{dog}(x,w') \wedge \text{black}(x,w')] \rightarrow [\text{dangerous}(x,w')]]]$

<sup>3</sup>It is worth recalling that Rooth's (1995) theory, along the lines of the standard account, leads to the problem mentioned in the introduction of this paper.

For the grizzly bear case, the interpretation in (35) is obtained: the generalization that a grizzly bear is dangerous holds as a primitive truth in all worlds where laws about grizzly bear hold.

- (35)  $\forall w'[[\text{maximally realizing the ideal of bears including grizzly ones } (w')] \rightarrow \forall x[[\text{bear}(x,w') \wedge \text{grizzly}(x,w')] \rightarrow [\text{is dangerous}(x,w')]]]$

**Ca constructions.** In French, all generic sentences involving epistemic or factive properties can be rescued by *ça*.

- (36) Un chien, c'est intelligent / *A dog 'ça' is intelligent*

Carlier (1996) provides two crucial observations.

1. *Ca* differently from personal pronouns relates to an "object" (for now, it is unspecified what kind of object) and not to the linguistic entity (the plural "des mouches" cannot be predicated of a singular feminine). *Ca*, instead, is neutral w.r.t. gender and number:

- (37) a. Sa nourriture (fem. sing), c'est des mouches (pl.) / *Its meal, "ça" is flies*  
 b. \*Sa nourriture (fem. sing), elle (fem. pronoun) est des moches (pl.) / *Its meal, "elle" is 'des' flies*

2. *Ca* creates a "dereferentialization" effect (it is a shifter from entities to sets). Contrary to what the author claims, this effect seems to hold even for proper names. In other terms, *ça* refers to the *property* (or to a aspect of an entity), and not to the entity.

- (38) a. \*Marie, c'est beau ! / *Mary, ça is beautiful !*  
 b. Marie, c'est de la bêtise à l'état pur ! / *Mary, ça is silliness in itself !*

Casting these two observations in our framework, it follows that left dislocated indefinites provide the property that functions as a respect and *ça* deictically refers back to it. The respect having been settled, any subjective primitive truth can be asserted.

- (39)  $\forall w'[[\text{maximally realizing the ideal dogs } (w')] \rightarrow \forall x[[\text{dog}(x,w')] \rightarrow [\text{dangerous}(x,w')]]]$   
 Paraphrase: "dogness" means: "danger", ..., ...

### 3.4 Other predictions

Our account makes other interesting predictions, in particular, that acceptabilities improve in three cases:

(i) with polyphonic items:

- (40) a. ?? Un chien n'est pas intelligent / *a dog is not intelligent*  
 b. Un chien n'est pas *si* intelligent / *a dog is not that intelligent*

(ii) with purpose expressing PPs (see Corblin, 1997):

- (41) a. ??Une rose a besoin d'eau / *a rose needs water*  
 b. Une rose a besoin d'eau *pour vivre* / *a rose needs water for living*

(iii) with situation types vs. tokens.

- (42) a. ??Lorsqu'il chasse, un chien est intelligent / *when (extensional) it hunts, a dog is intelligent*  
 b. En cas de danger, un chien est intelligent / *in case of danger, a dog is intelligent (= (6a))*

Sense can now be made of the contrast in (9). If the location is presented as a situation token as in (9), the sentence is unacceptable. If the adjunct settles a universe in which certain laws hold, the generalization is presented as one of these laws and the acceptability is improved as in (42).

## 4. Conclusion

This paper, indirectly arguing for the doctrine about indefinite generics as expressing analytical truths, shows that non essential properties can be used in generic statements iff their normative status can be restored. Our argument has focused on evaluative properties, resting on the insight that evaluation cannot be reached by adding facts, but is intrinsically subjective and as such needs to be supported by a respect or a point of view.

Under an explicit modal interpretation of the generic operator, we have argued that the analyticity of the statement is restored while being restricted to worlds in which the point of view holds. We have shown that different linguistic devices can be used for introducing point of views (i.e. restricting worlds of the modal basis): overt expressions, evaluative adverbs in disguise, contrast, and presupposition triggers (e.g. focus and subtriggering). This account explains the unexpected ungrammaticality of statements such as (2), explains the grammaticality of cases in (3), provides a new understanding of *ça* constructions and finally provides interesting predictions. All of these are phenomena to which previous account were either blind to or have provided misleading explanations.

## References

- Burton-Roberts, Noel, 1977, "Generic sentences and analyticity," *Studies in Language* 1(2), 155-196.
- Bonami, Olivier and Godard, D.anièle (to appear). Lexical semantics and pragmatics of evaluative adverbs. In L. McNally et C. Kennedy (eds.), *Adjectives and Adverbs in Semantics and Discourse*. Oxford: OUP.
- Carlson, Greg, 1977, *Reference to Kinds in English*. PhD thesis, MIT.
- Chierchia, Gennaro, 1995, "Individual-level predicates as inherent generics," in G. Carlson and F. Pelletier (eds.) *The Generic Book*, Chicago: Chicago University Press, p. 176-223.
- Charolles, Michel, 1997, "L'encadrement du discours: univers, champs, domaines et espaces", *Cahiers de recherches Linguistiques* 6, Univ. de Nancy II, 1-73.
- Corblin, Francis, 1987, *Indéfini, défini et démonstratif.*, Genève, Droz.
- Carlier, Anne, 1996, "Les gosses, ça se lève tôt le matin", *French Language Studies* 6: 133-162.
- Cohen, Ariel, 2001, "On the generic use of indefinite singulars," *Journal of Semantics* 18, 183-209.
- Dähl, Osten, 1975, "On generics," in E.L. Keenan (ed.) *Formal Semantics of Natural Language*, Cambridge, CUP, 99-111.
- Dayal, Veneeta, 2004, Licensing by Modification, ms. Rutgers University.
- Dobrovie-Sorin, Carmen, 2004, "Generic plural indefinites and (in)direct binding," in F. Corblin and H. de Swart (eds.) *Handbook of French Semantics*, Stanford, CSLI, p. 55-70.
- Greenberg, Yael, 2002. "Two types of quantificational modalized genericity and the interpretation of bare plurals and indefinite singular NPs," in B. Jackson (ed.) *SALT XII*, 104-123.
- Jayez, Jacques and Masson, Anne, 2006, "What room for viewpoints?" In O. Bonami and Cabredo-Hofherr (eds.) *Empirical issues in syntax and semantics* 6: 175-199.
- Kratzer, Angelika 1989. "An investigation into the lumps of thought," *Linguistics and Philosophy* 12:607-653
- Kratzer, Angelika, 1991. "Modality," A. von Stechow and D. Wunderlich (eds.) *Semantics: An International Handbook of Contemporary Research*, Berlin: de Gruyter, 639-650.
- Kratzer, Angelika, 1995, "Stage-level and Individual-level predicates," in Carlson, G. and Pelletier, F. (eds.) *The Generic Book*, Chicago: Chicago University Press, p.125-175.
- Lewis, David, 1975, "Adverbs of Quantification," in E. Keenan (ed.) *Formal semantics of natural language*, CUP.
- Rooth, Mats, 1985, "Association with Focus". PhD Thesis. University of Massachusetts at Amherst.
- Rooth, Mats, 1995, "Indefinites, adverbs of quantification, focus semantics," In Carlson and Pelletier (eds.) *The Generic Book*, Chicago: Chicago University Press, p. 265-299.
- Ross, Jeff, 1997, *The Semantics of Media*. Dordrecht: Kluwer Academic Publishers.
- Schlenker, Philippe, 2004, "Conditionals as definite descriptions," *Research on Language and Computation* 2: 417-462.
- Vogeleer, Svletaana and Tasmowski, Liliane, 2005, "Les N, Un N, Des N en lecture générique," *Travaux de Linguistique* 50:53-78.
- de Swart, Henriëtte, 1996, "(In)definites and genericity," in Kanazawa, M. Pinon, C. and de Swart (eds.) *Quantifiers, Deduction and Context*, Stanford, CSLI, p. 171-194.

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