Analyticity under perspective: indefinite generics in French

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). Subjects of i-level predicates map into the restrictor, are bound by GEN and thus get the generic reading.

(1) A bird flies (in every relevant situation) / GEN x, s[bird(x) ∧ in(x, s)][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 abstract, 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

2 Constraining the interpretation: previous solutions
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 taken to be fulfilled by post-nominal modifiers. The Skolem function f binds individuals to events. (4b) is the corresponding modal interpretation, where w is the world of evaluation:

(4) a. ∃f GEN e [black(e) ∧ in(f(e), e)][intelligent(f(e))]
   b. ∀w′[[w′ is appropriately accessible from w] → ∀x, e[[dog(x, w′) ∧ black(e, x, w′)] → [intelligent(e, x, w′)]]

If the event based account fits cases where a temporal adverb is overt (see de Swart, 1996), it is legitimate to question what in (3a) triggers the existence of an event (see Vogeleer and Tasmoski, 2005). Moreover, at least cases (3a,c,d) seem not to involve such a parameter. Finally, the ungrammaticality of (2) is left unexplained.

2.2 *In virtue of* accessibility relations
The doctrine about indefinite generics (e.g. Dähl, 1975; de Swart, 1996, Cohen, 2001) has taught that they are compatible only with essential properties, i.e. definitional (Un chien est un animal intelligent / a dog is an intelligent animal), and normative (Un chien peut mordre / a dog can bite). However, non-essential properties are also allowed: A carpenter owns 1000$ per month as well as descriptive generalizations (Vogeleer and Tasmoski, 2005): *un atome contient un noyau fixe* *(an atom contains a fix nucleus)*. According to Greenberg (2001), the modal interpretation of indefinite generics accommodates a property in virtue of which the generalization holds (in (5a) "has a genetic makeup"), and which inherently characterizes the subject in all epistemically/stereotypically/... accessible worlds.

(5) a. Un chien a quatre pattes ∀w′[∀x[dog(x, w′) → has-a-genetic-makeup(x, w′)] → ∀x[dog(x, w′) → has-four-legs(x, w′)]]
   b. ∀w′[∀x[dog(x, w′) → has-a-genetic-makeup(x, w′)] → ∀x[dog(x, w′) → intelligent(x, w′)]]
   c. (i) ∀w′[∀x[dog(x, w′) → black(x, w′)] → ∀x[dog(x, w′) → intelligent(x, w′)]] or
      (ii) ∀w′[∀x[black dog(x, w′) → associated property(x, w′)] → ∀x[dog(x, w′) → intelligent(x, w′)]]

Besides overgenerating (5b), accommodation of associated properties leads to assume, for (3a), either that "noir" inherently characterizes dogs (5ci) or that black dogs are intelligent in virtue of some associated property (5cii): none of them captures the intended interpretation: "if they are black, dogs are intelligent" (Rooth, 1995; Vogeleer and Tasmoski, 2005). Finally, this account is blind to the data in (3).

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 Analytical truths as justified beliefs
The account proposed here rests on 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 respect (known under the term of space (e.g. Nunberg, 1978)) can be extended so as to include point of views (Jayez and Masson 2006). Our claim is that indefinite generics express truths that hold under a certain respect. Evaluative generalizations are admitted iff they are explicitly anchored in a restricted set of worlds determined by the point of view that has been chosen. 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.

3.1 Implementation in a modal framework
Kratzer (1991) proposes that modal 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 \( W \) have been chosen. Under our account, viewpoint expressions determine the modal base. (8) states that in those worlds in which the ideal introduced by the viewpoint is realized, are worlds in which \( p \rightarrow q \) holds more likely than \( p \land \neg q \). Let \( m = (W, \leq) \) be a modal viewpoint:

\[
(6) \quad p \rightarrow q \text{ is true in } m \text{ iff for every } w \text{ where } p \text{ is true, there is a world } w' \text{ such that } (i) w' \leq w, \text{ (ii) } p \land q \text{ is true at } w' \text{ and (iii) for every world } w'' \text{ such that } w'' \leq w', \text{ } p \rightarrow q \text{ is true at } w''
\]

3.2 Setting point of views
Point of views can be settled in many ways, including PPs adjuncts, adverbs, contrast, focus and NP modifiers, a ... 

Overt point of views and evaluative adverbs. (3d) states that only in those worlds which support speaker’s beliefs, \( p \rightarrow q \) holds, leading to the interpretation in (8). Similarly, at least some (see de Swart, 1996) frequency adverbs (7) introduce speaker’s evaluations (Bonami and Godard (to appear)):

\[
(7) \quad \begin{align*}
& a. \text{ *Souvent, (je dirais qu') chien aboie / Often, (I would say) a dog barks} \\
& b. \text{ De manière générale, (je dirais qu') un chien aboie / In general, (I would say) a dog barks}
\end{align*}
\]

\[
(8) \quad \forall w'[[\text{supporting speaker’s beliefs}(w')]] \rightarrow \forall x[(\text{dog}(x, w') \rightarrow \text{intelligent}(x, w'))]
\]

Alternative values \( NP \) modification, contrast and focus provide a set of alternatives. Sentences such as (3c) state that intelligence is associated with dogness in worlds where cats are associated with not-intelligence (9a); focus triggers the presupposition that the ordinary semantic value of the focussed phrase belongs to a set of alternative values; similarly, \( NP \) modification introduces the presupposition that there are different subclasses of entities. As for contrast cases, presupposed alternatives restrict the modal basis setting a point of view (9b) and (9c)).

\[
(9) \quad \begin{align*}
& a. \forall w'[[\text{realizing the ideal of cats as not -intelligent}(w')]] \rightarrow \forall x[(\text{dog}(x, w') \rightarrow \text{intelligent}(x, w'))] \\
& b. \text{ Un chien}^F \text{ est intelligent } \forall w'[[\text{realizing the ideal for (domestic) animals including dogs}(w')]] \rightarrow \forall x[(\text{dog}(x, w') \rightarrow \text{dangerous}(x, w'))] \\
& c. \forall w'[[\text{realizing the ideal for different kinds of dogs including black ones}(w')]] \rightarrow \forall x[(\text{dog}(x, w') \land \text{black}(x, w')) \rightarrow \text{intelligent}(x, w'))]
\end{align*}
\]

Other predictions This account considers that the dislocated indefinite in "ça" constructions introduces a point of view, in accordance with Carlier (1996) that "ça" is a shifter from entities to properties. For \( Un \text{ chien, c’est intelligent} \):

\[
(10) \quad \forall w'[[\text{realizing the ideal of dogs}(w')]] \rightarrow \forall x[(\text{dog}(x, w') \rightarrow \text{intelligent}(x, w'))]
\]

The account also predicts that polyphonic items improve the acceptabilities "si" (so) : (?)Un chien n’est pas intelligent / un chien n’est pas si intelligent. It also makes justice to some often noted alternations (Corblin, 1987) ?une rose a besoin d’eau / a rose needs water vs. une rose a besoin d’eau pour vivre (for living), and to the fact that situation types (3b) are preferred over situation tokens: ?lorsqu’il chasse (when it hunts), un chien est intelligent.

References