

Constraints on quantificational domains: generic plural *des*-indefinites in French

The current literature on pluralities is mainly concerned with definite plurals in existential contexts and the implicit assumption is that indefinite plurals are to be analyzed in the same way, as sums of individuals. We argue that although plural indefinites can be modeled as sums of individuals in those contexts in which they are bound by existential closure, they cannot do so when they are bound by an adverbial quantifier (Krifka et al., 1995); in the latter context, plural indefinites can only be modeled as groups. This constraint, which follows from Quine's individuation condition on quantification, will allow us to account for the behavior of French plural indefinites headed by *des* ('some').

1. Generic plural indefinites and adverbial quantification over groups. The first fact to be explained is the impossibility of the example (1). The commonly assumed explanation is pragmatic (Corblin, 1987; Krifka et al., 1995): (1) is blocked since the generalization can be more directly expressed by using the corresponding example with a singular indefinite (2). Dobrovie-Sorin and Laca (2002) have suggested that the ungrammaticality of (1) would result from a mismatch between the value of the variable in the restriction of the Q-adverb (pluralities) and the value of the variable in the nuclear scope (atomic individuals). Note that, in these cases, we are assuming, following (Chierchia 1995, among many others), that GEN directly binds individual variables supplied by the indefinites ('truly-generic-indefinites' henceforth), as in (3). (We leave out our account of pseudo-generic indefinites, in which, the presence of a modifier introduces an event argument that gets bound by the the quantifier (10)). This proposal seems problematic, since plural indefinites normally allow distributive predication over their members (4).

2. The Ban on Quantification over Sums. In order to solve the problem we need to refine the notion of "plurality" by clearly distinguishing between *sums* and *groups*. Our claim is that whereas non-generic plural indefinites can be represented as sums, generic plural indefinites can only be represented as groups. Following Link (1984) and Landman (2000) we will be assuming that sums are derived entities whose members can be accessed, whereas groups are primitive entities such that their members cannot be accessed. Moreover, sums are not individualizable and as such they cannot be quantified over (since quantification requires individuability (Quine, 1953)). This explains why an example such as (5) is ill-formed, but it is not sufficient to rule out the LF in (6). We still need to understand why the GEN operator cannot have access to the members of the sum and the LF in (6) cannot be assigned to (1). The illegitimate status of this LF can be explained as follows: because a binary quantifier (the GEN operator in particular) denotes the relation between two sets, the cardinality of each of the sets must be fixed (although not necessarily known), a constraint that cannot be satisfied by the set corresponding to a random sum (since one cannot state precisely, which, among all possible sums has been picked out). Our proposal extends to quantification in non-generic contexts, as shown in (7). The example (4) is grammatical because the members of the sum are accessible for distributive predication, which is not sensitive to the cardinality of the set: any predicate that may apply distributively to a plurality will do so regardless of the number of elements contained in a plurality. In (7), instead, quantification is forced by the presence of a floated quantifier, and ungrammaticality results. In sum, the contrast between (4) and (7) indicates that the distributivity observed in (4), which is an effect of a pluralized predicate applying to a sum, does not extend to quantification. We will argue that maximal sums (8) (unlike random sums) allow quantification over their members (since they are stable and have a fixed cardinality).

3. Symmetrical nouns and descriptions for groups. It follows from the definition of sums that any pluralized nominal predicate may denote a sum of individuals but only certain nominal predicates may, when pluralized, provide descriptions for groups: besides singular collectives, symmetrical nouns can do so (e.g. Moltmann, 1997). This explains the contrast (9a) vs. (9b). (9a) is grammatical because *jumeaux* is a relational noun, which as such can supply a group-variable. Since *bébés* can only be represented as a sum, (9b) is unacceptable. In sum, plural indefinites can take 'truly generic' readings only if they can be represented as groups bound by Q-adverbs (in particular by GEN), which yields generalizations over groups. Because access to the members of groups is blocked, plural indefinites bound by Q-adverbs cannot express generalizations over atomic individuals.

4. *Kein* vs *keine*. Kratzer (1995) observes that - but does not explain why - the negative plural indefinite *keine* (unlike sg. indef. *kein*) cannot function as a quantifier, but must be bound by existential closure. The restriction on *keine N* is expected under our analysis, if we take it to be the negative counterpart of French *des* indefinites: just like *des*-indefinites, *keine*-indefinites are expected to be ungrammatical whenever quantification over atomic individuals is forced. Our account predicts the grammaticality of German examples such as 'keine Nachbarstaaten kommen gut miteinander aus'.

Data

(1) *Des carrés ont quatre côtés / *'des' squares have four sides*

(2) Un carré a quatre côté / *a square has four sides*

(3) # GEN X (X is a plurality of squares) [x has four sides]

(4) Pendant l'excursion, des enfants étaient trop fatigués pour marcher / *During the trip, 'des' children were too tired to walk*

(5) *Des droites sont parallèles / *'des' lines are parallel*

(5') # GEN X (X is a sum of lines) [X is parallel]

(6) GEN x (x is an atom of any/a random sum of squares) [x has four sides]

(7) *Pendant l'excursion, des enfants étaient chacun/tous trop fatigués pour marcher / *During the trip, 'des' children were all too tired to walk*

(8) Pendant l'excursion, les enfants étaient tous trop fatigués pour marcher / *During the trip, 'les' children were all too tired to walk*

(9) a. Des jumeaux se ressemblent dans les moindres détails / *'des' twins look alike down to the smallest details*

b. (#)Des bébés se ressemblent dans les moindres détails / *'des' babies ... (only existential)*

A note on pseudo-generic.

(10) Des éléphants blancs se promenant dans la rue ont toujours suscité la curiosité / *white elephants strolling in the street always arouse curiosity*

(10') GEN e (stroll in the street (e, f(e)))? white elephants (f(e)) [arouse curiosity (e,f(e))]

It is also possible that indefinites are indirectly bound by a quantifier over events (Rooth, 1995) ('pseudo-generic'), in which case they can be represented as event-dependant Skolem terms (10'). We will argue that the number neutralization observed by Corblin (1987) cannot arise for truly generic, but only for pseudo-generic plural indefinites: number neutralization is an effect of counting events rather than participants, which can vary from one event to the other.

References

- Carlson, Gregory N. (1977a): Reference to kinds in English, Diss., University of Massachusetts.
- Chierchia, G. (1995): "Individual-level predicates as inherent generics." In Carlson G-N. and Pelletier, F-J. (eds), 176-223.
- Corblin, F. (1987). Indéfini, défini et démonstratif. Constructions linguistiques de la référence. Genève: Droz.
- Dobrovie-Sorin, C. and Laca, B. (2002): "Les noms sans déterminant dans les langues romanes", in D. Godard (ed.), Syntaxe des langues romanes. Paris:CNRS Ed.
- Heyd, S. (2002). Prédication et interprétation générique des syntagmes nominaux en *des* en position sujet. *Comm Indéfinis et prédication en Français*, Paris-Sorbonne.
- Krifka, M. et al. (1995): "Genericity: an introduction", In C&P (eds), 1-124.
- Kratzer, Angelika (1995): "Stage-level and individual-level predicates", In C&P (eds), 125-175.
- Landman, F. (2000). Events and Plurality. Dordrecht: Kluwer.
- Link, G. (1984). "Hydras. On the logic of relative clause constructions with multiple heads". In F. Landman and F. Veltmann (eds.). *Varieties of Formal Semantics*. Dordrecht: Foris.
- Moltmann, F. (1997). *Parts and Wholes in Semantics*. Oxford: OUP.
- Quine, W.V. (1953). *From a logical point of view*. (Second edition, 1980), Cambridge MA: Harvard UP.
- Rooth, M. (1995): "Indefinites, adverbs of quantification, and Focus Semantics." In C&P (eds), 265-299.