

DEFINITENESS IN PLURAL GENERICS: DECOMPOSING MAXIMALITY

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**Introduction.** Under Farkas & de Swart (2007, F&S), there are two sorts of languages with number and definiteness: Ones where kind-denoting (K) and generic-quantifying (Gen) plurals can be non-definite, and others where they must be definite. We show that the two sorts of plurals behave differently with respect to definiteness in several languages, and we discuss the implications for two theories of genericity (Chierchia 1998, F&S).

**Background.** Dutch (1) and Italian (2) exemplify the two sorts of languages of F&S.

- (1) a. Dinosaurussen zijn uitgestroven. dinosaurs are extinct (K)  
 b. Honden blaffen. dogs bark (Gen)

- (2) a. \*(I) dinosauri sono estinti. the dinosaurs are extinct (K)  
 b. \*(I) cani abbaiano. the dogs bark (Gen)

Under F&S, (1–2) stem from differing rankings of the Optimality-Theoretic constraints in (3).

- (3) a. MaxMax: Maximize maximality features of the discourse referent  
 by reflecting them in the nominal projection (via a definite article).  
 b. \*Def/[–Fam]: Avoid non-familiar definites.

F&S assume that the two sorts of plurals in (1–2) denote maximal discourse referents. In (1a) and (2a), the plural denotes the sum of all possible dinosaur specimens, (4a). In (1b) and (2b), maximality comes from the variable *u* being bound by the generic operator, (4b).

- (4) a.  $Pl(\Sigma(dinosaur(x,w)) \wedge extinct(\Sigma(dinosaur(x,w)))$   
 ‘The sum of all possible dinosaur specimens is a plurality (Pl) and it is extinct.’  
 b.  $Gen_{s,u} [dog(u,s) \wedge Pl(u,s)] [bark(u,s)]$   
 ‘It is generally true of situations with pluralities of dogs that those dogs bark.’

(2) stems from the ranking (3a) » (3b). Thus, regardless of the familiarity ([±Fam]) of the discourse referent denoted by the plural, the definite is more optimal than the non-definite, (5).

(5) a. (4a), [+Max] [–Fam]	MaxMax *Def/[–Fam]
Dinosauri sono estinti.	*
I dinosauri sono estinti.	*
b. (4b), [+Max] [–Fam]	MaxMax *Def/[–Fam]
Cani abbaiano.	*
I cani abbaiano.	*

(1) stems from (3b) » (3a); both sorts of plurals are optimally non-definite when the discourse referent is [–Fam], and they are optimally definite when [+Fam], (6). [+Fam] is licensed by anaphoricity (F&S, §4.2) and humanness (Oosterhoff 2008:§5.3).

(6) a. (4a), [+Max] [–Fam]	*Def/[–Fam] MaxMax
Dinosaurussen zijn uitgestroven.	*
De dinosaurussen zijn uitgestroven.	*
b. (4b), [+Max] [–Fam]	*Def/[–Fam] MaxMax
Honden blaffen.	*
De honden blaffen.	*

Contra (6a) analyzing K plurals in Dutch as optimally non-definite, some of Oosterhoff’s (2008) consultants reject non-definite K plurals. In general, in languages where K and Gen plurals can be non-definite, the data is more complex than (6) suggests.

**Data.** There are reports on Dutch (Oosterhoff 2008), German (Barton et al. 2015) and Fering (Schwarz 2009) where definite K plurals are better than definite Gen plurals. This is replicated in the present study on Hebrew. First, Gen plurals as in (7) are preferably non-definite.

(7) *láma* (#ha-)klavím novxím? why<sub>def</sub> dog<sub>pl.msc</sub> bark<sub>pres.pl.msc</sub> ‘Why do (the) dogs bark?’

With K plurals, Hebrew is more Italian-like. With the four kind-level predicates in (8), a plural denoting the argumental kind must be definite. Non-definites can be subkind-denoting, e.g. (8a) without *ha-* ‘the’ can mean ‘A number of kinds of dinosaurs have gone extinct.’

- (8) a. #(*ha-*)dinozáurim {nikxedú hukxedú}. ‘Dinosaurs  
the dinosaur<sub>pl</sub> {extinct<sub>pst.pl</sub> annihilated<sub>pst.pl</sub>} {have gone extinct, were annihilated}.’  
b. #(*ha-*)dinozáurim {hitrabú hitmaatú}. ‘Dinosaurs  
the dinosaur<sub>pl</sub> {propagate<sub>pst.pl</sub> dwindle<sub>pst.pl</sub>} have {propagated, dwindled}.’

(8) is corroborated by corpus data. We collected from heTenTen21 (Jakubiček et al. 2013) the cases where the arguments of the predicates in (8) are denoted by plurals, and the respective percent of definites is 98.2% (<sup>270</sup>/<sub>275</sub>), 100% (<sup>17</sup>/<sub>17</sub>), 96.7% (<sup>231</sup>/<sub>239</sub>) and 96.2% (<sup>179</sup>/<sub>186</sub>).

**Implications.** Definite K plurals being better than definite Gen plurals poses a challenge to the aspect of the neo-Carlsonian approach where generic characterization is mediated by kind-reference (Chierchia 1998); a neo-Carlsonian would conclude from (7) that kinds are denotable by bare plurals in Hebrew, which is contrary to the plurals in (8) being preferably definite. This challenge is met by adopting the aspect of Oosterhoff’s (2008) analysis where generic characterization need not be mediated by kind-reference.

Also challenged is the aspect of F&S where definiteness-marking of K and Gen plurals is motivated by MaxMax in (3a). This is met by the present decomposition analysis.

**Analysis.** We decompose MaxMax in (3a) into the two constraints in (9). (9a) requires K plurals as in (4a) to be definite, and (9b) requires that of Gen plurals as in (4b).

(9) a. MaxΣMax: Maximize Σ-maximality features of the discourse referent.

b. MaxGenMax: Maximize Gen-maximality features of the discourse referent.

In Italian-type languages, (9a–b) are ranked above (3b), (5). In Dutch-type languages, both are ranked below (3b), (6). The Hebrew pattern in (7–8) stems from (3b) intervening, (10). Thus, Hebrew K plurals are optimally definite regardless of the familiarity of the discourse referent, and [–Fam] licenses non-definite Gen plurals as in (7).

(10) a. (4a), [+Max] [–Fam]	MaxΣMax	*Def/[–Fam]	MaxGenMax
dinozáurim nikxedú.	*		
☞ ha-dinozáurim nikxedú.		*	
b. (4b), [+Max] [–Fam]	MaxΣMax	*Def/[–Fam]	MaxGenMax
☞ klavím novxím.			*
ha-klavím novxím.		*	

**Hypothesis.** We hypothesize (9a) » (9b) as universal due to (9a) appealing to a more prototypical notion of maximality; Σ(dog(x,w)) is instantiated by all dog specimens, whereas dog(u,s) in (4b) is less prototypically maximal due to Gen admitting exceptions. Thus, we predict that there should be no languages where Gen plurals must be definite whereas K plurals need not be.

**Conclusion.** In light of the repeated pattern where definite K plurals are better than definite Gen plurals, certain aspects of current theories of genericity cannot be maintained.

Barton, D. et al. 2015. Definite article use with generic reference in German: an empirical study. *Zeitschrift für Sprachwissenschaft* 34(2). • Chierchia, G. 1998. Reference to kinds across languages. *Natural language semantics* 6(4). • Farkas, D. F. & H. de Swart. 2007. Article choice in plural generics. *Lingua* 117. • Jakubiček, M. et al. 2013. The TenTen corpus family. In *7th International Corpus Linguistics Conference CL*. • Oosterhoff, A. 2008. *The semantics of generics in Dutch and related languages*. • Schwarz, Florian. 2009. *Two types of definites in natural language*. University of Massachusetts dissertation.