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Bare Nouns and Weak Indefinites^{*}

• 'bare noun' '(BN) = N without Det (with(out) modif) in argument positions

Goals:

Improve on previous analyses of the exist. readings of BNs in order to capture

- similarities between exist. BNs and 'super-weak' indefinites (French des/du-indefinites)
 - contrasts with run-of-the-mill weak indefinites

Current analyses of existential BNs (in languages with articles)

- (1) a. Existential BNs are kind-referring.
 - b. Existential BNs are weak indefinites.
- The kind-analysis is problematic, the weak-indefinite analysis needs to be refined

Proposal (background assumption: strong indefinites denote choice functions)

- (2) a. Weak indef's (sg/some-indef's in Engl) denote $\exists x \text{ over individuals.}$
 - b. Exist BNs and Fr. des/du-indef's denote polyadic $\exists e, x \text{ over amounts.}$

1. BPs and BMs in English vs. Romanian, Catalan, Spanish (RCS), Italian

Empirical generalization (Dobrovie-Sorin & Laca 1996, 1998, 2003, 2010, Dobrovie-Sorin 1997a,b, Longobardi 2002, Delfitto 2002):

(3) a.Romance languages other than BrP (Braz.Port) allow exist, but not kind-referring BNs¹ b. English allows for both kind-referring and exist. BNs (BPs and BMs)

This empirical generalization goes against Neo-Carlsonian analyses of BNs (see section 2.1)

1.1 Existential BNs in Engl and RCS

- (4) a. BPs and BMs freely combine with stage-level/localizing predicates
 - b. CBNs (Count Bare Nouns) are impossible in Engl and restricted in RCS
 - c. obligatory narrow scope wrt Neg, intensional operators

• Narrow scope wrt negation (Carlson 1977)

- (5) a. I didn't read novels.
 - b. N-am citit romane.
 - c. Non ho letto romanzi.
 - 'I didn't read any novels (not even one)'.

^{*} Thanks go to Patricia Cabredo, Ion Giurgea and Brenda Laca for comments on a previous version of this h-out.

¹ Chierchia (1998) is the only Italian scholar who argued in favor of a kind-based analysis of Italian BPs. Longobardi (2002) and Delfitto (2002) refuted Chierchia's argumentation.

• Narrow scope wrt intensional operators (Carlson 1977)

- a. Minnie wants to meet young psychiatrists. (6)
 - b. Minnie vrea să consulte tineri psihiatri.
 - c. Minnie vuole consultare giovani psichiatri.
 - # There are (some) young psychiatrists that Minnie wants to meet.
 - OK Minnie wants to meet any young psychiatrists.

1.2 Kind-referring BPs and BMs: in Engl, but not in RCSI

(i) arguments of kind-predicates

- (7)a. *Dinozauri sunt o specie dispărută. Dinosaurs are a species extinct
 - b. *Dinozauri sunt o specie de animale. Dinosaurs are a species of animals

(ii) object position of *love/hate* verbs

(Laca 1990, Dobrovie-Sorin&Laca 1996, 1998, 2003, 2010, Dobrovie-Sorin 1997).

(8)	a. *Maria detesta caffè.	a'. Maria detesta il caffè.	It.
	Maria hates coffee	Maria hates THE coffee	
	 b. *Lui Ion îi plac prăjituri. 	b'. Lui Ion îi plac prăjiturile.	Ron
	DAT Ion him.DAT likes cakes	DAT Ion him.DAT likes cake	es.THE

(iii) subjects of generic statements

(9)	a. *Studenti mangiano male.	It.
	Students eat poorly	
	b. *Pătrate au 4 laturi.	Rom.
	Squares have 4 sides.	

For evidence in favor of the hypothesis that the generic readings of BPs rely on kind-reference see Dobrovie-Sorin & Laca (1996, 1998), Dobrovie-Sorin & Mari (2006), Dobrovie-Sorin (2013a).

(iv) quasi-universal readings (Condoravdi's 1993 'functional readings'): reference to the collective entity made up of all the representatives of the kind at a given spatio-temporal localization that is determined by the context

(10) a. We're reaching the end of the term. Students are exhausted. b. Ajungem la sfirsitul trimestrului. *Studenti sunt epuizati. (Rom)

• Dobrovie-Sorin & Laca (1996, 1998): the quasi-univ/functional reading of BNs is possible only in those languages in which BNs can be kind-referring.

Rom.

2. Theories

2.1 Neo-Carlsonian

Carlson (1977), Chierchia (1998, 2023), Dayal (2004, 2023)

- (11) a. BNs (on both their generic and existential readings) are kind terms (across lang's)
 b. The existential force of BNs is due to the semantics of the main V Carlson: - that triggers a realization relation (kind => individual instantiations) Chierchia - Derived Kind Predication (DKP)
- (12) a. Dogs have evolved from wolves. Evolve-from (∩dogs, ∩wolves)
 - b. Dogs bark. Gen x [U∩dogs(x)] [bark(x)]
 c. Dogs are barking. ∃x [U∩dogs(x)] [are-barking(x)]
- \cap (Down) = type-shifting operator from properties to kinds
- \cup (Up) = type-shifting operator from kinds to properties
- Chierchia's (1998) Derived Kind Predication (DKP)
- (13) If P applies to objects and k denotes a kind, then $P(k) = \exists x [\forall k(x) \& P(x)]$
- (14) a. Lions are ruining my garden =
 b. ruining my garden ([^]lions) => (via DKP)
 c. ∃x[[^]Olions(x) & ruining my garden (x)]

Problems

(15) a. languages in which BNs cannot refer to kindsb. partitive articles (French *des/du*), see § 4.4-4.5)

• Languages in which BPs and BMs cannot refer to kinds (see Section 1):

(16) a. Ion a citit romane.'Ion read novels.'b. *Ion respectă profesori.Ion respects professors

• Indefinites headed by partitive articles (French *des/du*) are perfect counterparts of exist. BPs and BMs but they cannot be analyzed as kind-referring:

(17) Jean lit des poèmes tous les jours.Jean reads poems/??some poems every day.

Conclusion: Neo-Carlsonian analyses are not applicable to Romance =>

- We need a different analysis for exist BNs in Romance
- Review of several proposals :
- Property denotation and its problems (§2.2)
- Generalized \exists over amounts (Section 3)

2.2 Existential BPs and BMs as property-denoting expressions and Semantic Incorporation

McNally (1995, 1998), Dobrovie-Sorin (1997), Dobrovie-Sorin & Laca (2003, 2010), Dobrovie-Sorin et al. (2005, 2006), Carlson (2003), Dobrovie-Sorin & Beyssade (2004), a.o., propose variants of the semantic composition shown in (18), due to vanGeenhoven (1996)
Property-denotation for *des/du*-NPs: Bosveld-de Smet (1998, 2004)

Semantic Incorporation (vanGeenhoven 1996)

(18) a. Existential BNs denote properties (type <e,t>)

b. Stage-level predicates can be represented as 'existential predicates':^{2,3} one of their argument positions is bound by an exist quantifier; lambda operator over the properties that restrict the range of that argument.

- (19) Ion a citit romane. 'Ion read novels.'
- (20) i. $[[\operatorname{citi'}]] = \lambda P \lambda x \exists y (\operatorname{read}(x,y) \land P(y))$ ii. $[[\operatorname{romane}]] = \lambda z \text{ novels } (z)$ iii. $[[\operatorname{citi' romane}]] = [[\operatorname{read'}]]([[\operatorname{novels}]]) = \lambda x \exists y (\operatorname{read}(x,y) \land (\lambda z \operatorname{novels}(z))(y)) =$ $= \lambda x \exists y (\operatorname{read}(x,y) \land \operatorname{novels}(y))$

• This analysis naturally extends to English exist. BNs

(21) Ion read novels.

Individual-level predicates do not have an existential version:

(22) [[respect]] = $\lambda x \lambda y$ (respect(y,x))

Such predicates cannot combine with property-denoting arguments => *(16)b, repeated in

(23) *Ion respectà profesori.

• Engl \neq RCSI: has a covert Down operator => kind-referring BNs:

(24) Ion respects professors.

 $^{^2}$ The hypothesis that the existential reading of BPs depends on the existential quantifier being supplied by the main predicate rather than by the BP itself goes back to Carlson (1977), who combined this idea with the hypothesis of kind-referring BPs by postulating a realization relation between the kind and an existentially bound variable over realizations of the kind.

³ The stage- vs. individual-level distinction goes back to Carlson (1977). For refinements of the distinction see fn. 6.

Problems

(i) Why is it that **adjectives** (property-denoting) cannot appear in argument positions.

- (25) Ion citește *bun / *interesant Ion reads good interesting
- (ii) French BPs can be predicates (26)a but not arguments of existential predicates (26)b:
- (26) a. Jean et Marie sont professeurs. Jean and Marie are professors.
 - b. *Le proviseur a embauché professeurs. The dean hired professors.

(iii) Contrasts between Count Bare Nouns vs. BPs/BMs in RCS

• CBNs are not allowed with run-of-the-mill exist pred's:

(27) Maria {desenează / vede / aude / vopseşte / mută} {maşini / *maşină}.
 Maria draws sees hears paints moves cars car
 'Maria is drawing / sees / hears / is moving cars / *(a) car.'

• CBNs appear in the object position of certain verbs, most of them related to possession (*have, wear, buy, look for, find, wish (to have), need (to have), use*)

- (28) a. A cumpărat ieri maşină. (Ro.) has bought yesterday car '(S)he bought yesterday a car.'
 - b. N-a avut niciodată casă.
 not-has had never house
 '(S)he has never had a house.'
 - c. Are de trei ani maşină.has for three years car'(S)he's had a car for three years'

• Scandinavian also exhibits different distributions for CBNs and BPs, although the constraints are different (Borthen 2003, Dahl 2004)

• **Hindi**: similar contrasts between pseudo-incorporated CBNs and non-incorporated CBNs in Dayal (2004, 2011)

3. Differences between BPs and CBNs: analyses

3.1 Same Denotation, Different Compositions

• Dobrovie-Sorin & Bleam, Espinal (2005, 2006):

- All BNs (BPs, BMs and CBNs in RCS) are property-denoting
- The semantic composition of BPs/BMs relies on Semantic incorporation (see (18)-(20))

- The semantic composition of CBNs in RCS relies on Predicate Modification⁴

Predicate Modification/Pseudo-Incorporation

(29) $[[V]] = \lambda P \lambda y \lambda e [P-V(e) \land Ag(e) = y \land Appropriately Classificatory (e)]$ where $\exists e P-V(e)$ is true iff $\exists e'(V(e') \land \exists x (Theme(e') = x \land P(x))$ (adapted after Dayal 2011:p.146)

(29) represents an '**incorporating predicate**', which is obtained from a transitive verb of the form $\lambda x \lambda y \lambda e [V(e) \land Ag (e) = y \land Th(e) = x]$, by replacing the Theme argument with a place-holder for a predicate-modifier notated P. The restriction to '**appropriately classificatory**' events (cf. Dowty 1979) is meant to account for the fact that V + bare singular sequences must refer to types of events that are **culturally stable**.⁵ Given (29), the object position can be filled by property-denoting nominals, which qualify as predicate-modifiers.

• Problem: identical denotations (properties) enter distinct rules of semantic composition

3.2 Different denotations

Property-denoting BNs (Predicate Modification)

(30) a. CBNs in RCS (Dobrovie-Sorin et al. 2005, 2006)
b. pseudo-incorporated CBNs in Hindi (Dayal 2004)
c. CBNs in Hungarian (Farkas & de Swart 2003)

Non-property-denoting BNs

- Dayal (2004, 2011): exist BPs are kind-referring
 - non-incorporated Hindi CBNs are names of kinds or definites
- Farkas & de Swart (2003): BPs 'presuppose discourse referents'

• Dobrovie-Sorin & Beyssade (2012): BPs and BMs denote exist GQ over amounts (individuals ordered by the part-of relation)

(31) Children were sleeping by the fire.

- a. [[children]] = $\lambda P \exists x_a (children(x_a) \land P(x_a))$
- b. [[sleep]] = $\lambda x_a \exists y (sleep(y) \land Ind(y,x_a))$
- c. [[children]]([[sleep]]) = $(\lambda P \exists x_a (children(x_a) \land P(x_a)) (\lambda x_a \exists y (sleep(y) \land Ind(y,x_a))) = \exists x_a (children (x_a) \land \exists y (sleep(y) \land Ind(y,x_a))$

• $\exists x_a \text{ in (31)}a \text{ asserts the existence of an amount that instantiates the nominal property ($ *children* $); <math>\exists y \text{ in (31)}b \text{ asserts the existence of a participant to the event (of sleeping);}$

• The two variables (over amounts and over event participants) are related by a relation of individuation notated Ind, by virtue of which amounts of objects are specified as being identified with the individuals that are the participants to the event.

⁴ Dayal uses the label 'pseudo-incorporation', which suggests that predicate modification applies to those BNs that are pseudo-incorporated in Massam's (2001) sense (i.e., VP-internal BNs). Different implementations of the same type of analysis: Farkas & de Swart's (2003) Unification of thematic arguments, Chung & Ladusaw's (2004) Restrict and Espinal & McNally's (2011) Pred. Modif.

⁵ See also Carlson (2003), according to whom the semantic composition of exist. bare nominals deals with types of things/events (rather than tokens): 'there are no times, no possible worlds, no truth, only types'.

Advantage:

• Respects the homomorphism principle by which argumental positions are occupied by DPs denoting entities (type <e>) or GQs (<<e,t>t>); rules out <e,t>-type terms (adjectives) in argument position.

• Dobrovie-Sorin & Giurgea (2015): use of e-variables allows a simplification of the GQ in (31)

(32) $[[_D \emptyset]] = \lambda N \lambda P \lambda e \exists x (N(x) \land P(x)(e))$ defined iff $\exists y, y \neq x$ such that-y=Participant(e) and x is spatially localized wrt. y in e⁶

4. Distinguishing between bare nouns and weak indefinites

• All previous analyses of BNs as indefinites assume that BNs are weak indefinites. The **same type of denotation** (property-denotation or \exists GQ, depending on the author) is assumed for exist. BNs and run-of-the-mill weak indefinites

• the weak vs strong distinction

- problems with identifying exist BNs with run-of-the-mill weak indef's (Engl. *some*, Sp. *unos*) - atelicity (*for*-adverbials, habituals)
 - des-indefinites behave on a par with exist BNs (and contrast with Engl. some, Sp. unos)

• narrow scope wrt to Negation

4.1 Weak vs Strong Indefinites

• Milsark (1977)

(33) Indefinites (e.g., singular indefinites, *some*-indefinites) allow both 'weak' and 'strong' readings, depending on the type of main predicate

(34)	a. There is a solution.b. There are some solutions.	<i>There</i> -sentences =>	weak
(35)	a. A student I know is hard working.	I-level pred's => strop	ng

(35) a. A student I know is hard working.b. Some students are hardworking.

• Diesing (1990), McNally (1995, 1998), Laca (1996, 1999) van Geenhoven (1996, 1998), Dobrovie-Sorin (1997) Dobrovie-Sorin & Laca (2003), Dobrovie-Sorin et al. (2005, 2006), Dobrovie-Sorin & Beyssade (2012), a.o.

(36) a. Exist BNs are to be analyzed on a par with weak indefinites.b. Weak indefinites are property-denoting/exist GQ over amounts.

⁶ The spatial localization definedness condition in (32) is meant to capture the fact that only spacelocalizing predicates allow for weak readings. Such predicates had been characterized as s(tage)-level by Carlson (1977) but later authors observed problems with this characterization and proposed instead that the relevant factor is the presence of a Localizing argument in the lexical represent (Dobrovie-Sorin 1997, Glasbey, McNally 1995b). This constraint is not specified as a definedness condition in DS&Beyssade (2012), who capture the generalization by assuming that only Spacelocalizing predicates can be represented as existential predicates (see (31)b).

• Problems: Differences between existential BNs and Weak Indefinites

(37)	a. John ate apples/*sm apples/*an apple for an hour.	(for-adverbials)
	b. John reads books/*sm books/*a book.	(habituals)
	c. If you have children/*sm children	(number-neutral in downward entail. contests)
	d. John didn't eat apples/*sm apples/?an apple.	(scope wrt NEG)

4.2 BNs trigger atelicity: previous analyses

(38) John ate apples/*sm apples/*two apples for an hour.

• Krifka (1998): *for*-adverbials can only combine with atelic predicates (cumulative and divisive, incremental homogeneity)

- Problem: eat some apples is cumul. and divisive. Why is it that for-adverbials are unacceptable?
- Krifka (1998: 221; (29)): *some*-indefinites take scope outside the event description, by QR. - BNs cannot be affected by QR
- This is however problematic:
 - (i) sm-nominals, as well as sg indef, can be weak and
 - (ii) weak indefinites are undoubtedly VP-internal, which clashes with the idea that they are obliged to raise (out of the VP) via QR

• Chierchia (2023) attempts an analysis of the problem in (38) within the Neo-Carlsonian theory of BNs. In addition to the problems raised by the Neo-Carlsonian analysis (see Sections 1-2), in order to solve (38) Chierchia's (2023) needs to make an important number of assumptions that are not independently motivated. The proposal is extremely difficult to summarize... (see Appendix 1).

4.3 Proposal

Background Assumptions:

(i) Strong indefinites are to be analyzed as choice functions.

(ii) Common properties of weak indefinites, including exist. BNs (Dobrovie-Sorin & Beyssade 2012, Dobrovie-Sorin & Giurgea (2015): (i) they can only apply to localizing predicates (see fn. 6);
(ii) they supply ∃

Proposal: Two types of weak determiners

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(39) a. polyadic \exists e, x_a
b. unary \exists x
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• Polyadic $\exists e, x_a \text{ over events and amounts (exist. BPs and BMs)}$

- (40) $[[DØ_{\exists cum}]] = \lambda N_{cum} \lambda P_{Loc} \exists e, x_a (N_{cum}(x) \land P_{Loc}(x_a)(e))$
- (41) a. John ate $[DP[D^{\circ}Ø_{\exists cum}]$ sugar].
 - b. [[ate [$_{DP}[D^{\circ}\emptyset_{\exists cum}]$ sugar]]] = $\exists e, x_a$ (sugar(x_a) \land ate (x_a)(e))
 - c. [[John ate $[DP[DOB_{\exists cum}]$ sugar]]] = $\exists e, x_a$ (sugar(x_a) \land ate (x_a)(e)) \land Agent (e, John)

• The index \exists in $[[_D Ø_{\exists cum}]]$ is meant to distinguish the exist. null Det from the other two possible null Det's that can apply to cumulative predicates: Chierchia's **Down** operator and the **null Iota operator** (in languages without def articles).

• The index cum in $[[_DØ_\exists cum]]$ is meant to signal the selectional/subcategorization feature of this \exists , which distinguishes it from the \exists that subcategorizes for quantized Ns (see (43)) or sg Ns

• Intuition behind the proposal:

(42) a. BPs and BMs refer to **amounts**, which cannot be introduced separately from the event => they can only rely on **polyadic GQs over e**,**x**_a.

b. Singular indefinites and *some*-indefinites refer to **individuated entities**, which are necessarily **introduced separately from the event-variable**.

Quantized mass/pl indefinites, e.g., 400 g of sugar/3 children, although they are clearly weak, cannot be arguments of [[DØ∃cum]], which subcategorizes for cumulative Ns.
[D°Ø∃] supplies a ∃ that binds an individual variable.

(43) $[[_{D}\emptyset_{\exists}]] = \lambda N_{quant} \lambda P_{Loc} \exists x (N_{quant}(x) \land P_{Loc}(x))$

(44) a. John ate 400g of sugar.
b. ∃x(400g of sugar(x) ∧ John ate (x))

• CBNs marked as sg (see Hindi, Somali or Hebrew) also rely on $[[_D \emptyset_{\exists}]]$:

(45) $[[_D \emptyset_{\exists}]] = \lambda N_{sg} \lambda P_{Loc} \exists x (N_{sg}(x) \land P_{Loc}(x))$

• Unless lexically specified to the contrary (see des/du indefinites in French), overt determiners e.g., Engl. *some*, Spanish *unos*, supply a unary $\exists x$:

(46) $[[_Dsome]] = \lambda N \lambda P_{Loc} \exists x (N(x) \land P_{Loc}(x))$

• Back to for-adverbials and BNs: telic Vs and atelic VPs

(47) a. For-adverbials can only combine with atelic events.
b. Vs with Incremental Themes can yield atelic VPs only if their object denotes a polyadic exist. Q over events and amounts (∃e,x ...)

The semantic composition remains to be implemented...

• Converging data:

(48) Weak *some*-NPs contrast with *des*-indefinites in rescuing contexts. (Dobrovie-Sorin, Gerards & Ihsane, submitted)

• The different denotations proposed in (40) and (43) may help explain the observation in (48).

4.4 Des-indefinites

Des-indefinites are as close as it can be to BPs and BMs (*≠ some*-indefinites, Spanish *unos*)

• Bosveld de Smet (1998, 2004), Dobrovie-Sorin & Beyssade (2004), a.o.: *des*-indefinites are property-denoting

• Present proposal : [Dodes/du] contributes $\exists e, x_a$; [Dosome] cannot contribute $\exists e, x_a$

• Disjunctive generalization

(49) D° can contribute $\exists e, x_a \text{ if } D^{\circ}$ applies to N_{cum} and D° is null or lexically marked as 'cumulative'.

• The two options specified in (49) may be due to general principles:

(50) a. A null/covert D° that takes N_{cum} as an argument is by default 'cumulative'
b. The default function of an overt D° (even if its sister is N_{cum}) is DR introd.
c. Lexical marking (as partitive/cumulative) is needed for an overt D° to be 'cumulative' (supply ∃e,x_a).

4.5 Habituals

Carlson (1977a), Kleiber (1987), de Swart (1987):

- (51) Habitual telic predicates
 (i) + singular indef: disallow a 'multiplication' reading in which each event applies to a different individual.
 (ii) + BP: allow a 'distributive' reading (different individuals across events)
- (52) a. # John reads a novel/three novels.b. John reads novels.

The data are parallel to those observed for *for*-adverbs. The parallelism is confirmed for *some*-NPs

(53) # John reads some novels.

Cabredo-Hofherr (2013: 221)

(54) a. The habitual operator is a pluractional operator analyzable (not as a frequency adv) as an abstract V- or VP-level degree adverb with a modal component.
b. The habitual operator is not a scope taking operator.

• This proposal explains the contrast between sg. indef (as well as sg-interpreted CBNs, see Somali, Hebrew, as well as Hindi) and BPs/CBNs (Brazilian Portuguese).

- The proposal is not concerned with the unacceptability of *some*-indefinites.
- Note again that des-indefinites behave on a par with BPs and contrast with some-indefinites:
- (55) Jean lit **des** romans. 'John reads novels.'

• Arguably, the analysis proposed above for the BP vs *some*-NPs contrast in the context of *for*-adverbials can be extended to habituals.

• Tentative proposal

- (56) a. Habituals refer to atelic events.
 - b. Vs with Incremental Themes can yield atelic VPs only if their object denotes a polyadic exist. Q over events and amounts (∃e,x ...)

The semantic composition remains to be implemented...

4.6 Scope under Negation

(57) BNs obligatorily take narrow scope under Neg.

• Why?

The answer gets more and more complex as we move from one example to another. In the end, scope wrt Neg seems to be a matter of Neg-marking (by means of NPIs or Neg Conc Items) in addition to denotation of the DP $(\exists e, x_a)$

Answer to (57)

(58) a. BNs translate as ∃e,x_a (proposal made above)
b. Sentential Neg translates as Neg ∃e,x_a

• Problems

• Bare sg Ns in Hebrew and Somali and Hindi do not translate as $\exists e, x_a$ and yet they take narrow scope wrt Neg ((Cabredo-Hofherr 2013)

• Conversely, *des*-indefinites in Fr. translate as $\exists e, x$ and yet they cannot take narrow scope wrt Neg.

(59) Jean n'a pas lu de/*des romans.

Explanation of des > de

(60) a. In order to take scope under Neg, an *overt* indefinite Det needs to be Neg-marked (NPI or Neg-concord element). (takes care of *des/de* in French)
b. Neg-marking is impossible on *covert* D° (BNs cannot vary depending on Neg or no Neg)

Further problem

In certain dialects of French:

(61) Jean n'a pas lu **des** romans.

Solution :

(62) In certain languages/dialects Neg-marking is not necessary for DPs headed by indefinite articles.

Appendix 1: Chierchia (2023) on 'Kinds, Properties and Atelicity'

(63) a. Bare arguments are uniformly kind denoting.

b. Durative modifiers are universal quantifiers (Dowty 1979).

c. Kinds drive an 'ultra narrow scope' reading via DKP, according to which Thematic roles automatically introduce quantification over instances of a kind, when needed. d. Two distinct types of TH (th-roles), which allow V to combine either (i) with regular

arguments (individuals or GQ) or (ii) with kind-referring terms

- (64) a. Why are Dur-Mods subject to a constraint that doesn't affect D-quantifiers (like *each time*
 - *went*)? I have only speculations to offer in this connection [...] (pp 9-10)
 - b. Durative adverbs can modify either events or intervals.
 - c. Durative modifiers of events require 'same participants' (any DP other than BNs)

d. The notion of participant does not apply to intervals => the constraint on 'same

participants' is suspended => 'This allows switching to a 'local' resolution of the description, with different mosquitos across the cells' (p. 12).

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Appendix 2: CBNs in Brazilian Portuguese and in Hindi

• morphologically singular, but semantically number-neutral expressions

- (65) a. Dinossauro està extinto. (divergent judgments) Dinausaur is extinct. 'Dinosaurs are extinct.'
 - b. Tem cachorro para tudo quanto é lugar (unanimous judgment) Has dog to every much/many is place 'There are dogs everywhere'

Within Chierchia's (1998a, 2010) model

- (66) a. CBNs in BrP are plural count nouns (Schmitt and Munn 1999, 2002; Müller 2002)b. CBNs in BrP are mass (Pires de Oliveira and Rothstein 2011)
- Both analyses are judged inadequate by Pires de Oliveira (2022), who invokes experimental results (Pires de Oliveira and Bevilaqua 2020) that show that
- BrP speakers oscillate between mass and count when interpreting the CBN
- English speakers massify CBNs; they are never counted.
- The proposal suggested in Pires de Oliveira (2022) resembles Dobrovie-Sorin & Pires's (2008)

Dobrovie-Sorin & Pires (2008)

(67) a. Exist. CBNs in BrP are number-neutral (denote atomic join semi-lattices)
 b. Down operator => '(plural) kinds'⁷,⁸

⁷ Chierchia himself wrongly assimilates number-neutrality and mass denotation and proposes that exist. mass/number-neutral BNs denote kinds. This view is also adopted by Munn & Schmitt (2005).

⁸ Cheng & Sybesma (1999, *in passing*): unlike lexical Classifiers, which have an individualizing function, the null Classifier has only a 'deictic' function, i.e., it is a type-shifting operator that applies to a property and yields a non-individualized entity, e.g., a random amount of matter, a random number-neutral sum of individuals or an intensional maximal sum (i.e., a name of kind).

• If Zamparelli (2002) is right about the **exist readings of BPs in Engl as arising from 2 different sources**, *mutatis mutandis*, we may be able to demonstrate, with similar, possibly identical, arguments, that **the exist readings of CBNs in BrP arises from 2 different sources**: from kind-reference and from indefinite-like denotation (so, CBNs in BrP, on a par with Engl. BPs, are ambiguous)

• NB: BPs in BrP seem to behave more like *some*-NPs. This means that the analysis of Engl BPs does not extend to BPs in BrP

• Hindi vs. BrPort

(68) a. Non-incorporated existential CBNs refer to singular entities in Hindi (Dayal).b. Kind-referring CBNs behave as sg kinds in Hindi

• Dayal's analysis: kind-reference of BNs is primitive, exist read (constrained to refer to atoms) is derived from kind-reference. Dayal attempts to explain why the existential readings of 'sg kinds' in Hindi pick up singular entities.

• This account cannot explain why the kind-reference of CBNs in Hindi is of the 'singular' type (relies on the iota operator applying to a set of kinds), whereas the kind-reference of CBNs in BrP is of the 'plural' type (relies on the Down operator).

Correlated Contrasts between Hindi and BrP

(69) a. Non-incorporated exist. CBNs refer to atoms in Hindi, but to number-neutral entities (pluralities) in BrP.⁹
b. Kind-referring CBNs behave as sg kinds in Hindi, but as 'plural kinds' in BrP.

• My proposal: variation regarding the feature specification of Number of CBNs

- (70) a. CBNs are specified as sg in Hindi (absence of plural marking indicates singular); denote sets of atoms
 - b. Down operator cannot apply to sets of atoms. =>
 - c. $[D^{\circ}\emptyset]$ that combines with CBN denotes either
 - (i) $\exists \Rightarrow$ the meaning of indefinite singulars or
 - (ii) Iota that applies to a set of ordinary individuals => definite singular

(iii) Iota that applies to a set of kinds/taxonomic entities => 'singular kind'

(the bear in Engl)

Independent confirmation of the analysis

- (71) In the context of *for*-adverbials and habituals (see Section 6)
- a. CBNs in Hindi (Somali and Hebrew) behave on a par with sg. indefinites in Engl.
- b. CBNs in BrP behave on a par with BPs in Engl.

Conclusions

(72) a. Deriving the exist. reading from kind-referring BNs is problematic.

b. BNs are not 'born' as kind-referring but rather as nominal predicates/set-referring.

c. Depending on number-marking and count vs mass root, BNs can denote either join semilattices (of mass entities or of pluralities) or sets of atoms

⁹ The exist. readings of Hebrew and Somali CBNs resemble Hindi CBNs in referring to singular entities (Cabredo-Hofherr 2013).

d. Kind-reference is obtained at the DP-level, by applying either Down or Iota

Still to be explained:

(73) a. Why is it that English, but not RCSI, has kind-referring BPs?b. Why is it that BrP has kind-referring CBNs?

•••••

Appendix 3: Speculations regarding the internal structures of BNs

• Dobrovie-Sorin et al. (2005, 2006)

(74) a. DP	overt Det
b. NumP	BP, BM
c. NP	CBNs in RCS

• Problems:

(i) same semantics for apparently different synt. represent's

- des/du-indef's are presumably DPs but like BP/BM and unlike weak some-indef's

- (ii) different semantics for apparently same synt. represent's
- BSs/CBNs in BrP vs RCS
- BPs in BrP vs RCS
- Italian dei vs Fr. des/du

• Alternative

- (75) a. All nominals in argument positions, including BNs, are DPs (e or <<et>t>)
 b. Pseudo-incorporated BNs are NPs/nPs (property-denoting).
 c. denotations of BNs also depend on Number-marking.
- (76) BPs denote atomic join semi-lattices (mass intepretations are excluded)

Different semantic representations of lack of Number marking, depending on the lang:

- (77) a. BNs (in arg pos) that are not marked as pl denote join semi-lattices in BrPorta'. The count vs mass interpretation of BNs depends on whether the root is mass/count.b. BNs (in arg pos) that are not marked as pl denote sets of atoms in Hindi (Hebrew)b'. BNs are interpreted either as mass or as sg count.
- (78) a. Number is a feature that attaches to either little n or D° (Dobrovie-Sorin 2012)
 b. Pl-marking is not mandatory (nouns are already pluralized in the Lexicon)
- (79) Singular Number is always introduced higher than little n, in Cl or D° (null or overt)
- (80) In Romance languages even plural Number attaches to D°
- (81) A D° that is specified as pl cannot denote the Down operator => *kind-referring BPs

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