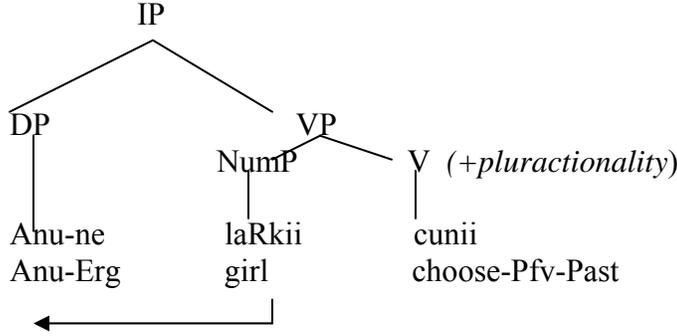


II. An Aspect-based Account of Number Neutrality in Pseudo-Incorporation

2.1. The Analysis (Dayal 2011 – see also Dayal 1999, 2003)

- The first argument of an pseudo-incorporating verb denotes a property:
(V_{INC} : type $\langle\langle e,t\rangle\langle et\rangle\rangle$, V_{TR} : $\langle e\langle et\rangle\rangle$)
- The nominal in Pseudo Incorporation has number specification: it is a **NumP**, not NP:
(**NumP**: type $\langle e,t\rangle$, not $\langle e\rangle$ or $\langle\langle et\rangle t\rangle$)
- **NumP**_{SING} has a number neutral interpretation only if
 - (i) it occurs below verbal pluractionality
 - (ii) if it occurs in the nuclear scope of an aspectually induced quantificational structure.
- A claim specific to Hindi: NumP in PNI can scramble freely, like other nominal arguments.

Syntax



Key Distinctions:

- Structural requirements for incorporation: Direct object, no proper names/DPs, no case marking.
- Aspectual requirements for #-neutral interpretation of singular forms:
 - Perfective aspect: compatibility with pluractionality
 - Imperfective aspect

Interpretation: $V_{INC} = \lambda P \lambda x \exists e [P-V(e) \ \& \ Ag(e) = x]$, where $P-V(e)$ is true iff $\exists x[V(e) \ \& \ P(x) \ \& \ Th(e)=x]$

$$\begin{aligned}
 OP_{PA(pluractional)} = \lambda V \lambda P \lambda y \lambda E [& \text{Card}(E) \geq 2 \ \& \ \forall e \ \forall e' \in E [V(e)(y)(P) & \text{ adapted from} \\
 & \text{plurality} & \text{event type} & \text{Lasersohn 1995} \\
 & \ \& \ \neg\tau(e) \circ \tau(e') \ \& \ \exists t[\text{between}(t, \tau(e), \tau(e')) \ \& \ \neg\exists e''[V(e'')(y)(P) \ \& \ t = \tau(e'')]]] \\
 & \text{non overlap} & \text{hiatus}
 \end{aligned}$$

$$\begin{aligned}
 V_{INC} + \text{Pluractionality} = \lambda V \lambda P \lambda y \lambda E [& \text{Card}(E) \geq 2 \ \& \\
 \forall e \ \forall e' \in E [& V(e)(y)(P) \ \& \ \neg\tau(e) \circ \tau(e') \\
 \ \& \ \exists t[\text{between}(t, \tau(e), \tau(e')) \ \& \ \neg\exists e''[& V(e'')(y)(P) \ \& \ t = \tau(e'')]]]
 \end{aligned}$$

(3)a. $\exists e [girl\text{-}chose(e) \ \& \ Ag(e) = anu]$

PERF Aspect; No Pluractionality: one event; one girl

b. $\exists E [\text{Card}(E) \geq 2 \ \& \ \forall e \ \forall e' \in E [girl\text{-}choose(e) \ \& \ Ag(e) = anu \ \& \ \neg\tau(e) \circ \tau(e')]]$

PERF Aspect; Pluractionality: multiple events; multiple girls

c. $\forall i [[C(i) \ \& \ in(i, \text{those-days})] \rightarrow \exists e [book\text{-}read(e) \ \& \ Ag(e) = anu \ \& \ \tau(e) = 2\text{-hours} \ \& \ \tau(e) \subseteq i]]$

PERF Aspect; No pluractionality; Embedded under IMPERF Aspect: multiple intervals; one event per interval; one girl per event = multiple girls overall

- **Singular in (non)- Incorporated Position vs. Plural**

- (4)a. puure din kamre meN *cuuhaa* ghustaa rahaa
 whole day room in mouse kept-entering
 ‘The whole day mouse kept entering the room.’ *Subj: singular: only 1*
- b. puure din kamre meN *cuuhe* ghuste rahe
 whole day room in mice kept-entering
 ‘The whole day (different) mice kept entering the room.’ *Subj: Plural: more than 1*
- c. anu puure din *cuuhaa* pakaRtii rahii
 Anu whole day mouse kept-catching
 ‘Anu kept catching mice (different ones) the whole day.’ *Obj: singular: more than 1*

- Bare singulars in non-Incorporated positions are not # neutral, bare plurals are.
- We can assume bare plurals represent kinds whose members are semantically accessible.
- Bare singulars may denote kinds but the members of the kind are not semantically accessible.

- **Singular vs. Plural in Incorporated Position**

- (5) a. anu apne beTe ke liye *laRkii/#laRkiyaaN* DhuunDh rahii hai
 Anu self’s son for girl girls is-searching *Dayal 2003*
 ‘Anu is searching for a bride/#brides for her son.’
- b. anu *botal/botaleN* ikaTThaa kartii hai
 Anu bottle/bottles collects
 ‘Anu collects bottles.’

- Plural terms denote in the plural domain and so do singular terms. Falsified by (5a).
- In the rest of this section I argue against the following conclusions which are compatible with (5):
 - ❖ PNI of singular terms involves NP (with no # feature).
 - ❖ Since singulars are NPs with no # feature they are interpreted neutrally.
- Plurals are kind terms & don’t incorporate (but Hungarian bare plurals cannot be kind terms).

- **Aspect Sensitivity**

- (6)a. anu-ne *tiin ghanTe meN /tiin ghanTe tak* kitaab paRhii
 Anu-ERG 3 hours in 3 hours for book read
 ‘Anu read a book in three hours’ = exactly one book *perfective: telic*
 ‘Anu read a book for three hours’ = one or more books *atelic*
- b. anu-ne *tiin ghanTe meN /*tiin ghanTe tak* kitaab paRh *Daalii*
 Anu-ERG 3 hours n 3 hours for book read COMPL *perf+compl: telic*
 ‘Anu read a book in three hours’ = exactly one book
- c. anu-ne tiin ghanTee meN **kitaab* ikaTTaa kar lii^{OK} *kitaabeN* ikaTThaa kar liiN *perf+compl: telic*
 Anu-ERG 3 hours in book collected-COMPL/ books collect-COMPL
 ‘Anu got done collecting *a book / ^{OK}books in three hours.’

- (7) (un dino) anu do ghanTe meN kitaab paRh letii thii
 those days Anu two hours in book read COMPL-IMPERF PAST *imperf(perf+compl)*
 ‘Those days Anu would book-read in two hours.’ *telic inside nuclear scope*

- Singular terms are interpreted as singular in telic sentences, #neutral in atelic sentences.

2.2. Number Restrictions with Collective Predicates

- *Preverbal (PNI) Singular Terms and Semi vs. Pure Collective Predicates*

- (8) a. Mari bélyeget/ bélyegeket gyűjt *from Farkas and de Swart 2003*
Mari stamp-ACC/ stamps-ACC collects
'Mari collects stamps.'
- b. Donka és én *jelöltet/ jelölteket hasonlítunk össze *from Dayal 2011*
Donka and I candidates-ACC candidates-ACC compare together
'Donka and I are comparing candidates.'

- Singular NP are compatible with 'collect'; do not have plural implicatures with 'seek'.
- They are incompatible with 'compare'.

- Hungarian is like English wrt compounding/regular complementation and indefinite objects.

- (9) a. * Bill collects a stamp.
b. Bill is an avid stamp collector.
- (10) a. *OT analyses require comparing a candidate.
b. OT analyses require candidate comparison.

- Conclusion: PNI and Compounding are not the same process, regardless of the analysis.

The Account:

- The core process involved in *collection* does not have a plurality requirement, while the core process involved in *comparison* does (but see Dobrovie-Sorin and Ferraro 2013 for an alternative approach).
- Collection is compatible with acquiring one atomic item at a time, building up to a plurality of items. Plurality can result from the fact that collection presupposes a plurality of sub-events of acquiring. The core process of *comparison*, on the other hand, requires a plurality of items to be evaluated simultaneously along some dimension. It is undefined for an atomic entity.
- The sub-events of semi-collective predicates are variants of the events associated with the lexical verbs *collect* and *gather*, something like *acquire-as-part-of-a-collection* and *move-to-designated-location*.
- Lasnik (1995), following Cusick (1981), distinguishes between such *repetitive action* verbs (those whose lexical semantics selects for pluractionality) and *repeated action* verbs (those that may or may not undergo pluractionality): A single *nibbling* consists of several small bitings that add up to a nibbling, but are not individually so.
- The profile of semi-collective predicates is like that of *nibbling*, in presupposing a plurality of sub-events. Being transitive, this aspect of their meaning reveals itself in the possibility of selecting a singular incorporated nominal.

Conclusion Based on Dayal 2011:

- Hindi has shown us that bare non-case marked singular terms can be # neutral, but only in direct object position and only if aspect supports iterativity or a quantificational structure.
- Hungarian has shown us that preverbal/incorporated singular terms cannot go with all pure collective predicates, unlike singular terms in compounding.
- Thus pseudo-incorporation is distinct from complementation as well as compounding.

III. Deriving Genericity in Pseudo-Incorporation

3.1. Reference to Kinds (primarily drawing on English)

- “Kinds” may be a unitary notion, but natural languages refer to it in several distinct ways.

11a. Dinosaurs are extinct.

Plurals kinds

b. The dinosaur is extinct.

Singular kinds

c. The/Two/Every/A (type of) dinosaur(s) are extinct.

Taxonomic kinds

d. Dinosaur-hunting/watching...

Concepts

- The kind terms in (11a) and (11b) do not have the same denotation because their distribution is different.
- Contextual manipulation can redeem an otherwise unacceptable definite singular generic (12b vs. 12c).
- Contextual manipulation does not make available predication that is not representative of the species as a whole (13b).

12a. Green bottles have narrow necks.

b. #The green bottle has a narrow neck.

c. We produce three types of bottles. The green bottle has a narrow neck.

13a. Dogs are barking outside.

b. #The dog is barking outside.

c. The rat reached Australia in 1770.

d. We photographed the grizzly.

Krifka et al 1995.

14a. In medieval times, the child didn't exist. *Krifka et al 1995; Corblin 1987, Kleiber 1990 for French*

b. # In medieval times, children didn't exist.

- Bare plurals name a kind that allows predication to its instantiations (Carlson 1977).
- Singular kind terms differ from plural kind terms because the semantics of singular morphology clashes with the conceptual notion of a kind; Singular kind terms denote atomic entities which do not allow semantic access to their instantiations (Chierchia 1998, Dayal 1992, 2004).
- Singular kind terms denote unique sub-kinds in a taxonomic hierarchy; depending on the language they can be definite or bare; quantification over sub-kinds comes about as a repair option (Dayal 1992, 2004).
- The definite singular can also denote concepts, not just kinds and objects (Krifka et al 1995).
- Concepts are a superset of Kinds; they have word-like properties but allow for phrasal modification (Krifka (1995)).

15a. *Kind formation (Nomⁿ):* $\lambda P_{\langle s, \langle s, e \rangle \rangle} \lambda s \iota x [P(s)(x)]$

b. *Derived Kind Predication (Pred^u):* $\lambda k_{\langle s, e \rangle} \lambda x [x \leq k(s)]$

c. *ⁿP_{SING}

d. $\text{Pred}_K (^n P_{\text{SING}}) = *^n (P_{\text{SING}}) \Rightarrow (\iota X^{\text{TK}} [P^{\text{TK}}(X)])$

e. KIND \subseteq CONCEPT

3.3. Pseudo-pseudo-incorporation

A Connection based on Kinds

- If incorporation does not depend on fusion of N and V, any language can have incorporation.
- Incorporation involves kinds, English bare plurals manifest incorporation (Van Geenhoven 98)
- Hindi bare singulars & English definite singular are kinds, incorporation requires kinds - but they differ.

22a. John photographed the grizzly [in Alaska].

b. We saw the Asian lion on our last tour.

c. ?We read the book last night. (*under intended reading*)

Dayal 1992, 1999

- Carlson and Sussman (2005) & Carlson (2006) reopen the possibility of incorporation by restricting attention to a subset of definites (Weak Definites), potentially changing the terms of the inquiry.

Bosch & Cieschinger (2010)

23a. Enriched interpretations of WD require the VP denotations that abstract from the referential identity of the denotation of the (prepositional) object DP, requiring a concept of the activity that abstracts from the particular referent denoted by the DP [paraphrased from the original, V.Dayal]

b. Fred went to the desk and Alice did, too.

WD unavailable

c. (23b) can have WD interpretation in a game where competing teams of people carry out various problem solving tasks and deposit a written report of their result at a desk assigned to their group. Such contexts replace the default everyday conditions with new situation-specific identity conditions.

- *Read the book* would have to have a similar explanation, though why the default fails is not so clear.

Aguilar-Guevara and Zwarts (2010)

24a. *Kind Lifting Rule*: If V is a transitive verb (or verb-preposition combination) with interpretation

$\lambda x_i \lambda e[V(e) \wedge Th(e) = x_i]$, then V also has the meaning $\lambda x_k \lambda e[V(e) \wedge R(Th(e), x_k) \wedge U(e, x_k)]$.

b. $\sqrt{\text{read the newspaper}}$? read the calendar

- *Read the book* is a potential problem, but would be explained as a “gap” typical of lexical rules.

Schwarz (2012)

25a. The definite is a regular definite but participates in a VP meaning that denotes kinds of events.

b. $\mu\text{read}_{\text{kind}} \text{ident}(\text{the newspaper})_{\mu} = {}^k\text{read-the newspaper} =$

$\lambda s \iota * \{e \mid \text{read}(e) \wedge \exists x[x = [\text{newspaper}(e)] \wedge Th(e) = x] \wedge e \leq s\}$

- *Read the book* simply doesn't make the cut for counting as an established kind (cf. *the green bottle*)

Conclusion

- Incorporation of WD cannot be *pseudo incorporation* where *book/poem-read*, *house-buy* are readily acceptable.
- It is *pseudo-pseudo-incorporation*: it requires operations not just on the verb ($V_{TV} \rightarrow V_{INC}$), but also on the noun ($DP^{K/O} \rightarrow \dots$) or the equivalent.

Selected References

- Aguilar-Guevara** A. and Joost **Zwarts**. 2010. Weak definites and reference to kinds. SALT 20.
- Asudeh**, Ash, and Line Hove **Mikkelsen**. 2000. Incorporation in Danish: Implications for interfaces. In A Collection of Papers on Head-driven Phrase Structure Grammar, eds. Ronnie Cann et al. Stanford: CSLI.
- Baker**, Mark. 1996. The Polysynthesis Parameter. Oxford: Oxford University Press.
- Bittner**, Maria. 1994. Case, Scope and Binding. Dordrecht: Kluwer.
- Bosch**, P. & M. **Cieschinger**. 2010. Weak definites - linguistic evidence for cognitive constraints. CSRT talk..
- Carlson**, Gregory. 1977. Reference to Kinds in English. Ph.D. Dissertation, University of Massachusetts.
- Chierchia**, Gennaro. 1998. Reference to Kinds Across Languages. *Natural Language Semantics* 6: 339-405.
- Chung**, Sandra, and William **Ladusaw**. 2003. *Restriction and Saturation*. Cambridge: MIT Press.
- Cusic**, David. 1981. Verbal Plurality and Aspect. PhD dissertation, Stanford University.
- Dayal**, Veneeta. 1992. The Singular-Plural Distinction in Hindi Generics. In Proceedings of SALT 2.
- Dayal**, Veneeta. 1999. Bare NPs, Reference to Kinds and Incorporation. In Proceedings of SALT 9.
- Dayal**, Veneeta. 2003. A Semantics for Pseudo Incorporation. Unpublished Rutgers University ms.
- Dayal**, Veneeta. 2004. Number Marking and (In)definiteness in Kind Terms. *Linguistics and Philosophy* 27.4.
- Dayal**, Veneeta. 2011. Hindi Pseudo Incorporation. *NLLT* 29.1.
- Dobrovie-Sorin**, C, T **Bleam** & M. T **Espinal**. 2006. Bare nouns, number and types of incorporation. In Tasmowski & Voegelé (eds.), 51–79.
- Dobrovie-Sorin**, C, & T. Ferreira. 2013. Amounts of Objects and Pluralities. This conference.
- Dowty**, David. 1979. *Word Meaning and Montague Grammar*. Dordrecht: Reidel.
- Espinal**, Maria T. & Louise. **McNally**. Bare nominals & incorporating verbs in Catalan and Spanish. *JoL* 47(2).
- Farkas**, D. & **de Swart** H. 2003. The Semantics of Incorporation. CSLI.
- Krifka**, M. et al. 1995. Genericity: An Introduction. *The Generic Book*, eds. G. Carlson et al. UChicago Press.
- Krifka**, M. 1995. Common Nouns in Chinese & English. *The Generic Book*, Carlson et al (eds). UChicago Press.
- Lasnik**, Peter. 1995. Plurality, Conjunction and Events. Dordrecht: Kluwer.
- Massam**, Diane. 2001. Pseudo Noun Incorporation in Niuean. *Natural Language and Linguistic Theory* 19.
- Mithun**, Marianne. 1984. The Evolution of Noun Incorporation. *Language* 60: 847-894.
- Porterfield**, Leslie, and Veneeta **Srivastav**. 1988. (In)definiteness in the Absence of Articles. WCCFL.
- Pustejovsky**, James. 1991. The Generative Lexicon. *Computational Linguistics* 17: 409-41.
- Schwarz**, F. 2012. How Weak are Weak Definites? To appear in *Weak Referentiality*, Aguilar-Guevara (ed).
- Van Geenhoven**, Veerle. 1998. Semantic Incorporation and Indefinite Descriptions. Palo Alto: CSLI.
- Van Geenhoven**, Veerle. 2004. For-Adverbials, Frequentative Aspect and Pluractionality. *NLS* 12.
- Zucchi**, A & M. **White**. 2001. ‘Twigs, Sequences, and the Temporal Constitution of Predicates’, *L&P* 24.