

The role of little *n* in the derivation of null arguments

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0. Recent analyses of pro-drop phenomena have sought to reduce *pro* to the categorizing head *n* that doesn't merge with a root (Ruda 2017, Dvořák 2015, Barbosa 2019). This approach can be traced back to Tomioka (2003), who observed that all the languages that allow discourse pro-drop have (robust) bare NP arguments and suggested that what underlies zero arguments is the fact that languages (almost) universally allow null NP anaphora (cf. *John bought one book. I bought five* [—]). In a language that lacks determiners or licenses a null D, this operation will give rise to phonologically unrealized arguments. In languages in which D (or other functional elements above N) is necessarily overt, a remnant D will always show up so this process will never yield a silent argument. Tomioka argues that Japanese null arguments denote properties whose descriptive content is pragmatically retrieved, their possible interpretations being derived by general type-shifting operations. Consider (1):

- (1) a. Ken-wa zibun-no kuruma-o arat-ta. b. Erika-mo \emptyset arat-ta.
Ken-TOP self-GEN car-ACC wash-PAST Erika -also wash-PAST
'Ken washed his car(s). Erika washed \her/his/a car(s)[, too.]'

(1) is ambiguous between a strict and a sloppy reading of the zero object. The sloppy reading is derived as follows. In the situation in which (1) is uttered, the property $\lambda y[\text{car}(y) \ \& \ \text{own}(y), (x)]$ is salient, so *pro* is interpreted as denoting this property. Since the predicate requires an object of type *e*, the property is type-shifted to *e* via iota-closure, resulting in $\iota y [\text{car}(y) \ \& \ \text{own}(y), (x)]$. After the variable *x* is replaced by the denotation of *Ken*, the sloppy reading is obtained. Kurařugi (2018) extends this approach and argues that the base-generated empty nominals are interpreted via choice-functions. Combining these proposals with the idea that nouns are formed by merging a root with a categorizer, a plausible candidate for a zero argument is an *n(P)* that lacks a syntactically projecting restricting property.

In this talk, I examine null objects (NO) in European Portuguese (EP) and I argue that they are adequately analyzed in this fashion. Then I extend this approach to rich agreement pro-drop with additional qualifications.

1. Definite NOs have the following set of properties.

1.1 *Strict and sloppy readings*. This is a stable crosslinguistic feature of anaphoric NOs (Landau 2018 on Hebrew; Cyrino 2017 on Brazilian Port. (BP)).

1.2 *The antecedent of an embedded NO cannot be a matrix subject*:

- (2) a. O João_i disse que a Maria não conhece **ec*_i / *o*_i pessoalmente. [EP]
the João said that the Maria not know *ec*/him personally
'João said that Maria doesn't know him in person.'
b. [Speaking of Peter_k ...] O João_i disse que a Maria não conhece *ec*_k / *o*_k pessoalmente.
the João said that the Maria not know *ec*/him personally
'João said that Maria doesn't know him (=Peter) in person.'

In (2), the embedded object EC may refer only to someone whose reference is fixed in discourse, outside of the entire sentence, but not to the matrix subject. This feature indicates that anaphoric NOs are not pronouns (cf. also Huang 1987 on Chinese and Korean).

1.3 *Inanimate antecedents are favored* Corpus investigations reveal a strong tendency for anaphoric NOs to have inanimate antecedents (Schwenter 2014, Rinke et al., 2017, on EP; Cyrino, 2017 on BP and Erteschik-Shir et al. 2013, on Hebrew).

2. Currently, there are essentially two main approaches to NOs: (i) the argument ellipsis (AE) analysis, which claims that the NO is an elided full-fledged nominal projection (Landau 2018; Cyrino 2017); and (ii) the null *nP* proform analysis (Ruda 2017). Both the AE and the null *nP* proform analyses have the potential to handle the availability of sloppy interpretation. Property 2, however, appears to favor AE ((2) would be straightforwardly ruled out by Condition C). The animacy effects, by contrast, are not accounted for under AE. On the surface, properties 2 and 3 constitute a real challenge for the base-generated nominal analysis. Yet, when we look at clear instances NP anaphora, we observe that they indeed display these properties. This is the case of Noun Incorporation (NI) in languages in which an incorporated noun (IN) is used productively for discourse purposes, e. g., to express definite nominal arguments that are backgrounded old information (Type III NI in Mithun 1984).

(3) *Mapudungu* (Baker et al, 2005:145, example attributed to Harmelink 1992:135)

Kiñe kelluwen rëtre-ke-ø-y pali ñi tripalwe pële kangelu
 one team push-HAB-30-IND.3sS ball 3.POSS goal toward her
 ingkawen katrütu-**pali**-ke-y.

side intercept-ball-HAB-3sS

'One team pushes the ball toward their goal, and the other side tries to intercept it.'

2.1 Interestingly, when the antecedent is found in the same sentence as the IN, functioning as the subject of a higher clause, a coreferential interpretation is not accepted.

(4) #Ti ullcha domo pe-fi-y ti ayü-**domo**-le-chi wentru.
 the young woman see-30-IND.3sS the love-woman-STAT-ADJ man

'The young woman saw the man who loved the/that woman [Baker et al (2005):146, ex.16]

This is reminiscent of Property 1.2 NOs. Baker (1988) attributes this restriction to Condition C.

2.2 Sensitivity to animacy is yet another property of NI. Inanimate nouns are more likely to incorporate than animate or human nouns (Mithun 1984). As happens in the case of NO, this constraint is not categorical, and is best described as a tendency.

3. I take these similarities between NO and IN as indication that NOs minimally involve *n*. The *n* denotes a contextually salient set and independently motivated type-shifting operations derive the individual interpretation (Iota) or the existential interpretation (vP level Existential Closure, in the case of indefinite plural NOs). Since there is no evidence in favor of incorporation (the NO can be a Small Clause subject) I do not assume that *n* incorporates. The set of properties that NO and IN have in common follows from their categorial status rather than from incorporation per se. Being a nominal, *n* is subject to Condition C effects. The animacy effect follows from competition with the overt pronoun option. A similar explanation can carry over to NI, given that it alternates (and competes) with non-NI configurations.

4. Turning now to null subjects, most analyses of subject omission in the consistent NSLs invoke D (Holmberg, 2010; Roberts, 2010; Anagnostopoulou, 2017). Yet, a null subject can be indefinite (Leonetti 2022):

(5) ¿Asistieron obispos? — No, no asistieron. [Spanish]
 attended.3PL bishops — no not attended.3PL 'Did bishops attend? — No, none attended.'

I argue that *n* (rather than D) is at the root of the null subject in the consistent NSLs. I adopt a suggestion by Koenenman and Zeijlstra (2022) that subject Agr (φ) in these languages is an independent morpheme and has inherently valued φ features. I take a pair merge approach to head raising (Chomsky 2020). Schematically, *n* is first merged in argument position, vP internally (6); since the consistent NSLs are verb raising languages, I assume that *v* is first pair merged with T (drawn from the lexicon) forming $\langle v, T \rangle$, and the resulting amalgam is set merged with vP:

(6) $\{ \langle v, T \rangle \{ \dots n \ \varphi \dots \} \}$

n is pair merged with φ (from the lexicon), yielding $\langle \varphi, n \rangle$. This amalgam is then set merged with (6) yielding $\{ \langle n, \varphi \rangle \{ \langle v, T \rangle \{ vP \dots \# \ \varphi \dots \} \} \}$, thereby satisfying the EPP. Subsequent Morphological Merger of [_{*n*} *n*- φ] with [_{*T*} *v*-T] under T (Matushansky, 2006) yields an inflectional head containing an incorporated pronoun which is what we need for a consistent null subject language.

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