The finiteness-*pro*-drop generalization

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The goal of this paper is to argue that (for at least a non-trivial set of languages) *pro* never appears in subject position in prototypically non-finite clauses. Standard GB theory Chomsky (1981) and Minimalist descendents thereof (Martin, 2001) maintained a bijective correspondence between the subject of a non-finite clause (excluding raising-to-subject and -object (ECM) constructions) and PRO, on case-theoretic grounds. However, Sigurðsson (1991); Landau (2004); Sundaresan and McFadden (2009) and others have shown that this putative correspondence can be undermined in both directions: PRO can bear standard case and overt DPs may occupy non-finite subject position. This however means that it is no longer quite so straightforward to distinguish PRO from *pro* in non-finite subject position. Consider the sentences below:

(1) $[_{GerP}$ EC$_i$ having no idea how to get home], Alex$_i$ was forced to ask for directions.

(2) $[_{GerP}$ Sue$_i$ having no idea how to get home], Alex$_j$ was forced to ask for directions.

The structures above constitute a minimal pair, with a covert subject in the gerundival clause in (1) alternating with an overt one in the same environment in (2). Under standard Case theory, the former, taken on its own, would automatically be classified as PRO, given its nonfinite subject status. But the presence of the overt subject *Sue* in (2) calls such a conclusion into question. In particular, we can no longer assume from its non-finite subjecthood alone, that the silent DP in (1) is PRO and not *pro*. In English, this problem is assuaged somewhat, because we have independent grounds to rule out *pro*: English doesn't exhibit *pro*-drop elsewhere, thus null subjects are generally taken to be PRO.

But in languages that do exhibit *pro*-drop, and in particular subject-drop, this distinction is much harder to disentangle. In such languages, overt subjects regularly alternate with *pro* subjects, e.g. in prototypical finite clauses; thus, the null subject that alternates with an overt one in a non-finite clause might be taken to be *pro*, rather than PRO, as well. This may, in fact, be the null hypothesis. Kissock (2014) takes precisely this position for Telugu, arguing that all null arguments in this language are *pro*, and, by extension, that Telugu lacks PRO altogether. To resolve such issues, we need recourse to independent, empirical diagnostics that distinguish the two types of null argument. A good place to start is Landau (2013)'s "OC Signature" which claims that: "In a control construction [...X$_i$...[S PRO$_i$...]...], where X controls the PRO subject of the clause S: a. The controller(s) X mustbe (a) co-dependent(s) [argument or adjunct] of S. b. PRO (or part of it) must be interpreted as a bound variable." This in turn yields some useful diagnostics to distinguish between PRO and *pro*: the former, being a bound variable, is obligatorily coreferent with a (superordinate or subordinate) antecedent, yields sloppy readings under VP-ellipsis, and is interpreted obligatorily *de se*. The latter is a covert deictic pronoun: as such, it is not obligatorily coreferent with an antecedent, may yield strict or sloppy readings under VP-ellipsis, and can be interpreted as *de se* or *de re* relative to its antecedent.

Armed with these diagnostics, I examine a range of languages (tested against native speakers), which have the following properties: (i) they exhibit subject *pro*-drop, and (ii) they show an alternation between overt and coverts subjects in certain prototypically non-finite clauses. The goal is to test whether the alternating null subject in these non-finite clauses is PRO or *pro*. Given the alternation between overt subjects and *pro* elsewhere, the null hypothesis is that it is *pro*. Contrary to expectation, however, the interpretive diagnostics mentioned above actually indicate that the null subject is in fact PRO. Consider the following minimal pair in Spanish:

(3) a. A-l mostra-r María$_i$ los síntomas de la gripe, Carlos$_j$ se vacun-ó.
   At-the show-INF María$_i$ the symptoms of the flu, Carlos$_j$ ANAPH vaccinate-PST
   "$[_{CP}$ (With) Maria$_i$ showing the symptoms of flu], Carlos$_j$ got vaccinated."

b. A-l   mostra-r $EC_{i,*j}$ los síntomas   de la   gripe, Carlos$_i$ se   vacun-ó.
    At-the show-INF $EC_{i,*j}$ the symptoms of the flu,   Carlos$_i$ ANAPH vaccinate-PST
    "[$EC_{i,*j}$ showing the symptoms of flu], Carlos got vaccinated."

The embedded clauses in these structures may be classified as "non-finite" in the sense that their embedded verbs lack tense/agreement. Thus, what we have here is an alternation between an overt and covert nonfinite subject. This null subject is obligatorily coreferent with the subject of the matrix clause ((3b)), and yields sloppy readings under VP ellipsis (4):

(4)   Al   mostrar los primeros síntomas de la   gripe, C.   se   vacun-ó,
       At-the show-INF the first   symptoms of the flu,   Carlos ANAPH vaccinate-PST
       y,   (entonces) María también.
       and (then)   María too
       "Showing the first symptoms of the flu, Carlos$_i$ then got vaccinated. And [$_{CP}$ ~~showing the first symptoms of the flu~~, María$_j$ (then) did too."
       ✔ **Sloppy; *Strict:** And once María/*Carlos showed the first symptoms of the flu this year, then María got vaccinated too.

It is also interpreted obligatorily *de se*. In (3b) above, Carlos has to be aware that he is the one showing flu-symptoms; it cannot, e.g., be the case that these flu symptoms belong to someone that <u>happens</u> to be him: as e.g. in an anonymized flu-testing scenario.

These diagnostics show that the null subject in (3b) bears the definitive fingerprint of OC PRO, not *pro*. But if the clause has tense/agreement inflection (as in (5)), non-coreferent *pro*-drop again becomes possible. The null subject in (5) can refer to either the matrix subject *Carlos* or to a discourse-salient entity (like e.g. María), yields strict/sloppy readings under ellipsis, and can be interpreted *de re*: i.e. it behaves like *pro*, not like OC PRO:

(5)   Carlos$_i$ pens-ó   [$_{CP}$ que $EC_{i,j}$ mostra-ba   los síntomas   de la   gripe].
       Carlos$_i$ think-PST [$_{CP}$ that $EC_{i,j}$ show.3SG-IMPF the symptoms of the flu]
       "Carlos$_i$ thought [$_{CP}$ $EC_{i,j}$ was showing the symptoms of the flu]."

Spanish independently allows overt nonfinite subjects, and subject *pro*-drop. Thus, *pro*-drop must be restricted in non-finite subject position for <u>independent</u> reasons. This same set of patterns holds for the other languages tested: Italian, Romanian, Hungarian, Japanese, Hindi and Tamil. Based on these results, I formulate the "Finiteness *pro*-drop generalization" below:

(6)   *Pro*-drop is restricted in the subject position of prototypically non-finite clauses.

The theoretical reasons behind (6) are less obvious. One possibility is that this is a language-internal instantiation of the rich-agreement hypothesis for *pro*-drop (Taraldsen, 1978). Potential support for this hypothesis comes from Pashto (Huang, 1984). Pashto has NOM-ACC agreement in the present but displays an ergative system in the past, with subject agreement if the verb is intransitive, and object agreement if it is transitive. Crucially, *pro*-drop seems to be directly conditioned by these patterns: only subject pro-drop obtains with a transitive verb in the present, but only object pro-drop is possible when the transitive verb is in the past and marked for object-agreement. Such data suggest a direct connection between agreement and *pro*-drop licensing in designated syntactic positions. At the same time, work in the intervening years has turned up numerous potential counter-examples to Taraldsen's Generalization. E.g. Chinese, Japanese, and Malayalam lack morphological agreement entirely, yet allow *pro*-drop (Jaeggli and Safir, 1989; Biberauer, Holmberg, Roberts, and Sheehan, 2010). Others like Finnish, Marathi and Brazilian Portuguese allow partial *pro*-drop (Holmberg, Nayadu, and Sheehan, 2009) which is licensed under specialized conditions. Such data force us to re-evaluate the nature of the *pro*-drop/agreement correlation. E.g. *pro*-drop in languages without overt agreement suggests that the input condition for *pro*-drop is not the overt marking, but the underlying representation,

of agreement. Another possibility may be that these languages have a different sort of *pro-drop*, one not subject to Taraldsen's Generalization (Neeleman and Szendrői, 2007). The choice between these and other solutions must, as always, be decided empirically.

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