PRO as a Partial Copy: A movement-based account of Control

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Introduction: Approaches to Control in Minimalism have either analyze it as Agree-based (Landau 2000, 2004, 2008), or Movement-based (Hornstein 1999; Boeckx and Hornstein 2004, 2006; Boeckx, Hornstein and Nunes 2010), or both (van Urk 2010; Sheehan *to app.*). I argue in this paper that Buli is unusual in having a lexical instance of PRO in nonfinite clauses. The clear fact that nonfinite controlled complements surface with overt pronominal subjects raises interesting questions for theories of PRO which either denies its syntactic presence (Bresnan 1978, 1982; Chierchia 1984; Jackendoff and Culicover 2003, a.o) or requires it to be null altogether. The fact that it is overt, I argue, shows that phonetic nullness is not an inherent property of the controlled element as previously assumed. I propose that the overt PRO(nominal) is a partial-spell out copy of the moved DP. The motivation for this analysis comes from the observation that other movement dependencies like raising and long-distance subject extraction employs the same mechanism of resumption. This, I argue provides a novel argument for a particular instantiation of the Copy Theory (Chomsky 1993, 1995) where pronouns can spell-out copies of DPs (Zaenen et al. 1981; Pesetsky 1998; Sichel 2014; Harizanov 2014; van Urk 2015).

Data and Discussion: The empirical focus of this paper is controlled complements in Buli, illustrated in (1) where the infinitival complement has an overt pronominal which co-varies with and is obligatorily co-indexed with a matrix argument. Example (1a) shows obligatorily co-indexation with a singular subject while (1b) shows co-indexation with a plural object.

(1) a. Asouk$_i$ tieri   *(wa$_{i/*j}$) da gbaŋ   b. Mi tulim bisaŋa$_i$ zuk *(ba$_{i/*j}$) da gbaŋ
     Asouk remember 3SG   buy book   1SG turn child.PLU.DEF head 3PLU buy book
     'Asouk remembered to buy a book'   'I convinced the children to buy a book'

Finite-nonfinite Distinction: Treating clauses as nonfinite in a language such as Buli is not obvious. However, three diagnostics have been employed to make this distinction including the future marker, subject extraction, and tonal patterns. I illustrate with the future marker in (2-3). In finite clauses, both matrix and embedded, the future marker is possible (2). In contrast, it is excluded from nonfinite clauses (3).

(2) a. Asibi ali da gbaŋ   b. Asouk pachim Asibi   ali   da gbaŋ
     Asibi FUT buy book   Asouk think   Asibi   FUT buy book
     'Asibi will buy a book'   'Asouk thinks that Asibi will buy a book'
(3)   *Asouk$_i$ tieri   *(wa$_{i/*j}$) ali   da   gbaŋ
     Asouk   remember 3SG   FUT buy book

Control Properties: Except for it overtness, the pronominal bears the signature properties of PRO (Williams 1980; Hornstein 1999; Landau 2013). It requires a local c-commanding antecedent (4a-b). It has only a bound variable reading (4c), and in the right context (4d) must be *de se*.

(4) a. Asouk$_i$ nya   asi nurma$_j$ tieri   *(wa$_{*i}$/ba$_j$) da gbaŋ
     Asouk   realize C   people.DEF remember   3SG/3PLU buy book
     'Asouk realized that the people remembered to buy a book'
    b. Asouk$_i$ doama$_j$ baŋ   *(wa$_{*i}$/ba$_j$)   da   gbaŋ
     Asouk   friend.PLU forget   3SG/3PLU   buy book
     'Asouk's Friends   forgot to buy a book'
    c. Wa:-me:na$_i$ tieri   *(wa$_i$) da   gbaŋ
     someone-all remember 3SG   buy   book
     'Everyone remembered to buy a book'
    d. Asouk a-zienti *(wa$_i$) chim   na:b
     Asouk eager   3SG   become chief
     'Asouk is eager to become a chief'

Proposal: In analyzing this data, I adopt Hornstein's (1999, 2003) Movement Theory of Control (MTC) in which the relation between the controller and the controllee is mediated by movement. Under this account, the sentence in (1a) will have the derivation in (5). *Asouk* first merges with the embedded verb *da* 'buy' checking the verb's theta-role. When the verb and T_1 merges, Asouk moves to Spec TP_1 to satisfy the EPP requirement of T. When the matrix verb *tieri* 'remember' is merged with TP_1, *Asouk* moves once again to the matrix verb to check the verb's theta-role. *Asouk* finally raises to Spec TP_2 when T_2 is merged with the verb. A movement analysis readily accounts for the various properties identified in (4) including the strict co-variance between the controller and the controllee.

(5) $[_{TP}$ [Asouk] T_2 $[_{VP}$ [~~Asouk~~] V tieri $[_{TP1}$ [~~Asouk~~] T_1 $[_{VP}$ [~~Asouk~~] V da [gbaŋ]]]]]]

A question at this point is: if this is the right derivation how did we end up with a pronominal in the subject position of the embedded TP? Resumption is a general mechanism employed by languages, for instance Nupe (Kandybowicz 2007) and Yoruba (Adesola 2010) in a movement relation, and Buli like these languages employs resumption. Both raising (6) and Long-distance subject extraction (7) employs resumptions in the position from which movement took place. Note that like control, the resumptive pronoun co-varies in number, person and class with the moved DP.

(6) a. Asouk$_i$ magsi *(wa$_{i/*j}$) cheŋ suku: b. Nurma$_i$ magsi *(ba$_{i/*j}$) cheŋ suku:
       Asouk   right   3SG   go   school   people.DEF right   3PLU go school
       'It is right for Asouk to go to school'   'It is right for the people to go to school'
(7) a. Ka wana$_i$ ati fi   pa:-chim *(wa$_i$) ali dig lammu:
       Q who ATI 2SG think   3SG ALI cook meat.DEF
       'Who do you think cooked the meat?'
    b. Ka nur   bana$_i$ ati fi pa:-chim *(ba$_i$) ali   dig lammu:
       Q people which ATI 2SG think   3PLU ALI cook meat.DEF
       'Which people do you think cooked the meat?'
The sensitivity of the raising and subject extraction to islands in (8) presents strong evidence for a movement analysis of (6-7).
(8) a. *Asouk magsi ba   pa   nipok wai   ati   wa   a-ya: la
       Asouk magsi 3PLU hire woman REL.PRO ATI   3SG ASP-love PRT
       'It is right for Asouk to hire the woman that he loves'
    b. *Ka wana$_i$ ati fi   pa:-chim Asouk pa   nipok   wai   ati wa   a-ya: la
        Q who ATI 2SG think   Asouk hire   woman REL.PRO ATI3SG ASP-love PRT
        'Who$_i$ do you think Asouk hired the woman that he$_i$ loves'
I propose that the overt pronominal in raising, Long-distance subject extraction and control is derived from a single operation. Specifically, the pronominal in the subject of the complement clauses in raising, Long-distance subject extraction and control is a partial spell-out of the full DP (Zaenen et al. 1981; Pesetsky 1998; Sichel 2014; Harizanov 2014; van Urk 2015). This is expected under the copy theory of movement (Chomsky 1993, 1995) where moved elements leave behind copies rather then traces. What, however, needs explanation is the transition from full copies of DPs to Pronouns. On this, I follow van Urk (2015) in assuming that DP copies have articulated internal structure which can be spelled-out as pronouns.

Key words: Syntax, Control, PRO, Movement, Copy

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