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A stronger argument for backward control

1**. Bakground:** Polinsky & Potsdam (P&P) (2002) discuss a pattern of backward subject control in the Nahk-Dagestanian language Tsez. As shown in (1), two subject arguments are co-indexed but it is the higher one that is unpronounced. P&P argue that the existence of backward control (BC) in natural language is the strongest argument brought by the movement analysis to control (Hornstein 1999) against the PRO-based approach, see e.g. Landau (1999). Landau (2007) raises two objections to this: i) the chain of the subject DP in Tsez bears two distinct cases, ergative and absolutive. Hence it is not clear why the merging of a second DP in the matrix clause is impossible. ii) BC is very rare. In Tsez only **two** verbs display BC, i.e. a subset of verbs that allow Obligatory Control (OC). And most commonly, the BC verbs are aspectuals (*begin*, *stop*) which also have a standard raising analysis.

2. On the basis of Greek and Romanian, we make a stronger case for BC. For these languages neither of Landau's objections hold. We argue that these languages allow BC, as they make extensive use of clitic/agreement-associate pairs, see Alexiadou & Anagnostopoulou (A&A 1998, 2001), P&P (2002).

3. As Greek and Romanian lack infinitives, Control is instantiated in a sub-set of subjunctive complements. Greek subjunctives are introduced by the marker *na* (2). The Romanian subjunctive marker is *să* (3). Romanian has a second type of subjunctive, introduced by the complementizer *ca* plus *să*. *ca* is absent in OC (Grosu & Horvath 1987, 4). Greek subjunctives and Romanian *să* (but not *ca să*) subjunctives lack obviation effects and thus behave like infinitives (Terzi 1992). Two main types of subjunctives have been recognized: OC ones and non-OC ones (NOC). **OC-subjunctives** are found with verbs such as *ksero* 'know how', *herome* 'be happy', *ksehno* 'forget'; N**OC-subjunctives** are found with e.g. volitional predicates. In OC-subjunctives, the embedded and the matrix verb agree in number and person with the matrix subject; the embedded verb doesn't have independent tense (morphological or semantic (5-6); Iatridou 1993, Varlokosta 1994, Alboiu 2007).

4. All OC verbs in Greek/Romanian allow BC. The subject can appear in several positions (7-8). When the subject is in the complement clause, it agrees with both the embedded and the matrix verb in person and number. This is a pattern of BC, as evidenced by the following: i) The subject is truly embedded (i.e. not situated in the higher clause) as it precedes objects (note the VSO order in 9) and VP-modifiers of the lower verb. In Greek (9a) the event adverbial modifies either the matrix or the embedded verb. This difference in interpretation depends on the adjunction site of the adverb. When it modifies the matrix verb, it (right-) adjoins to the matrix vP/TP. When it modifies the embedded verb, it adjoins to the embedded vP/TP. In the low reading, the subject must be in the embedded clause. If it was part of the higher clause, the adverbial would also be adjoined to the higher clause, resulting in the high reading obligatorily. In (9b), where it clearly modifies the matrix verb, the adverb only has matrix scope. Romanian is similar. ii) An unpronounced subject is present in the matrix clause. In Greek/Romanian, nominal secondary predicates and modifiers like "alone" agree in gender and number with the c-commanding DP they modify (10 for Romanian; Greek patterns alike). In BC, such modifiers can be licensed in the matrix clause, while the modified DP is in the embedded clause (11), suggesting that a silent copy is present in the matrix. This contrasts with NOC verbs/non-subjunctives (12). In conclusion, Greek/Romanian provide uncontroversial evidence for BC and in turn for Control as movement. Landau's objections don't hold. Both clauses have the same Case, namely nominative (the expected pattern under the Copy and Delete analysis) and BC is found with all OC verbs.

5. As BC patterns lack Tense, they constitute domains transparent for A-movement, see Alboiu (2007), Rivero & Geber (2008). A straightforward account can be given in Chomsky's (2007) system where Case is a property of C inherited by T. If the presence of C turns a clause into a phase, then lack of C (and hence of T features and Case) entails lack of a phase (13). Romanian provides evidence for the absence of C, as the complementizer *ca* is always absent in OC (4). What are the properties Greek and Romanian share that could potentially explain the common BC pattern? Both have subjunctives in OC, are pro-drop, have VSO orders with VP-internal subjects, clitic doubling and check EPP via V-movement (A&A 1998). The lack of infinitives cannot be the source of BC, as e.g. Bulgarian lacks infinitives but also lacks BC, while Spanish has infinitives, but exhibits BC (14). Spanish but not Bulgarian shares with Greek and Romanian the other properties. A&A (1998, 2001) have proposed that these properties are a reflex of a single one: the extensive availability of agreement-associate relationships of the clitic doubling type in a language. Unlike long distance Agree, doubling involves movement of the clitic/agreement without phrasal pied piping (Anagnostopoulou 2003, Preminger 2008) which leads to Case and EPP checking allowing the DP to remain in situ.

Data

(1) Δ_i [kid-bā$_i$ ziya b-išra] y-/*b- oqsi
II.ABS girl.II.ERG cowIII.abs III-feed.INF II./*III.begin-PAST.EVID
The girl began to feed the cow

(2) *O Petros/ego kser-i/-o na koliba-i/-o* *Greek*
Peter-nom/I knows/know-1sg subj swim-3sg/-1sg
Peter knows how to swim/I know how to swim

(3) Ion a uitat să limpezească cămasa *Romanian*
Ion forgot-3sg subj rinse-3sg shirt-the
Ion forgot to rinse the shirt

(4) Ion$_i$ vrea/*a uitat ca azi să cinte pro$_{j/*i}$ la violoncel.
Ion wants/forgot that today subj play at cello
Ion $_i$ wants pro$_{j/*i}$ to play the cello today./*John forgot to play the cello today.

(5) a. *(o Janis) kseri na kolibisi (o Janis) avrio
John-nom knows subj swim-3sg tomorrow
b. *o Janis kseri na kolibisi i Maria
John-nom knows subj swim-3sg Mary-nom

(6) a. *(Ion) stie să a inotat (Ion) *Romanian*
John-nom knows-3sg subj swam-3sg.
b. *(Ion) stie să inoate (Ion) miine
John-nom knows-3sg subj swam-3sg tomorrow.
c. *Ion stie să inoate Maria
John knows subj swim Mary

(7) (O Janis) emathe (o Janis) na pezi (o Janis) kithara (o Janis)
John-nom learned-3sg John-nom subj play-3sg John-nom guitar John-nom
Janis learned to play the guitar

(8) (Ion) a uitat (Ion) să cinte (Ion) la chitara (Ion)
Ion has forgotten (Ion) subj play Ion at guitar Ion
Ion has forgotten how to play the guitar

(9) a. ksehase na ksevgali o Janis to pukamiso teseris fores
forgot subj rinse John the shirt four times (four rinsings/forgettings)
John forgot to rinse the shirt four times
b. ksehase teseris fores na ksevgali o Janis to pukamiso
forgot four times subj rinse John the shirt (four forgettings)
John forgot four times to rinse the shirt

(10) a. Ion a plecat panicat/*ă. *Romanian*
Ion left panicking-ms/fem
Ion left in panic
b. Ion a venit singur/ *ă.
Ion came alone-ms/alone-fem
Ion came alone

(11) a. Si-a amintit ingrijorat să stinga Ion lumina.
ReflexD-has-3sg remembered worried-ms subj switch off John light-the
John remembered in panic to switch off the light
b. A invatat singur să -si resolve Ion problemele.
Has-3sg learned alone-ms subj-reflexD solve John problems-the
John learned alone to solve the problems

(12) a. *Vrea nerabdator să ia Ion examenele.
Wants impatient-ms subj take John exams-the
b. * Crede increzator că va lua Ion examenele.
Believes optimistic-ms that fut take John exams-the

(13) [$_{TP1}$ T° [$_{TP2anaphoric}$ na/ să NOM]]

(14) (Juan) aprendió a tocar (Juan) quitara (Juan)
(John) learned to play (John) guitar (John)
John learned to play the guitar