On Long Distance Agreement, the Spec,Head Configuration and Overt Agreement[1]

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The goal of this paper is twofold: First, to explain regularities in Agreement paradigms across languages, specifically, the fact that in a number of languages moved elements trigger agreement as opposed to in situ elements. Secondly, to test the pertinence of a Spec,Head approach to this paradigm (Chomsky 1995) vs. a Long Distance Agreement approach (e.g., Chomsky 2001). The claim being made is that incremental computation of Agreement explains such paradigms in a way that is compatible with Long Distance Agreement (Chomsky 2001, etc.). Section 1 presents the relevant crosslinguistic generalizations, section 2 discusses the relevance for syntactic theorizing and section 3 presents the analysis.

1. Agreement paradigms

According to Greenberg's Universal 33 (Greenberg 1966: 94), one can find languages where verbal agreement follows the paradigms in (1) and (2) but not the one in (3) (where this is illustrated in terms of Probes (P) and Goals (G)):

(1) G P$_{\text{overt agreement}}$ vs.   P$_{\text{overt agreement}}$ G   √ across languages
(2) G P$_{\text{overt agreement}}$ vs.   P G   √ across languages
(3) G P   vs.   P$_{\text{overt agreement}}$ G   * across languages

The crosslinguistic validity of this observation is present in some way or other in works as Barlow (1992), Corbett (1979), Manzini and Savoia (1998), Moravcsik (1978) and Samek-Lodovici (2002). The following data from the Italian dialect of Ancona, Brazilian Portuguese and French illustrate the generalization:

(4) *Italian Dialect of Ancona*
     a.   Questo, lo   f*a*   / *f*anno*   sempre i   bambini.
         thisACC itACC does / *do*   *always the children*
     b.   Questo, i   bambini lo   f*anno* / *f*a*   sempre.
         thisACC the children itACC do   /   *does always* (Cardinaletti 1997: 38-9)

(5) *Brazilian Portuguese*
     a.   Mesm*o* / *Mesm*as*   as meninas criticaram o   professor.
         even   / *even-FEM.PL the girls*   *criticized the teacher*
     b.   As meninas mesm*as*   / *mesm*o*   criticaram o   professor.
         the girls   *even.FEM.PL* / *even*   *criticized the teacher*
         'Even the girls criticized the teacher.' (Hornstein et al. 2006: 119)

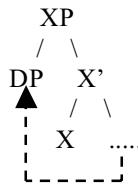
(6) *French*

    a.   Jean a   v*u*   / **u*e   la fille
        Jean has seen / seen.AGR.FEM the girl
        'Jean saw the girl.'

    b.   Quelle fille Jean a(-t-il) v*u*e   / *v*u*?
        which girl Jean has-he seen.AGR.FEM / seen
        'Which girl did Jean see?'

    c.   Cette fille a   été v*u*e   / *v*u*
        this girl has been seen.AGR.FEM   / seen
        'The girl was seen.' (Boeckx 2004: 23)

A number of languages, some of them genetically unrelated, follow such pattern, e.g., Arabic, Hungarian or certain African languages (see Samek-Lodovici 2002 for an overview), a fact that provides further evidence for the validity of the above generalization. The next section discusses the relevance that these paradigms have for syntactic theorizing.[2]

2. Relevance for syntactic theorizing

Such facts have played a prominent role in syntactic theorizing, i.e., in that they provided and argument for role of Spec,Head relations (cf. Kayne 1989) and even part of the empirical basis of the LCA in its original formulation (Kayne 1994).

(7) *Spec,Head relations*

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                        XP
                       /  \
                     DP    X'
                     ▲    /  \
                     ┊   X   .....
                     └ ─ ─ ─ ┘
```

Within an approach to syntax which assumes Spec,Head configurations, the relation between the P and the G at the point of Spell-out is different in the in situ and the movement counterparts. Hence, it is natural to consider the Spec,Head relation the domain of (morphological) agreement (Kayne 1994) at least in the relevant languages.

In contrast, the picture changes once one assumes Long Distance Agreement (Chomsky 2001, etc.).

(8) *Long Distance Agreement (LDA)*

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                        X'
                       /  \
                      X  ..... DP
                      └ ─ ─ ─ ─ ┘
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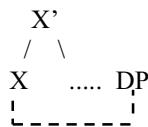
Within such system, there is no distinction between the moved and the in situ version in terms of the relation of P and G at the point of Spell-out. Surely enough, things move or do not move but the relation between P and G is the same no matter what. [3] Therefore, such Agreement Asymmetries do not follow from the system as opposed to the Spec,Head approach.

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[2] Not every single language shows such Agreement Asymmetries: some languages show overt Agreement irrespective of the precedence relations between the P and the G, other show no overt Agreement, etc. The existence of language particular variation is beyond question. Still, the correlation that Greenberg named Universal 33 seems to be robust, a fact that we would like to explain. Therefore, I do not take such crosslinguistic variation to question the relevance of Greenberg's observation and, consequently, the general approach explored in this paper.

[3] Notice that analyzing such fact by relating them to the presence / absence of an EPP feature in P would but disguise Spec,Head relations under a different name.

In fact, as Chomsky (2005) states, as the role of Spec,Head relations is diminished, this calls for a reconsideration of a number of issues, Agreement being among the most relevant ones. [4] This is the purpose of the next section. Agreement Asymmetries are shown to follow from computational dynamics of the interfaces, more specifically, from the incremental nature of the parser (Levelt 1989) and its interaction with the syntax (e.g., Bock et al. 1992, Phillips 1996 and Ferreira 1996).

3. The proposal

Recent research has provided evidence for:
i. the fact that overt agreement is a PFish/morphological twist, not a syntactic one (e.g., Bobaljik 2004 and Sigurðsson 2006)
ii. the incremental nature of production (e.g., Bock et al. 1992, Phillips 1996 and Ferreira 1996)
The syntactic framework that captures the incremental nature of production more naturally is Left-to-Right Syntax (Phillips 1996).[5]

Within this framework, Agreement is computed from left-to-right (e.g., Phillips 1996, Legate 1999) and the top of the tree would be assembled/made available earlier than the bottom of the tree. Arguably, this state of affairs would conspire to derive the above agreement asymmetries (cf. also Barlow 1992). Specifically, in the P–G order the production system would work on P irrespective of whether the rest of the sentence has been coded or not, so as to allow for fast(er) production (cf. Phillips 1996).[6] Still, a P showing morphological / rich agreement cannot be uttered till G has been coded, because agreement causes P to 'wait' for G to become available. Only then can P be spelled-out. Inasmuch as such a 'wait' goes against the spirit of incremental production, one option to avoid it is to drop agreement markers or adopt default agreement.

In turn, in the G–P order, that is to say, in the Spec,Head configuration, the 'wait' for G takes place anyway because it precedes P. Hence, there is nothing to be gained by dropping agreement markers.

Notice that the uncontroversial assumption that production is incremental in nature together with the minimalist desiderata that overt agreement morphology plays no role in the syntactic computation (Chomsky 2001 and 2005) correctly derives the relevant paradigms.

Let's see how the proposal works with the data in (4). The crucial factor is whether the element triggering the agreement is already available in the structure or not when the element carrying the overt agreement morphology is hit.

(9) *Course of production of (4)a*
Questo – available for production
  lo – available for production
   fa(no) – production contingent on the availability of the subject -> wait or adopt default
    ....   Agreement.

(10) *Course of production of (4)b*
Questo – available for production
  i bambini – available for production
   lo – available for production

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[4] Chomsky (2005: 13) states the following:

For minimal computation, the probe should search the smallest domain to find the goal: its c-command domain. It follows that there should be no m-command, hence no SPEC-head relations, except for the special case where the SPEC itself can be a probe. That requires considerable rethinking of much important work, particularly on agreement.

In a similar vein, Chomsky (2001: 46, note 39) observes that the French facts pose an interesting challenge for Agree.
[5] See Drury (2005), Guimarães (2004), Phillips (1996 and 2003), Richards (1999 and 2003) for syntactic evidence in favor of this framework.
[6] Cf. the crosslinguistic tendency for old information to come before the new information, in keeping with the idea that optional movement is related to surface semantics effects (Chomsky 2001 etc.).
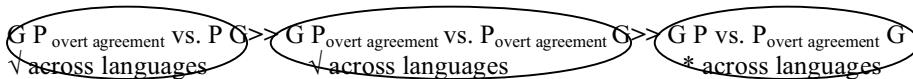
fanno – subject is available so default Agreement is unnecessary

....

Notice that if overt Agreement is computed in a separate operation (completely different from LDA) after syntax (Bobaljik 2004), this approach would be compatible not only with left-to-right syntax but also with standard right-to-left syntax. Assuming that such a computation of overt Agreement is incremental, we can derive the mentioned Agreement Asymmetries without recourse to Spec,Head relations, a necessary step for the adoption of LDA (e.g. Chomsky 2005: 13) in the latter framework.

Going back to Greenberg's typology, the present approach suggests the following ranking among Agreement patterns, from the most advantageous system in terms of incrementality to the less advantageous one.

(11)

G P $_{\text{overt agreement}}$ vs. P G >> G P $_{\text{overt agreement}}$ vs. P $_{\text{overt agreement}}$ G >> G P vs. P $_{\text{overt agreement}}$ G
√ across languages   √ across languages   * across languages

Given this, the system at the bottom of the ranking should be fairly uncommon if it exists at all as seems to be the case.

Finally, it is worth mentioning that within the context of this research, crosslinguistic variation regarding agreement (and lack of thereof) with in situ elements come from the fact that the strategies of the parser/production system are defeasible: e.g., central embedding in English is disfavored due to its costly nature, but it is not banned by the parser/production system. In this sense, the present approach succeeds in providing a rationale for the existence of the paradigms under consideration. The choice to follow the most incremental pattern or to 'defeat' the strategies of the parser/production system would be a language particular matter.

Next, I discuss two remaining issues, namely, unbalanced coordination and anti-agreement effects.

4. A note on unbalance coordination and anti-agreement effects

With regard to unbalanced coordination, in a number of languages such facts are found in the G-P order (Johannessen 1993), a fact incompatible with the current analysis. Furthermore, the contrast between full agreement and first/second conjunct agreement affects interpretation in some languages, (e.g., binding possibilities, see Aoun, Benmamoun and Sportiche 1994 among others), a fact at odds with a PF treatment of the phenomenon.

As far as anti-Agreement effects are concerned, A'-moved subjects may fail to trigger overt agreement in a number of languages in spite of the fact that they precede the subject:

(12) Quante   ragazze gl'h*a*   / *h*anno* telefonato?
how-many girls   GLI has/ *have   phoned? (Campos 1997: 94)

Note that in the current framework T is not in itself the locus of Case, Agreement or EPP features, rather the C/T complex is. Hence, A'-moved elements in C not only can interact with EPP or Agreement features, they are indeed predicted to do so. In that sense, Anti-Agreement effects are part of the system and the claim that overt Agreement is computed incrementally is not at odds with such facts.

5. Conclusion

This approach explains the fact that in a number of languages moved elements trigger agreement as opposed to in situ elements by claiming that:
i. Agreement Asymmetries are not a purely syntactic phenomenon as suggested by recent research (Bobaljik 2004 and Sigurðsson 2006)

ii. Incremental production (e.g., Bock et al. 1992, Phillips 1996 and Ferreira 1996) conspires to derive Agreement Asymmetries

This analysis is compatible with minimalist desiderata (Chomsky 2001 & 2005) in that not only such Agreement Asymmetries play no role in the syntactic computation but also the paradigm is explained without resource to Spec,Head Agreement.

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