An argument for long-distance theta-role assignment

A pervasive assumption about thematic theory is that Merge is a necessary condition for thematic assignment. The strongest version of such an approach is that only External Merge can satisfy thematic requirements (Chomsky 1995, 2000, 2001 and Miyagawa 2010, among others). A weaker version -mostly represented by the proponents of the Movement Theory of Control (Hornstein 1999 and much subsequent works)- claims that internal Merge also affects thematic positions. The common assumption is, again, that Merge is a necessary condition to establish thematic relations. Indeed, Sheehan (2012) has formulated this as a principle of UG:

(1)   Principle of theta-role assignment:

        Theta-roles can only be assigned via External or Internal Merge with a thematic head.

                                                            [Sheehan 2012: 38]

In this squib, I contend this long-standing assumption in current minimalist theory by showing that theta-role assignment can proceed in a long-distance fashion provided that well-known conditions on Activity and Locality are met (Chomsky 2000, 2001, and subsequent works). In other words, I propose that thematic dependencies comply with essentially the same syntactic conditions that affect other A-dependencies, maybe related to the so-called operation *Agree* (Chomsky 2000, 2001). Informally, these conditions are stated with reference to a given *v*P domain (other heads can also be thematic heads) as follows:

(2)   Principle of theta-assignment revisited:

An argument DP *A* receives a theta-role from a thematic head, $x_{[D]}$, in the domain of a *v*P if and only if:[1]

(A) ***Activity****:* *A* has its case value not determined within the *v*P level in which it is contained (i.e., it is active within the *v*P domain to enter into further A-dependencies).

(B) ***Locality****:* *A* is local to $x_{[D]}$; (i.e., *A* is not contained in the domain of another $y_{[D]}$ of the same type as $x_{[D]}$ c-commanding $x_{[D]}$).

In what follows, I show that (2) is preferable to (1) both on conceptual and empirical grounds. As I will show, the principle in (2) not only accounts for well-known patterns of SE syncretism in Spanish and Romance but also derives cases where a given DP receives more than one theta-role even when movement to theta position is not required. On the conceptual side, this squib unifies theta and case relations under the same basic considerations of locality and activity. In other words, long distance dependencies between a probe and a goal not only hold for agreement but also for thematic dependencies.

1. On the activity condition in theta-assignment

Taking (2) as a starting point, in a configuration like (3), where V assigns a theme-role and *v* an agent-role (so v ≠ V) the active DP gets two thematic roles because is active and local with respect both theta-assigners:

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[1] The notation $x_{[D]}$ stands for a head with a subcategorization feature of the D type that makes that head a potential *x* assigner.

(3)   [$_{vP}$ $v_{[D]}$ [$_{VP}$ V$_{[D]}$ DP$_{[uK]}$]]]

This configuration can only arise if *v* is also phi-defective, and consequently, cannot value the K feature of the internal DP. Put differently, we need a transitive skeleton with a unique DP. This DP will value nominative case once C, the phi-bearer (Chomsky 2007, 2008), and T enter the derivation and trigger a long-distance Agree relation with this DP:

(4) [$_{CP}$ Cφ [$_{TP}$ T [$_{vP}$ $v_{[D]}$ [$_{VP}$ V$_{[D]}$ DP$_{[K:\textbf{nominative}]}$]]]]]

The internal argument of such a structure will be interpreted as the agent and the theme of the sentence in consonance with (2). An additional requisite is that an expletive satisfy the D feature on $v_{[D]}$. I think that the situation abstractly represented in (4) corresponds to reflexives / reciprocals in Spanish and other Romance languages, where the reflexive clitic is just the expletive (syntactically or post-syntactically) merged with v:

(5)   Se   ama   Juan.

        SE   loves   Juan

        'Juan loves himself.'

Given that an expletive cannot have theta-roles, it does not establish any competence with the internal argument that, consequently, gets two theta roles in the vP domain in which is contained.

A good indication that Activity (2A) is on the right track is provided by impersonal SE/SI constructions in Romance, where (i) there is a pattern of syncretism with reflexives (i.e., the clitic SE is also present here), but (ii) v is not phi-defective and, as such, can value accusative case.

(6)   Se   castigó   a   los   culpables.

      SE   punished   ACC   the   culprits

      'One punished the culprits.'

(7) $[_{vP}$ EXPL $v_{[D, \varphi]}$ $[_{vP}$ $V_{[D]}$ $DP_{[K:ACC]}]]$

Here, a default, arbitrary interpretation has to arise for the external argument position just because the internal DP is inactive to receive the external theta role.

The key property of the proposed analysis is connected to the feature composition of potential v probes. Importantly, this analysis predicts that accusative marking is not decisive to block the agentive interpretation of a given internal argument. Thus, suppose that we add an extra, phi-complete v head above the defective vP in a structure like (3) (maybe more structure is present between both vs).

(8) $[_{vP}$ $DP_{[uK]}$ $v_{[\varphi, D]}$ $[_{vP}$ EXLP $v_{[D]}$ $[_{vP}$ $V_{[D]}$ $DP_{[K: ACC]}]]]$

Here, the prediction is that the internal DP can have a reflexive / reciprocal reading but not an impersonal one. The reason is that such a DP is active when the thematic interpretation of the lower vP takes place (maybe, in LF). It is only when higher v is

introduced in the derivation that this DP will be valued as accusative. This prediction is nicely confirmed in cases of causatives in Spanish and other Romance languages (Kayne 1969, Bordelois, 1974, Folli & Harley 2007, among many others) where impersonal SE readings are entirely blocked for the caused sentence:

(9)　　Juan　[hizo　[castigar**se**　a　　los　　culpables]].

　　　　J.　　made　to.punish.SE　ACC　the　　culprits

　　　　i. Reciprocal / reflexive reading (OK under the active structure)

　　　　'Juan made the culprits to punish themselves / each other.'

　　　　ii. Impersonal reading (NO)

　　　　*'John made the culprits were punished.'

The abstract configuration that accounts for this contrast is (8), where the accusative case of the internal DP is not valued within the lower vP, but in the higher one, so the internal DP remains active in the caused vP and receives the theme and agent role in this domain, in consonance with (2).

But assume now that the lower vP can optionally be a phi-complete probe, as well. In such a context, the impersonal reading should re –arise automatically, given that the internal DP is inactive in the lower vP domain. Of course, if the lower vP is defective then the reciprocal / reflexive reading blocks the impersonal one.

(10)　　$[_{vP}\ DP_{[uK]}\ v_{[\varphi, D]}\ [_{CP}\ \ldots\ [_{vP}\ EXLP\ v_{([\varphi, D])}\ [_{VP}\ V_{[D]}\ DP_{[K:\ ACC]}]]]\ \ldots]$

This case is attested with perception verbs of the ECM type in Spanish and other Romance languages:

(11)   *Impersonal* se *in the embedded infinitive*:

Juan   vio   castigar**se**   a   los   culpables.

J.   saw   to.punish.SE   ACC   the   culprits

i. Reciprocal / reflexive reading

'Juan saw the culprits to punish themselves / each other.'

ii. Impersonal reading

'Juan saw the culprits to be punished.'

Therefore, the difference between *hacer* 'to make' and perception verbs of the ECM type boils down to the fact that caused sentences are always phi-defective and the case of their arguments is externally determined (Folli & Harley 2007). At any rate, what the pattern briefly discussed here shows is that Activity is a necessary condition to thematic assignment (Sheehan 2012 and Author). However, this pattern does not falsify the principle in (1) just because it was not shown that the internal DPs involved in each case discussed remains *in situ*. In the following sections, I will try to show that (1) is indeed falsified by empirical considerations.

2. Locality effects in causatives

A long standing problem related to the so called *faire-par* (FP) causatives (Kayne 1969, Bordelois 1974, Harley & Forley 2007, Torrego 2010, among many others) is that the internal DP of the caused sentence can be reflexived in connection with the causative

verb (Baauw & Delfitto 2005, Folli & Harley 2007, Author). Thus in a sentence like (12) the theme of the caused sentence is also the agent of *hacer*:

(12) Juan **se**   hizo   besar por   María.

  J.   SE   made to.kiss by   M.

  'John$_i$ made Mary to kiss him$_i$.'

This is impossible with *faire à* (FI) causatives:

(13) *Juan **se**   (le)   hizo   besar a   María.

  J.   SE   (DAT) made to.kiss DAT   M.

  Intended: 'John$_i$ made Mary to kiss him$_1$.'

Such a contrast has no satisfactory solution hitherto, as explicitly recognized by Folli & Harley (2007) (although see Baauw & Delfitto 2005 for a lexicalist approach to the problem and Author for a criticism). The problem however vanishes under the thematic theory in (2), plus the basic assumption that the difference between FP and IP causatives is located in the lower vP shell. Thus, whereas in FP causatives the caused vP does not encode a [D] feature on v, IP causatives does. For this reason, external arguments are realized as PPs (*by*-phrases) in FP causatives but as dative or accusative DPs in FI contexts. In (14a) and (15b), the basic structure of a FP and FI causatives is respectively illustrated:

(14) a. Juan hizo   arreglar   la   cocina por   Pedro.   *FP causative*

    J. made to.repair   the   kitchen by   P.

b. [$_{vP}$ DP$_{[uK]}$ v$_{[φ, D]}$ [$_{vP}$ **PP$_{by}$ v** [$_{VP}$ V$_{[D]}$ DP]]]

(15) a. Juan   le   hizo   arreglar   la   cocina a Pedro. *FI causative*

       J.   DAT   made to.repair   the   kitchen to P.

b. [$_{vP}$ DP$_{[uK]}$ v$_{[φ, D]}$ [$_{vP}$ **DP v$_{[D]}$** [$_{VP}$ V$_{[D]}$ DP]]]

This simple assumption derives elegantly the contrast between (12) and (13). As we have seen, in a sentence like (5), the underlying structure of a reflexive sentence entails a transitive skeleton with a phi-defective v. This is the reason that makes the internal DP of a basic transitive sentence active to receive more than one theta-role.

In causative sentences with *hacer* 'to make', the possibility of having the internal argument of the caused infinitive reflexivized with respect the causative head follows from the fact that both heads, the caused and the causative one, are both phi-defective and, consequently, incapable of valuing the case of any DP in their complement domains; i.e., Activity (2A) should be at play. It should be also the case that the internal DP of the caused infinitive is in a local relation with respect the causative head; i.e., also Locality (2B) should be respected. Notice now that this is only the case with FP causatives, where the caused infinitive has no [D] encoding on the lower v. This entails that this v is not a thematic assigner and, as such, it does not intervene between the internal DP and the causative head. The abstract structure is illustrated in (16):

(16) [$_{vP}$ EXPL v$_{[φ, D]}$ [$_{vP}$ PP$_{by}$ v [$_{VP}$ V$_{[D]}$ DP$_{[K]}$]]]

Thus, (16) respects both Activity and Locality and, as a consequence, the internal DP ends with two theta-roles. After the introduction of the C and T heads this DP will value nominative case and the derivation can proceed.

As for IP causatives, neither of the two DPs contained in the lower vP can establish a thematic dependency with the causative head, because both are contained in the domain of the lower $v_{[D]}$ head; i.e., Locality (2B) is violated in this configuration.

(17) $[_{vP}$ EXPL $v_{[\varphi, D]}$ $[_{vP}$ DP $\textbf{v}_{\textbf{[D]}}$ $[_{VP}$ $V_{[D]}$ DP]]]

The prediction is then that not only (13) should be ruled out by locality, but also a sentence where the external argument of the caused infinitive is reflexivized. This is borne out (Baauw & Delfitto 2005 and author):

(18)   *Juan **se**   hizo   trabajar /   comprar   un   auto.

       J.   SE   made   to.work   /   to.buy   a   car

       Intended: 'Juan made himself to arrive/ work / buy a car' (*Juan* = infinitive subject)

To sum up, locality effects in causative sentences of the type discussed in this squib are attested in Romance causatives. I have shown that a crucial problem for the theory of reflexives and causatives is derived provided that theta assignment proceeds under considerations of activity and locality given in (2).

3. Long-distance theta assignment in causatives

Having shown that (2) is a crucial ingredient of thematic theory (see also Sheehan 2012), the remaining question is whether or not Merge is also a necessary condition for thematic dependencies, an assumption that it is at the heart of the current thematic theory in its strong or weak version. In other words, it remains to see whether the principle in (1), repeated as (19), holds or not:

(19)   Principle of theta-role assignment:

        Theta-roles can only be assigned via External or Internal Merge with a thematic head.

                                                            [Sheehan 2012: 38]

According to this principle, a sentence like (12) –and indeed whatever sentence that contains a DP with more than a theta-role- should be derived moving the internal DP *Juan* from its complement position in the infinite clause.

(20)   [$_{vP}$ **Juan** se-hizo [$_{vP}$ besar ~~Juan~~ por María]]

However, this is not borne out. As is well-known, Spanish is a language where referential post-verbal subject are attested. Indeed, such position is forced in interrogative contexts (Torrego 1984 and many subsequent works). In causative contexts this is also the case. Importantly, the canonical position of a subject in interrogatives with *hacer* causatives is internal to the infinitive sentence:

(21) a.   Cuándo [$_{vP}$ se   hizo [$_{vP}$ besar **Juan** por   María]]?
           when   SE   made   to.kiss J.   by   M.

'When did John make María to kiss him.'

b.   Qué   [_{vP} se hizo [_{vP}   poner ~~qué~~ **Juan** en   la

what SE   made   to.put ~~what~~ Juan in   the

cabeza]]?

head

In both sentences, *Juan* remains within the infinitive sentence, where it values its nominative case against the matrix C-T. This is the normal case in Spanish, where subjects are not required to move to Spec,TP for EPP reasons and can value case *in situ*; preverbal subject position in this language being plausibly an A'-position (Ordoñéz 1997, Alexiadou & Anagnostopoulou 1998, Kato 1999, among many others).

But notice now that the subjects in (21) also receive two theta-roles, the theme/beneficiary role from the infinitive V (or an applicative head in 21b) and the causer role from the causative head, showing that theta-roles can also be valued *in situ* (at least in this language). Crucially, obligatory inversion in interrogative contexts in Spanish does not require focus of the inverted subject. So, there is no justification for an LF movement analysis of these subjects.

A possible objection to this approach is that more structure is involved in (21) and that the subject in both sentences is in a position outside the infinitive clause. In other words, the subject moves from the infinitive position to the higher vP (a thematic position) and then some additional movements of the infinitive phrase give the final word order (see for instance Ordóñez 2005 for such an approach). Next to the fact that these alternative analyses require additional justification, I think that there is a conclusive argument to

think that the analysis underlying (21), according to which theta assignment can proceeds in a long-distance way, is preferable.

The crucial argument involves superiority in Spanish. As is well-known, this language lacks superiority effects (Jaeggli 1982 and much subsequent work):

(22)   a.   Quién compró   qué?

             who   bought   what

    b.   Qué   compró   quién?

             what   bought   who

Lack of superiority effects is accounted for if subject and object are equidistant from the interrogative probe (i.e., if both constituents are in the domain of the same vP). Superiority effects in English (e.g., 23) are accounted under this assumption because in this language subjects must vacate the vP for EPP reasons:

(23)   a. Who bought what?

       b. *What did who buy?

Notice now that no superiority effects are attested for sentences like (21b):

(24)   a.   **Qué** [$_{vP}$ se   hizo   [$_{vP}$ poner **quién** en   la

             what   SE   made   to.put who in   the

             cabeza por   María]]?

             head   by   M.

b.   Quién [$_{vP}$ se   hizo   [$_{vP}$ poner **qué** en   la

who   SE   made   to.put what   in   the

cabeza   por   María]]?

head   by   M.

(24a) is the crucial case here. If the subject moved to the higher causative vP for thematic reasons, then, the object would never cross the subject because of the Minimal Link Condition (Chomsky 1995). Therefore, the most plausible hypothesis is that the subject remains in the lower vP. If this is on the right track, then long-distance theta assignment should be permitted by UG.

4. Conclusions

In this squib, I have shown that long-distance thematic assignment takes place under exactly the same conditions that restrict the operation Agree. Crucially, I have demonstrated that the assumption that Merge (internal or external) is a necessary condition for theta assignment does not hold. I think that this is a natural conclusion. As far as I can tell a principle such as (1), according to which thematic assignment requires Merge is just a stipulation. The fact that the Language Faculty allows for long-distance dependencies is the null hypothesis in a framework where an operation as Agree is at play in the realm of A-dependencies. Therefore, I see no conceptual or empirical reasons to support the principle in (1). Instead, a principle such as (2), according to which thematic assignment just proceeds as other types of A-dependencies is justified both for conceptual and empirical reasons.

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