

Aspects of the Syntax of Result Clauses in Spanish

We discuss some aspects of cosubordinate degree result sentences. We adduce Spanish data in support of Guéron's and May's (1984) hypothesis which views result sentences as empirical evidence in favor of LF. It is proposed that at LF the degree word (*tal*) heads a cataphora phrase with the result clause in the specifier. The categorial and lexical features of the head *tal* and the configuration and scope that allow their percolation are discussed. Actual and potential result clauses are contrasted. A common representation in which an empty cause operator has raised to the specifier of CP of the result clause is suggested. This empty Op is licensed by the degree cataphoric head at LF. The contrast between actual result and potential result can be explained as the modal inflexion features adjoined to the verb in the result clause.

1. Some Structures Expressing Degree Result in Spanish

Degree result clauses express the result of focusing a QNP inside the main clause (O_1). Therefore between O_1 and the result clause (O_2) we find two kinds of relations: (1) Temporal ordering: the event-time O_2 follows the event-time O_1 . (2) Causation relation: Cause (focused QNP in O_1) / Result (O_2).

For the purpose of our argumentation we distinguish the following semantic types of result clauses:

- a) Actual result (cosubordinate degree result clauses [realis]).
- b) Potential no intentional result (subordinate to ergative predicates: *han venido muchos bomberos para apagar el fuego* - "there came many firemen PRO_{arb} to put out the fire"). cosubordinate degree result [irrealis].
- c) Potential intentional result (subordinate final clause: *muchos bomberos_i han venido para PRO_i apagar el fuego* - "Many firemen_i came PRO_i to put out the fire").

It is a well known fact that apparently similar Spanish constructions can denote those semantic types of result: cosubordinate degree result clauses, purpose clauses, subordinate relative-result clauses:¹

- (1) Escondió la aguja en *un lugar TAL* que nadie PUDO encontrarla
(She hid the needle in A PLACE SUCH that no one COULD find it)
(degree actual result clause)
- (2) Escondió la aguja en *un lugar TAL* (semejante) que nadie PUDIERA encontrarla
(She hid the needle in A PLACE SUCH that no one COULD_{SUBJUNCTIVE} find it)
(degree potential result clause)
- (3) Escondió la aguja en *TAL* (un) *lugar* que nadie PUDIERA encontrarla

¹ Alvarez (1989); Bartol (1986); Narbona (1978).

(She hid the needle in INDEFINITE DEMONSTRATIVE place that no one COULD_{SUBJUNCTIVE} find it) (final)

- (4) Escondió la aguja en un lugar tal EN EL CUAL nadie PUDO encontrarla
(She hid the needle in a place such IN WHICH no one could_{INDICATIVE} find it)
(relative, actual result)
- (5) Escondió la aguja en un lugar tal EN EL CUAL nadie PUDIERA encontrarla
(She hid the needle in a place such IN WHICH no one could_{SUBJUNCTIVE} find it)
(relative, potential result)

Only in the degree result clauses the degree cataphoric word and the result clause are within the same projection. The degree word (*tal*) marks the scope of the cosubordinate result clause at LF. In the final and relative clauses the result meaning is conveyed through the anchorage of Tenses which in turn depends on the scope construal of the constituent within the matrix sentence to which the clause is subordinated (the preposition *para* and a noun).

1.2. Subordinate Relative Result versus Cosubordinate Degree Result

In this section we'll compare sentences (1) and (4). We'll see that the forward shifted reading in the relative (4) depends on the scope construal of the complex QNP. If the QNP has wide scope we get independent readings since it is not necessary for the tense of V_2 to be anchored to the tense of V_1 .

We assume with Guéron and May (1984) that *tal* marks the scope of the degree result clause (1). But we differ from those authors in the way in which we believe that takes place.² The prospective meaning in the result clause is triggered by a causal empty (ec) category in O_2 . This ec is licensed by the cataphora *tal*. Therefore *tal* and the result clause must be in the same projection.

First we'll discuss the configuration of the "*tal*-phrase". Then we'll see the effect of that on the result-relative and the degree result clauses.

1.2.1. The *TAL*-Phrase

In the phrase *un lugar tal*, *tal* is a cataphoric demonstrative determiner. It refers to the semantic class that includes the type denoted by the N *lugar*. It covertly compares the N instantiated by the weak Q (*un lugar*) with the class of N which is its domain of interpretation (a N similar to the N included in the class X).

Supposing that the N denoting the class is represented by a covert category which is subcategorized by the demonstrative determiner then we could represent that meaning in the following way:

- 1) The N denoting the class is represented by a covert category which is subcategorized by the demonstrative.

² They propose a successive adjunction of the degree word and the result clause to O's at LF.

- 2) The demonstrative heads a projection, a demonstrative phrase, and takes that nominal ec as its complement.
- 3) That DemP is a modifier of the N instantiated by the indefinite determiner.
- 4) Given that the DemP forces the inespecific meaning in the N such noun must be instantiated by a weak Q.

Therefore the configuration for *un lugar tal* could be:

- (6) [QP un [NP lugar [DemP tal e]]]

Next we'll see how this configuration affects the structure of the result-relative and degree result clauses.

1.2.2. The Result Relative

The result-relative sentence differs from the result clause in the following:

- 1) The relative clause is outside the Scope of *tal*.
- 2) *tal* and the relative clause are not reconstructed as a cataphoric phrase at LF
- 3) The forward shifted tense construal is optional. It does not depend on some lexical feature inherent to *tal*. It is a scopal property of the complex QNP.

The wide scope construal of the QNP gives independent readings (simultaneous, retrospective (7) or prospective (1)):

- (7) ESCONDERÉ la aguja en [un lugar tal en el cual nadie PUDO encontrarla]+
(I hide+FUTURE the needle in a place such in which no one CAN+PAST find it)

The forward shifted reading ([-precedence]) occurs when the QP has narrow scope. In that case tense₂ is anchored to tense₁. This is so because the complex QNP is an island for extraction. In (8) the independent tense reading is not available because the indefinite NP cannot take scope over the VP.³

- (8) *Baldomera le da [unas bofetadas]_i [Op_j que *h_j* lo ATONTARÁN]
(Baldomera Cl_{Dat(k)} gives such slaps_j Op_j that *t_j* Cl_{Acc(k)} confuse-FUTURE)

That is not the case with the result clause. Since it is not within the scope of the NP the V₂ can have the prospective tense morphology

- (9) Baldomera_i le da [unas bofetadas] [que *pro_i* lo ATONTARÁ]
(Baldomera_i Cl_{Dat(k)} gives such slaps that she_i Cl_{Acc(k)} confuse-FUTURE)

Those properties are captured in the following structure for the complex QNP:

- (10) Escondió la aguja en [QPun [NP [N' [N_i lugar_i [DemP_i tal e]]] [CP_(i) en el cual_i [IP_i nadie pudo encontrarla *t_i*]]]]]

³ That could be explained as an instance of existential closure (I. Heim: 1982). This complex NP is not quantified. The indefinite is a determiner. The Ev1 and Ev2 are within the scope of a generic operator (*always...*) and the variable with the indefinite determiner is closed by this Op.

We assume that the relative clause is a modifier of N. The spec of CP is filled by the raised Wh word related to the nominal head through predication. Therefore an empty cause Op could not be moved to that position and *tal* only is cataphoric with respect to its ec complement.

1.2.3. The Degree Result Clause

The result clause is in the scope of *tal*. The scope of *tal* is not dependent on the scope of the QNP. The tense in the result clause must have a prospective reading [-precedence].

If we assume that the result clause is inside the projection of the *tal*-phrase then the configuration of the QNP in (1) could be as follows:

- (11) Escondió la aguja en [_{QP}un [_{NP} [_Nlugar [_{D_{emp}} [_{Dem^{tal}} *e*] [_{CP} *que nadie pudo encontrarla*]_{D_{emp}}]]]]

If this is true then the tense anchorage will depend on the Scope of the head *tal*. We'll come to that later.

1.3. Final clause (intentional potential result) versus no intentional potential result clause

Lets come back to sentences (2) and (3):

- (2) Escondió la aguja [en un lugar TAL (semejante)] que nadie PUDIERA (podía)(podría) encontrarla.
(result clause: non intentional potential result)⁴
(3) Escondió la aguja [en tal (demostrativo indefinido: un) lugar]...
que nadie PUDIERA (pudiese) encontrarla. (final: potential intentional result)

The FINAL clause (3) has the following properties:

- 1) The interpretation of the final clause does not depend on *tal*.
- 2) The demonstrative head *tal* has raised to QP where it has been incorporated into the indefinite head.
- 3) *Que* has the meaning of *para que*. Since there is no subordinating marker the final interpretation is conveyed by: (a) The shifted tense reading; (b) the [irrealis] feature triggered by the subjunctive.

We could think that *para* is represented by a covert category which percolates the features [-precedence] [+irrealis] to the final clause under government. Therefore, the final clause is not included in the *tal* phrase at LF

The result clause differs from the final clause in that:

⁴ If we use PUDIESE instead of PUDIERA the "intentional" reading is forced. In that case we have a final clause and not a degree result clause.

(i) ?Escondió la aguja [en un lugar TAL] que nadie PUDIESE encontrarla (final)

(ii) Escondió la aguja [en TAL lugar] que nadie PUDIESE encontrarla (final)

PUDIERA, but not PUDIESE has a modal value in these clauses. That explains the following contrast in Result clauses:

(iii) Esconderé la aguja en un lugar TAL que nadie PUDIERA encontrarla

(iv) *Esconderé la aguja en un lugar TAL que nadie PUDIESE encontrarla

- 1) *Tal* has the feature [- precedencia], but it does not force the subjunctive morphology in V_2 as senteces (1) and (2) show: (*Escondió la aguja en un lugar tal que nadie pudo/pudiera encontrarla*). The reading of potential result expressed by the subjunctive in V_2 can be triggered by:
- a) An element outside the V_2 such as the interrogation or the preposition *para*:
- (12) Le han dado unos venenos tales que el médico teme por su vida
(They $Cl_{Dat(i)}$ have given a poison such that the doctor fears for her_i life)
- (13) ¿Qué tipo de venenos le han dado para que el médico tema por su vida?
(What kind of poison Cl have they given $prep_{[+SUBJUNCTIVE]}$ [-PRECEDENCE] that the doctor fears_{SUBJUNCTIVE} for her life)
- b) The modal inflexion adjoined to V_2 . That seems to be the case with the potential result clauses given that: (i) the potential result is no intentional and therefore is not in the domain of a controller inside O_1 , (ii) it is optional. Only the feature [-precedence] must be present:
- (14) Guardaré la aguja en un lugar tal que Xurxo PODRÁ /PUEDA /PODRÍA encontrarla
(I will hide the needle in a place such that Xurxo $CAN_{FUTURE/SUBJUNCTIVE PRESENT/CONDITIONAL}$ find it).
- (15) *Guardaré la aguja en un lugar tal que Xurxo PUDO /PUEDE /PUDIESE encontrarla
(I will hide the needle in a place such that Xurxo $CAN_{PAST/PRESENT/SUBJUNCTIVE PAST}$ find it)

2. The Cataphora Phrase

We assume that at LF the *tal*-phrase and the result clause are in the same projection. The arguments are based on (a) the lexical features of the head *tal* and (b) the formal conditions for their percolation. The lexical features of *tal* are [+cataphora] [+quality]. The feature [+cataphora] relates the *tal*-phrase to the result clause. That is represented at LF and the configuration is constrained by the general conditions of the binding theory. By the feature [+quality] the *tal* phrase functions as a modifier of the QNP.

Therefore the configuration of the cataphora phrase must allow two types of relations: (i) Agreement with the modified QNP (ii) Variable binding. Given that *tal* points to the proposition denoting the result of the cause conveyed by the QNP that cause-result relation could be induced:

- by the anchorage of tenses (difference between relative/ result clauses)
- by an empty "cause" Op inside the result clause licensed by the cataphora ("as a result; (tal). [as a cause_i ... h_i]")

3. At which level of representation do the degree head and the result clause show themselves as a projection?

We propose that the lexical features of *tal* are not inserted at once but manifest themselves at different levels. That explain the following facts:

- 1) *tal* and the result clause are within the same complete functional complex (CED: result clause behaves as adjuncts for extraction facts. *extraposition*. It is inside the scope of operators of O_1 interrogation (16), conditional (17)):

- (16) ¿Qué tipo de venenos le han dado para que el médico tema por su vida?
(What kind of poison CI have they given prep that the doctor fear_{SUBJUNCTIVE} for her life?).
(17) SI escondes la aguja en un lugar tal que nadie PUEDA encontrarla Xurxo se enfadará
(If you hide the needle in a place such that no one CAN_{SUBJUNCTIVE} find it Xurxo will get angry)

- 2) The *tal*-phrase and the result clause are not in the same constituent at S-structure (interrogation (16), lineal order (18), (19), islands, multiple degree phrases (20)):

- (18) *Carmen [_{VP} ha colgado [_{QP} unas lámparas tales] [_{CP} que no puede dormir] [_{PP} del techo]
(Carmen has hung such lamps that she can't sleep from the ceiling).
(19) Carmen [_{VP} ha colgado [unas lámparas tales] [del techo]] [que no puede dormir]
(Carmen has hung such lamps from the ceiling that she can't sleep).
(20) Tantos invitados han traído unos amigos tales que hablaban tan pocas lenguas pero tan diferentes entre sí [que nadie podía entenderse el uno con el otro].
(So many guests have brought such friends who spoke so few languages but so different between themselves that no one could understand each other)

- The result clause is outside of VP (contrast between result/ finals, relatives)
- The QNP is inside of VP The *tal*-phrase is outside VP

Those facts could be derived from the general principles of the binding theory if we admit that *tal* is the head of a cataphora phrase. We could then assume the following derivation:

- 1) the feature [-precedence] (which expresses the first element of the relation result-cause) is subcategorized by the head *tal* at a level near the lexicon. It could take the general X-bar configuration so that this feature is copied to the result clause by spec-head agreement.

- (21) [_{CataphoraP} [_{Cat'} tal (-precedencia)] [_{CP} que.... PRO_{CAUSE}]]

- 2) Considering that the feature [-precedence] in O_2 is relational, the result clause moves to the Spec of TP at S-structure.⁵

- (22) [_{TP} [_{T'}... [_{QNP} un lugar [_{CatP} [_{C'} tal] t_1]]] [que nadie PUDO encontrarla]]

- 3) the cataphora phrase is reconstructed at LF:

- (23) [_{CataphoraP} [_{Cat'} tal_i ...] [_{CP} Op_i [_{C'} que nadie pudo encontrarla t_i]]]

- PRO_{cause} Wh-raises to Spec, CP: [_{CP} Op_i [... t_i]]
- *tal* licenses the empty Op_{cause}.

⁵ We have seen that the subjunctive mood of V_2 is not induced by the ModP of O_1 . Consequently, the result clause is not in the scope of ModP₁.

4. Conclusions

- a) The features [+cataphora] [+quality] of the head *tal* determine the configuration of the *tal*-phrase at D-structure that allows their percolation at multiple levels.
- b) The anchorage of tenses occurs at S-structure.
- c) [+/-irrealis] is a modal feature of the morphology of V_2 .
- d) The empty causal Op raised to the Spec of CP of the result clause is licensed by *tal* after reconstruction of the cataphora phrase at LF

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