THEMATIC CHAINS*

(Cadeias Temáticas)

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ABSTRACT: *Within the Principle & Parameters approach due mainly to proposals by Chomsky it has been argued that complex objects formed by movement (i.e., chains) are not eligible to participate in thematic relations. The present paper rejects this view, claiming that this restriction is justified neither on conceptual nor on empirical grounds.*
KEY-WORDS: *Syntax; Movement; Chains; θ-roles.*

RESUMO: *Na teoria de Princípios & Parâmetros, principalmente nas propostas de Chomsky, objetos complexos formados via movimento (i.e., cadeias) não são autorizados a participar de relações temáticas. O presente artigo argumenta que essa restrição não tem suporte teórico nem empírico.*
PALAVRAS-CHAVE: *Sintaxe; Movimento; Cadeia; Papel-θ.*

Introduction

One of the questions that have recently gained some importance in the discussion about the best theory for the language faculty is in (1). At least three different answers have been offered.

(1) How do θ-roles behave in syntax?

Jackendoff has consistently argued that θ-roles are just a convenient way to describe particular configurations at the level of conceptual structure,

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an autonomous level with its own set of formation rules to generate well-formed objects (cf. Jackendoff 1983, 1990 and 1997).[1] Thus, I think that it is fair to say that in his view questions about the syntactic behavior of θ-roles (i.e. (1)) are simply ill-formed given that he takes θ-roles to be terminological conveniences.

In their theory of verbal decomposition, Hale and Keyser (1993, 1998, 2002) defend θ-roles as configurations. That is, they take θ-roles to be part of semantic relations that are defined over structural relations, configurations formed by the lexical categories (V, N. P, A) and their projections.[2] Hence, for them, θ-roles behave syntactically insofar as configurations are defined in syntactic terms.[3]

The main trend of the Principle & Parameters approach due mainly to proposals by Chomsky does not deny the syntactic import of θ-roles. However, it is claimed that θ-roles have a special status inside the computational system in the sense that they are assigned at a stage of the derivation in which all the objects involved in the assignment have not yet being manipulated by transformational operations. Chomsky (1995b) mixes this view with the configurational view of Hale and Keyser, suggesting that thematic relations are configurations formed by non-transformed objects.

This special syntactic status of θ-roles is disputed by Bošković (1994), who argues that moved objects, or chains, are perfectly able to saturate thematic positions. Bošković and Takahashi (1998), in their account of scrambling in Japanese, raise the possibility of treating θ-roles in a simpler way: as syntactic features.

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[1] Jackendoff understands the grammar as having three independent levels: Phonology, Syntax (which corresponds to Chomsky's notion of broad syntax) and conceptual structure. These levels are connected by correspondence rules, and syntax is connected to conceptual structure via projection rules. I will not discuss Jackendoff's proposal any further because it poses deep questions about properties of the Conceptual–Intentional (C-I) interface, which lie far beyond the scope of this paper.

[2] These structural relations are the so-called *argument structure*, and they are formed in the lexicon (*l-syntax* in Hale and Keyser's terminology).

[3] I refrain from going into details here, but for arguments against the configurational view of θ-roles, see Boeckx (1998). See also Kuroda (1999) who, working on head-internal relative clauses in Japanese, claims that θ-role assignment, being blind to syntactic barriers, does not require government. That is, θ-roles do not need to be assigned locally.

Hornstein (1999, 2001) and Manzini and Roussou (2000) also take θ-roles to be features. For them, θ-roles are syntactic features in the sense that they are able to trigger movement. Their argument is that the featural view makes feasible a minimalist movement analysis of obligatory control, eliminating the GB assumption that there is a control module, and also avoiding certain complications related to the distribution of PRO, mainly the necessity of null Case.[4]

For his account of pseudogapping (2a), Lasnik (1999a) also assumes θ-roles to be features. He proposes that these gaps are the result of VP deletion at PF according to the derivation sketched in (2b). The verb *dated* has a strong θ-feature that must be checked against the external argument prior to spell-out in order to avoid PF crash. But, since the external argument is based generated in the spec of the upper V and *dated* does not move from inside the inner VP, the derivation reaches PF with an unchecked strong feature on *dated*. Thus, to salvage the derivation at PF, deletion is applied to what remained inside VP, eliminating the offensive θ-feature.[5]

(1) a. Mary hasn't dated Bill, but she has Harry

b. [...[$_{AgrsP}$ she$_2$ [$_{Agrs'}$ [$_{TP}$ has [$_{VP}$ t_2 [$_{V'}$ [$_{AgroP}$ harry$_1$ [$_{Agro}$ [~~VP dated t_1~~]]]]]]]]]
[strong θ-feature]

Working on the lack of reconstruction in argument positions (cf. Lasnik 2003, Chomsky 1993), Lasnik shows that treating θ-roles as features has the advantage of allowing elimination of argument traces (A-traces) from the Movement theory. A-traces serve the purpose of giving instructions to the C-I interface about the thematic relations created during the derivation. But, if a θ-role is checked by an NP, that NP carries the information related

[4] Hornstein's movement analysis has been extended to other domains of the grammar (cf. Grohmann 2000, Hornstein 2001 and Kiguchi 2002) and explored crosslinguistically. See, for example, Aoshima (2000) and Matsuya (2000) for control in infinitival and gerundive clauses in Japanese, Pires (2000) for control and inflected infinitives in Portuguese, Ferreira (2000) and Rodrigues (2000, 2002) for an analysis of referential null subjects in Brazilian Portuguese, Hornstein and San Martin (2000) for obviation effects in Basque, and Hornstein and Motomura (2002) for Object/Experiencer phych predicates in English and Japanese.

[5] He follows Koizumi's (1993) split VP hypothesis. Extending ideas of Johnson (1991), Koizumi argues that in English the direct object overtly checks Accusative case in spec of Agro and the verb adjoins to a still higher head which is taken to be the upper V of the VP shell.

to that θ-role throughout the derivation. Therefore, if an NP moves to an A-position, there is no need for leaving a trace in the thematic position. If there are no A-traces, the fact that there is no reconstruction into A-positions follows without further assumptions.[6]

Taking into consideration the debate presented so far, the goal of the present paper is twofold. The first goal (section 1) is to offer a discussion of the theoretical motivations within Chomsky's proposals for imposing a restriction on the type of objects that are eligible to participate in thematic relations. The purpose of this discussion is to show that this restriction hinges on assumptions and stipulations for which the conceptual motivations are not firm. The second goal (section 2) is to present some empirical evidence that, in certain cases, chains do participate in thematic relations. The conclusion to be offered is that, no matter how we understand the syntactic behavior of θ-roles, either as configurations or as features, the mainstream of Principle & Parameters approach needs revision with respect to its prohibition against assigning θ-roles to chains, or having thematic chains.

1. The Ban on Movement into Theta-Positions

On *Lectures on Government and Binding* (Chomsky 1981), the Theta-Criterion is proposed as a condition of adequacy at the level of D-Structure:[7]

(3) *Theta-Criterion* (Chomsky 1981:36)
Each argument bears one and only one θ-role and each θ-role is assigned to one and only one argument.

However, the Theta-Criterion is too strong. As noticed by Chomsky (1986), in sentences involving secondary predication, an argument receives more than one θ-role.[8] In (4), for instance, *Mary* receives one θ-role from *left* and a second one from *sad*.

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[6] For arguments against this proposal, see Hornstein (1995) and references therein.

[7] It is assumed that this criterion also holds at S-Structure and LF. In (1981, chapter 6), as well as in (1982), Chomsky formulates (3) in terms of chains.

[8] For other arguments against having the Theta-Criterion at the D-Structure, v. Bosković (1994) and references therein.

(4) Mary left sad

Thus, to avoid problems with constructions like (4), in Chomsky (1986:137), the Theta-Criterion is built into the system as a property of chains:

(5) *Chain Condition*
If C = (α_1,…, α_n) is a maximal CHAIN, then α_n occupies its unique θ-position and α_1 its unique Case-marked position.[9]

According to (5), there is nothing wrong with an argument receiving more than one θ-role, as long as it does not involve movement into a theta-position.

To derive the correct thematic relations of (4) without movement from one theta-position to the other, one could argue in favor of using an analysis similar to that proposed by Williams (1994), among others, in which the adjective phrase adjoins to the VP, forming a complex predicate that discharges two θ-roles to the subject. A small clause account, along the lines proposed by (Chomsky 1981) and Stowell (1983) could also be defended, taking the adjective phrase to be a small clause containing an empty category PRO. Though I will defer the discussion of these two possibilities to section 2.1,[10] note that if the small clause account is adopted, (4) is no longer a reason for formulating the Theta-Criterion in terms of Chain Condition. If there is a PRO in the structure of (4), (3) is obeyed: PRO is assigned the θ-role from *sad* and *John* the θ-role from *left*.

In the Minimalist Program, D-Structure is abandoned, as a consequence, the Theta-Criterion lost its primary role, and the operation *satisfy* (selection of array from lexicon and formation of a structure in accordance with the X-bar theory before Transformation) is also dispensed with. Therefore, lexical insertion/pure merge can intermingle with movement/second merge. But, despite this shift in the theoretical perspectives, the incompatibility between θ-role assignment and transformed objects is

[9] CHAINS are defined to include chains and also expletive-argument pairs (cf. 1986:132).

[10] In section 2.1, I will show that neither the complex-predicate approach nor the control analysis is able to explain secondary predication in double object constructions.

nevertheless part of the theory in Chomsky's minimalist framework: theta-positions are not to be filled via movement.

Chomsky (1993) and (1995a) does not adopt an LF version of the Theta-Criterion is not adopted, and the chain condition is not used to ensure the prohibition against movement into theta-positions. Rather, this prohibition is derived from economy considerations, mainly by the Last Resort principle, which is constrained by Greed, the "self-serving" basis of movement:

(6) Move raises α to a position β only if morphological properties of α itself would otherwise not be satisfied in the derivation.
(Chomsky 1995a: 400,7)

Putting it plainly, (6), a strong version of Greed, dictates that movement is for feature checking purposes only, and a phrase α is allowed to move to a position β in γ's checking domain only if α itself has a formal feature F that γ is able to check and F wouldn't be checked otherwise. Thus, crucially, a feature of γ cannot drive movement of α to β.

According to Chomsky, Greed provides a rationale for why a verbal item like HIT with the thematic structure of *hit,* but without a Case feature, does not exist. The existence of such a verb would presuppose a derivation like the one in (7) (1995a: 401, 9a).[11] *John* receives the internal θ-role in its base position, moves to spec of VP to pick up the external θ-role, and then moves to Infl to check its Case. Since the definition of Move accords to Greed, movement of *John* to spec of VP does not take place because such step is not motivated by any feature of *John* that needs to be checked.

(7) John [$_{VP}$ *t'* [$_{VP}$ HIT *t*]]

Lasnik (1995) argues that the system of Chomsky (1993) is redundant. Putting (7) aside, all the cases in which Greed is used to block a bad

[11] Chomsky (1981, 1986) uses the prohibition against movement into theta-positions to rule out (7). Brody (1993) argues that the ban on (7) follows from the projection principle if D-structure is defined as a level in which all and only chain root positions are present. Taking the projection principle to be satisfied in all levels, including D-Structure, it follows, then, that only chain roots can have a θ-role.

derivation can be explained independently by other principles.[12] Thus, the mechanics of the system are not in accordance with its minimalist spirit. As for Chomsky's explanation for the ill-formedness of (7), Lasnik's observation is that its success depends on our assumptions about the nature of θ-roles. If we take them to be similar to Case feature, being formal features of DPs that can checked only once, then Greed is not necessary to rule out (7). Moreover, Lasnik points out that it is not clear that Greed can block (7), for it is assumed in Chomsky (1993) that a phrase can move cyclically, through intermediate sites as long as the final landing site is a checking site for that phrase.[13]

Bošković (1994), building on Saito and Murasugi's (1993) condition on the length of chain links (each chain link must be at least of length 1, and a chain link from α to β is of length *n*, if there are *n* XPs that cover β but not α), argues that (7) is ruled out because the chain link between *t* to *t'* is of length zero, given that there is no maximal projection that covers *t* but not *t'*.[14]

Thus, given Lasnik's and Bošković's counter arguments, Chomsky's (1993) proposal is not convincing. It does not prove either that Greed is a necessary principle independently of (7) or that its use is necessary to rule out (7). In addition, considering the proposal in total, (7) is predicted to be a possible derivation, the movement into the theta-position being an intermediate step towards the feature checking position.

In *Categories and Transformations* (Chomsky 1995b), Greed is not formulated as a principle, in addition a configurational view of θ-roles à la Hale and Keyser is adopted.[15] There, the argument against movement into theta positions is the following:

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[12] See also Marantz (1995).

[13] Reflexive Predicates (ia), according to Lasnik (1995), might be like HIT, having the derivation in (ib), the surface subject starts as the logical object and moves to the sentential subject position, passing trough the external argument position:

(i) a. John washed/shaved/dressed (= John washed/shaved/dressed himself)
b. John [$_{VP}$ *t'* [$_{VP}$ washed *t*]]

[14] This explanation is similar to the anti-locality condition proposed by Grohmann (2000). For Grohmann, movement cannot occur inside the same domain, and he identifies three domains: Theta-domain, Case-domain and Discourse-domain. Hence, (7) can be ruled out because movement from *t* to *t'* is too local, occurring inside the same domain, the theta-domain.

[15] Notice that, by adopting Hale and Keyser's configurational view, Chomsky departs from the GB assumption that "*if an argument is in a chain, it gets its* θ*-role only by virtue of its membership in the chain, not by virtue of the position it occupies*". (Chomsky 1981: 338).

> *Suppose* β *{a* θ*-role assigner,* <u>*CR*</u>*} raises, forming the CH = (*β*,…, t). The trace t remains in the structural configuration that determines a* θ*-role and can therefore function as a* θ*-role assigner; but the chain CH is not in a configuration at all, so cannot assign a* θ*-role. In its raised position,* β *can function insofar as it has internal formal features: as a Case assigner or a binder. But in a configurational theory of* θ*-relations, it makes little sense to think of the head of a chain as assigning a* θ*-role.*
>
> *With regard to receipt of* θ*-roles, similar reasoning applies. If* α *raises to a* θ*-position Th, forming the chain CH = (*α*, t), the argument that must bear a* θ*-role is CH, not* α*. But CH is not in any configuration, and* α *is not an argument that can receive a* θ*-role. Other conditions too are violated under earlier assumptions or other like them, but I will not spell out the problem further.* (Chomsky, 1995b: 313)

As López (2001) puts it,[16] the ban on having a chain checking or assigning a θ-role depends on what we take chains to be.[17] If movement creates identical copies, as suggested by Chomsky, then the claim that the head of a chain cannot receive or assign a θ-role does not follow straightforwardly. As pointed out to me by Norbert Hornstein (personal communication), there is no reason to assume that chains themselves are assigned θ-roles. In virtue of its first member being assigned a θ-role, a chain is interpreted as having a θ-role. Therefore, if movement into a theta-position takes place, it is not the chain itself that will be in a thematic configuration, but one of its members.

Had this been the only problem, we could minimize our worries by assuming with Chomsky that the Chain Condition (cf (5)) is an LF condition on the wellformedness of a structure. If the head of a chain receives a θ-role, the Chain Condition rules out the structure. However, even if we do so, it seems to me that there is nothing in Chomsky 1995b, besides a stipulation on chain formation, preventing movement into theta-positions.

The claim that a moved head does not assign a θ-role in its derived position might be right. But it fails to be a counterargument for movement

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[16] López does not defend θ-roles as features. His point is that theta-domains and checking domains may be the same module, contrary to Chomsky's (1995b) assumption that they are two complementary modules. But, as López himself notices, his criticism may not be valid for the phase theory, given that in this theory, an argument in situ, besides being assigned a θ-role, can also check its Case Feature via Agree with a functional category.

[17] It also worth mentioning that this argument hinges on the existence of chains as real objects formed by the computational system. For the possibility of not having chains at all, see Hornstein (1998, 2001, 2002) and Kiguchi (2002).

into theta-positions if we consider the developments of the Minimalist Program. In an Agr-less checking theory, which is adopted by the end of Chapter 4 (Chomsky 1995b) and thereafter, this claim is valid for formal features in general:[18] Heads do not move in order to check a feature of an upstairs DP. Therefore, Chomsky's head-movement argument might, contrary to his intention, count as an argument for treating θ-roles as features. In addition, notice that head movement might be a PF phenomenon, as suggested by Chomsky (1995b, 2000) and also by Boeckx and Stjepanovic (2001). Thus, if they are right, the assumption that a moved head does not assign a θ-role in its derived position shows us nothing about the nature of θ-roles and the (im)possibility of movement into theta-positions. Since in Chomsky's model PF does not feed LF, and heads move only at PF, a moved head cannot possibly be a θ-role assigner given the semantic import of θ-roles. In other words, by opening up the possibility of analyzing head-movement as occurring at PF, Chomsky himself provides an independent explanation for why moved heads do not assign θ-roles.[19]

The discussion of argument chains is more complex and requires us to revise what Chomsky says about chains and their interpretation at LF. To do so, consider the LF representation sketched in (8), which corresponds to number (88) of chapter 4.[20,21]

(8) we are likely [t_3 to be expected [t_2 to t_1 build airplanes]]]

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[18] By the end of Chomsky (1995b), it is assumed that V is the Accusative Case carrier, and this Case is checked only after V adjunction to little v. However, in the latter developments of the theory (cf. for instance, Chomsky 2000) little v is the carrier of Accusative Case feature.

[19] But see Larson (1988), according to whom ditransitive verbs like *give* assign the external θ-role only after moving to the upper head of the VP shell. See also Saito and Hoshi (2000). On their account of the Japanese light verb construction illustrated in (i), they suggest that θ-role assignment happens only at LF after *kekkon* 'marriage' has raised covertly to the light verb *su*.

(i) Mary-ga John-to (kyonen) [$_{NP}$ kekkon]-o sita (sita = su + ta (past))
Mary-Nom John-with last year marriage-acc did
'Mary married John last year'

[20] The term 'trace' is used here as a shorthand term for 'copies formed by application of copy-and-deletion'.

[21] Chomsky's original example (cf. 1995b: 300, 88) is given in (i). However, as Howard Lasnik (personal communication) pointed out to me, (i) is a misanalysis, it treats *ask* as an ECM verb. Thus, in (8) I replaced *asked* with *expected*, a bona fide ECM verb.

(i) we are likely [t_3 to be asked [t_2 to t_1 build airplanes]]]

According to Chomsky, the successive cyclic movement of *we* forms the following chains.

(9) $CH_1 = (t_2, t_1)$
$CH_2 = (t_3, t_1)$
$CH_3 = (we, t_1)$

Since the Chain Condition is an LF condition, the only way to guarantee the convergence of (8) is via elimination of CH_1 and CH_2 for they violate the Chain Condition. To solve this problem, Chomsky proposes that traces that are not considered for interpretation can be eliminated, that is, "marked as invisible at LF".[22] T_1 cannot be eliminated because it is assigned a θ-role, hence it is important for the interpretation of the structure. T_2, and t_3, on the other hand, do not have effect on the interpretation, and are, therefore, marked as invisible. Consequently, chains CH_1 and CH_2 are eliminated. Hence, CH_3 is the only chain visible for interpretative purposes at LF. [23]

Though it works, there is a stipulation hidden in this mechanism. Chains are always represented with theta-position traces as the second member. But, note that if, instead of (9), we had (10), (8) would not converge because all the chains formed by *we* would violate the Chain Condition.

(10) $CH_1 = (t_2, t_1)$
$CH_2 = (t_3, t_2)$
$CH_3 = (we, t_3)$

There still is another way of computing chains. We can stipulate that each chain contain, as one of its members, the topmost copy of the moved element, which is free from uninterpretable features. Assuming this stipulation, from (8) we form (11). Interestingly, (9) and (11) achieve the

[22] Technically it is not the trace (i.e., a term) that is eliminated, but its formal features. And to use appropriate terminology, they are erased.

[23] Notice that apparently there is a redundancy in this system. It seems that if we allow elimination of chains, the Chain Condition can be dispensed with given that only chains that satisfy Chain Condition survive elimination. One possible way to solve this problem is by assuming that movement into intermediate vacuous positions does not take place. Castillo, Drury and Grohmann (1999) and Hornstein (2001) embrace this assumption, denying the existence of EPP.

same results: Only CH_3 is interpreted at LF. CH_1 and CH_2 violate the Chain Condition, but can be eliminated because they contain LF vacuous intermediate traces.[24]

(11) $CH_1 = (we, t_3)$
$CH_2 = (we, t_2)$
$CH_3 = (we, t_1)$

Now, let us see how this mechanism works if movement into theta-positions takes place. For illustrative purposes, I will use Hornstein's (1999, 2001) analysis of obligatory control. According to this analysis, (12a) has the LF in (12b), in which t_1 and t_3 are copies of *John* in theta-positions.

(12) a. John wanted to eat a bagel
b. [$_{TP}$ John [$_{VP}$ t_3 wanted [$_{TP}$ t_2 to [$_{VP}$ t_1 eat a bagel]]]]

Following Chomsky, we have the following chains:

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[24] One of the reviewers pointed out that this alternative way of forming chains is problematic because it is incompatible with the hypothesis that parasitic gap (PG) constructions are derived through sideward movement (as Jairo Nunes has been proposing since the mid nineties). In that view, some additional machinery is needed in order to force chain formation not to skip intervening copies, or else examples like (i) would wrongly be predicted to be grammatical.
(i) * I wonder [$_{CP}$ who [$_{IP}$ t_4 [$_{vP}$ [$_{vP}$ t_3 [v' called you]] [$_{PP}$ before t_2 [$_{vP}$ t_1 met you]]]]
Such 'non-skipping' requirement on chain formation is indeed incompatible with the system I am suggesting here. But that might be problematic only if one also adopts the sideward movement hypothesis. Also, once sideward movement is assumed, the apparent problem of overgenerating (i) would arise regardless of whether chain formation is formalized as Chomsky does (cf. 9) or as I do (cf. 11). Moreover, it is not clear that examples like (i) are problematic for either implementation of chain formation even under a sideward movement analysis of PG, since cases like (1) are arguably ruled out on independent grounds, as *who* is assigned the same case twice along the derivation (in positions t_2 and t_4). Evidence for that comes from examples like (ii) (Chomsky 1982: 71), which are fully acceptable, as opposed to (i), both cases could be derived in a sideward-movement fashion. The only relevant difference is that the adjunct clause (containing the parasitic gap) is finite in (i) and non-finite in (ii). Consequently, in (ii), but not in (i), *who* is assigned NOM case only in the matrix clause.
(ii) I wonder [$_{CP}$ who [$_{IP}$ t_4 [$_{vP}$ [$_{vP}$ t_3 [v' filed the article]] [$_{PP}$ without t_2 [$_{vP}$ t_1 meeting me]]]]
At any rate, examples like (i), as well as considerations about the validity of Jairo Nunes's sideward movement analysis to PGs, are orthogonal to the point I make here, and the choice between Chomsky's original notion chain formation (cf. 9) and mine (cf. 11) has to be made on the basis of other facts, like the ones I discuss throughout this paper.

(13) $CH_1 = (t_2, t_1)$
$CH_2 = (t_3, t_1)$
$CH_3 = (John, t_1)$

Everything is fine with CH_3. CH_1 violates the Chain Condition, but is eliminated. CH_2 violates the Chain Condition, but cannot be eliminated because its members occupy theta-positions, so they must be visible at LF. Hence, (12b) is either a non-convergent derivation or it converges receiving a deviant interpretation.

However, if we assume what was suggested in (11), we form the chains in (14):

(14) $CH_1 = (John, t_3)$
$CH_2 = (John, t_2)$
$CH_3 = (John, t_1)$

CH_3 is fine. CH_2 violates the Chain Condition, but is eliminated. Now, importantly, CH_1 is also fine. Thus, (12b) converges, with two chains: CH_1 and CH_3, which are structurally disconnected since t_2 is invisible at LF. Moreover, although the members of these chains are copies of the same source, thereby identical in constitution, they are distinct terms.

In essence, Chomsky's argument that chains are incompatible with assignment of θ-roles is as strong as his stipulation about chain formation. Of course, his stipulation can be maintained, thus blocking movement into theta-positions. But, it is important to keep in mind that a slightly revised version of the system allows this type of movement; and neither the original nor the revised version seems conceptually superior. Hence, the choice between them must be empirical.

To close the discussion on Chomsky (1995b), let me bring forward Lasnik's (1999b) observation. If chains are not in any configuration, and as a result are unable to participate in thematic relations, we are lead straightforwardly to the following radical conclusion: A-movement of an argument must be disallowed altogether, given that movement **from** a theta-position should create a chain just as much as movement **to** a theta-

position. Thus, the chain ($\alpha_1 \ldots \alpha_n$), with α_n in a theta-position and α_1 in a Case position, should not exist to begin with.[25]

In recent developments of the Minimalist Program (cf. Chomsky 1999, 2001a, 2001b), Chomsky suggests that the ban on movement into theta-positions is actually a principle of the Grammar:

(15) Pure merge in theta-positions is required of and (restricted to) arguments.

But here we should question the use of the term 'argument'. How do we define arguments? A nominal is defined as an argument because it saturates a θ-role; thus lexical items are defined as arguments or adjuncts only after being merged. As observed by Cedric Boeckx (personal communication), *yesterday* is an argument in (16a), but and adjunct in (16b). Therefore, (15) is problematic in the sense that it requires a lexical item to be somehow marked as an argument or an adjunct prior to merge.[26]

(16) a. Yesterday was a fine day
b. John arrived yesterday

Chomsky (1981) defines arguments as NPs with some sort of "referential function", such as names, variables, anaphors and pronouns. However, this definition does not make (16) compatible with (15). Moreover, if arguments are so defined and (15) maintained, a sentence

[25] Watanabe (1999) and López (2001) argue that there is also a tension between the configurational view of θ-roles and Chomsky's idea that little v is the locus of the external θ-role and accusative Case. If the object moves overtly to spec of vP, creating a second specifier (the first being occupied by the external argument), at LF both the subject and object will be configurationally in the right position to be interpreted as the 'agent' of the event. The assumption that only one specifier is interpreted as the 'agent' does not make the problem go away because it does not tell us which specifier is so interpreted. As pointed out by Usama Soltan (personal communication), this argument might not be a strong one. If LF does not allow the head of a multimembered chain to be in a theta-position, as suggested by Chomsky, then a shifted object should be prevented from being interpreted as the external argument.

[26] Moreover, as pointed out by Cedric Boeckx, a companion of (15) is Chomsky's assumption that adjuncts can be inserted later in the derivation. However, recently (cf. 2001b), Chomsky has dropped this assumption. Thus, once the companion of (15) is gone, (15) is even less justified.

involving left-dislocated NPs as in (17a) is arguably a violation of (15). [27] One could follow Williams (1994) and say that in (17a) *John* is in a thematic relationship with the proposition *Mary likes him*, with *John* being the topic of the comment. However, if this is so and topicalization is achieved via movement, (17b) should be prohibited since it would involve movement/second merge of an argument into a theta-position.

(17) a. John, Mary likes him
b. Fish, I don't like

Therefore, I close this section concluding that there are no strong conceptual arguments supporting the idea that θ-roles have a special syntactic status, being assigned only in a stage of the derivation in which the objects involved in the assignment are not yet complex objects expanded by movement. In the next section, I will present some empirical evidence to support the opposite conclusion: certain thematic relations are in fact formed only after NP movement.

2. Moving into Theta-Positions, Creating Thematic Chains

In section 2.1, I attempt to show that Chomsky's (1986) motive (i.e.; secondary predication) to formulate the Theta-Criterion in terms of the Chain Condition (cf. (5)) might, conversely, be an argument against the Chain Condition. I will focus on the thematic relationship between secondary predicates and indirect objects in an attempt to show that it may not be explained if a moved argument is not allowed to receive a θ-role.

In section 2.2, I will review Bošković's (1994) argument for assuming that Romance restructuring configurations involve movement into theta-positions, and in section 2.3, I will discuss Pesetsky's (1992) observation that some ECM subjects receive a second θ-role from the matrix verb.

[27] As Masaya Yoshida (personal communication) observed (17a) could be treated as a case of movement, leaving behind a resumptive pronoun a la Boeckx (2001). A related discussion on the distinction between left dislocation and topicalization can be seen in Lasnik and Uriagereka (1988).

2.1. Secondary Predicates and Indirect Objects

Recall from section 1 that, for Chomsky (1986), a single NP is interpreted as receiving two θ-roles in cases of secondary predication. In (18), for instance, *Mary* is predicated by both the adjective *sad* and the verb *arrived*.

(18) Mary arrived sad

Chomsky's response to this type of construction was the formulation of the Theta-Criterion (3) as part of the Chain Condition (5). Thus, the analysis of (18) must guarantee that the two θ-roles are assigned to *John* prior to *John's* movement to the sentential subject position when it is still in object position. One problem for this analysis is that it predicts that (19) is acceptable, but it is not.[28]

(19) * There arrived John sad

Notice that, in general depictive adjectives can be predicated of subjects and direct objects, as illustrated in (20).

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[28] Brazilian Portuguese displays the same phenomenon. (ia) allows only a reading in which *falastrona* 'talkative' is a simple adjective, describing a permanent property of the entity *Maria*. In (ib), on the other hand, *falastrona* is interpreted only as depictive predicate, denoting the state in which *Maria* was when arrived. Hence, if (ia) has a structure in which the logical object stays in situ, while a expletive pronoun is inserted in the subject position, as suggested by Rizzi (1982), among others, then the conclusion is that depictive adjectives can only predicate with the logical object if it moves to the sentential subject position. Therefore, in (ib) the predicative relationship between *Maria* em *falastrona* cannot be established prior to the movement of the DP *a Maria* to the sentential subject position.

(i) a. Chegou a Maria falastrona
arrived the Maria talkative
'There arrive the talkative Maria'
b. A Maria chegou falastrona
the Maria arrived talkative
'Maria arrived talkative'

Max Guimarães (personal communication) observed that in special contexts (for instance, iteration and special prosody in (ii)) inverted subjects tend to accept secondary predication.

(ii) Chegou a Maria falastrona, falastrona
arrived the Maria talkative, talkative
'There arrived Mary very talkative'

(20) a. I_i wrote my confession $drunk_i$
b. I put the $food_i$ on the table hot_i

This might suggest there is something special about presentational *there* constructions that make them incompatible with secondary predication. Thus, being cautious, I will put (19) aside. But this is not the end of the discussion. In Some languages, including English,[29] secondary predicates fail to predicated of indirect objects, as observed by Baker (1997) and Romero (1997):[30]

(21) a. * I gave the meat to $Mary_i$ $hungry_i$
b. * I gave $Mary_i$ the meat $hungry_i$

Interestingly though, Koizumi (1994) points out that a logical indirect object can be the understood argument of a depictive adjective if

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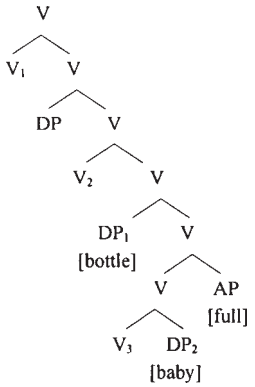
[29] See Pylkkänen (2002) for a crosslinguistic survey.

[30] Hale and Keyser (2002) discuss cases like (i):

(i) I gave the $bottle_i$ to the $baby_j$ $full_{i/*j}$

Their explanation seems to be that the secondary predicate is inserted at D-structure as an adjunct to the inner verbal projection that composes the argument structure of *give*, as represented in (ii), the representation of (i) at D-structure (cf p. 162, 11). They take D-structure to be the level in which predicative relations are formed. Thus, in (ii), since DP_2 does not c-command the adjective (cf. Williams' (1980:206) C-Command Condition on Predication), there can be no predicative relation between the two of them:

(ii)



What is missing from their account is an explanation for why the adjective is allowed within the argument structure of the verb, even though it is not selected by the verb. Moreover, we also need an explanation for why this type of adjunct is allowed within a verbal argument structure, whereas other adjuncts are not, given Fodor's (1970) objections against lexical decomposition.

passivization takes place and the indirect object is displaced to the sentential subject position, as in (22):

(22) The patients$_i$ were given the drugs drunk$_i$
(Cf. * The drugs were given to the patients$_i$ drunk$_i$)

The underlying indirect object of (22) must first be merged in the complement domain of *given* in order to be interpreted as the goal of the *giving* event. But, from its VP internal position, *the patients* cannot be interpreted as being in a theta-relation with *drunk*. Hence, the theta-relation between the NP *the patient* and *drunk* is licensed only after movement of the NP into the sentential subject position. This clearly shows that the head of a chain can be interpreted as being in a thematic relation, contrary to Chomsky's restriction.

One could disagree with the conclusion above, arguing that the phenomenon in question might be explained by appealing to the control analysis sketched in (23) and defended by Chomsky (1981) and Stowell (1983). According to this analysis, the conclusion that the NP movement in (22) licenses the thematic relationship between the underlying indirect object and *drunk* is just a misinterpretation of the datum. What the movement really does is put the indirect object in a position from which it c-commands and, therefore, controls PRO, the argument of the adjunct small clause.

(23) [$_{IP}$ the patients$_i$ were [$_{VP}$ [$_{VP}$ given t_i the drugs [$_{SC}$ PRO$_i$ drunk]]]]

However, there is evidence that something different from control is responsible for secondary predication. As pointed out by Koizumi (1994), an indirect object within a VP can be a controller (24), and this clearly contrasts with (21).[31]

(24) I wrote him$_i$ a letter [PRO$_i$ to show his mother]

---

[31] Besides that, observe the contrast in (i): depictive adjectives cannot be predicates of prepositional objects (Williams 1980), though prepositional objects can be controllers (Schein 1995).

(i) a. * John ate at the meat$_i$ raw$_i$
b. John pleaded with Bill$_i$ [PRO$_i$ to leave]

Taking into consideration languages like Russian, where secondary predicates are morphologically case marked, Schein (1995) provides another type of evidence against a control analysis for secondary predication. The Russian facts are the following: If a depictive adjective predicates with the subject, it is marked with nominative case, as (25a) shows, but if it is a predicate of the object, then it is marked with instrumental case (25b). If the sentential subject is an underlying object, as in unaccusative constructions (25c), the secondary predicate can be marked either with nominative or instrumental case.

(25) a. Marik ubil lošad' pjannyj (Nom)
Marik killed horse drunk
b. Ja kupil mjaso zamoroženym (Instr)
I bought meat frozen
c. Maša prišla veseloj (Nom)/veselaja (Intr)
Maša arrived cheerful

Schein's observation is that (25) cannot be a case of control because in a bone fide control configuration (26), a secondary predicate cannot bear nominative case. According to his analysis, the presence of PRO in the embedded subject position of (26) blocks agreement between the nominative matrix subject and the adjective. Therefore, if there were a small clause containing a PRO in (25), nominative case agreement would be blocked.

(26) Vanja *x*očet byt'vernym (Instr)/*vernyj (Nom) partii
'Vanya wants to be faithful to the party'

Therefore, based on these facts, we can exclude the possibility of having a control analysis for secondary predication.

A complex predicate analysis has being supported by Roberts (1986), Williams (1994) and Geuder (2000), among others. Putting aside differences in technical implementation, the proposal made by these authors is that depictive adjectives are predicates that combine with another predicate, forming a complex that is predicated of an argument c-commanding it.

This might be the right analysis for secondary predication, however it does not make the secondary predication in (22) compatible with the Chain Condition. Given the facts in (21), if a complex predicate is formed in (22), it is not predicated of the logical indirect object prior to its raising to the sentential subject position. Therefore, (22) should be seen as an argument that chain heads are able to participate in theta-relations, and the Chain Condition is false.

2.2. Prepositional Subjects in Restructuring Configurations

Consider the following pair of Spanish sentences:

(27) a. Marta le quiere gustar a Juan
Marta clitic. Want-3rdSg please-inf to Juan
'Marta wants for Juan to like her'

b. A Juan le quiere gustar Marta
to Juan clitic want-3rdSg please-inf Marta
'Juan wants to please Marta'

According to González (1988), (27a) and (27b) differ in meaning. In (27a), *Marta* is receiving the external θ-role of *querer* 'want', whereas in (27b) this very same θ-role is assigned to *Juan*. This contrast in meaning does not show up if the matrix verb is a raising verb, as illustrated in (28). This is explained by the fact that *querer* assigns an external theta-role, while the raising verb in (28) does not.

(28) a. Las estudiantes le empezaron a gustar al professor
the students-fem clitic began-3rdPl to like-inf to-the professor

b. Al professor le empezaron a gustar las studiantes
to-the professor clitic began-3rdPl to like-inf the students-fem
'The professors began to like the students'

Bošković (1994) argues that (27b) cannot be derived via control. The preposition *a* preceding *Juan* indicates that at some stage of the derivation, the DP *Juan* is an argument of the embedded verb *gustar*, being marked with inherent case, as in (27a). Hence, if (27b) were an obligatory control

configuration, it would involve the derivation represented in (29), in which both PRO and *Juan* are taken by the embedded verb as its external argument.

(29) A Juan$_1$ le quiere [PRO$_1$ gustar Marta t_1]

Hence, as suggested by Bošković (27b) is an argument for assuming that an NP can receive a q-role in its derived position.[32]

2.3. Exceptional Theta Marking

Originally discussed by Postal (1994), the sentence in (30) is taken by Pesetsky (1992) (also by Bošković 1997 and López 2001) as a case in which an ECM subject receives a second q-role from an agentive matrix verb.

(30) Sue estimated Bill's weight to be 150 lbs

The argument is the following: verbs like *estimated* select, as their complements, NPs denoting measurement. In (31a), for instance, the NP *Bill's weight* matches this selectional requirement and the sentence is acceptable. (31b), on the other hand, is unacceptable because the NP *Bill* does not denote measurement.

(31) a. Sue estimated Bill's weight
b. * Sue estimated Bill

Thus, if in (30) we substitute *Bill's weight* for *Bill*, it results in an unacceptable sentence:

(32) * Sue estimated Bill to weigh 150 lbs

It seems then that the main verb in (30) selects as its complement the *NP Bill's weight.* Hence, considering selection restrictions to be an indication

[32] López (2001) presents a similar argument, claiming that in some Spanish causative constructions a DP receives a θ-role after undergoing movement.

of θ-role assignment, it is reasonable to assume that in (30) *Bill's weight* is assigned a θ-role from *estimated*. And, taking thematic relations to be local, as defended by Hale and Keyser, the θ-role in question cannot be assigned before the embedded subject moves from its based generated position, otherwise locality wouldn't be satisfied. Therefore, it is plausible to assume that the LF representation of (30) has a nontrivial chain bearing more than one θ-role.[33]

For Pesetsky, this case might be analyzed as involving a θ-role assignment across a clause boundary, similarly to the GB account for exceptional Case marking, as shown in (33a). Bošković suggests that the embedded subject raises to the matrix Agro projection in order to check its Case feature, and its second θ-role is assigned when the matrix verb adjoins to the head of AgroP, as represented in (33b):

(33) a. [...[$_{VP}$ estimated [$_{IP}$ Bill's weight$_1$ [$_{T'}$[$_{VP}$ t_1 [to be 150 lbs]]]]]]

θ

b. [...[$_{AgroP}$ Bill's weight$_1$[$_{Agro'}$[$_{Agr}$ estimated+Agr][$_{VP}$ t_2 [$_{IP}$ $t_{1...}$]]]]]

θ

For the purpose of the present discussion, it does not matter which account fares better. What is important here is the empirical fact that both of them try to explain: an NP is arguably assigned a second θ-role after having moved from its original theta-position.

3. Conclusion

Upon closer inspection, the ban on movement into theta-positions reveals itself as conceptually unjustified. The developments of the Principles and Parameters approach do not provide any well-motivated argument against having θ-roles affecting complex phrasal markers. Therefore, the

[33] This type of exceptional theta-marking might also be involved in ECM constructions like (i) in which the verb *declared* is interpreted as affecting the embedded subject in the sense that *Bill's* status is changed by *Mary's* declaration (Cf. Pesetsky 1992)

(i) Mary declared Bill to be dead.

right answer about the syntactic behavior of θ-roles is to be decided on empirical grounds, and I have presented some empirical evidence that θ-roles can be saturated by derived objects.

The theoretical implication of this conclusion is the following: if θ-roles are understood as configurations, we need to redefine the operation Move such that it can be applied for purposes other than that of feature checking. On the other hand, if we hold our current understanding of Move constant, then θ-roles are to be defined as features, as defended by the authors cited in the introduction. Therefore, mainstream Principles and Parameters proponents need to revise their assumptions about how theta-relations are formed.

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References

Aoshima, S. 2000. Mono-Clausal Control Constructions in Japanese. In: Y. J. Jang and J-S. Kim (eds.) *Proceedings of the Seoul International Workshop on Generative Grammar*. Seoul: Hansin Publishing Co.: 33-49.

Baker, M. 1997. Thematic Roles and Syntactic Structure. In: L. Haegeman (ed.) *Elements of Grammar*. Dordrecht: Kluwer: 73-137.

Boeckx, C. 1998. *Traces of Argument Structure*. Ms, University of Connecticut, Storrs.

_____. 2001. *Mechanisms of Chain Formation*. Doctoral dissertation, University of Connecticut, Storrs.

_____. and S. STJEPANOVIC. 2001. Head-ing toward PF. *Linguistic Inquiry*, **32**: 345-55.

Bošković, Ž. 1994. D-structure, Theta Criterion, and Movement into Theta-Positions. *Linguistic Analysis*, **24**: 247-86.

_____. 1997. *The Syntax of Nonfinite Complementation: An Economy Approach*. Cambridge, Mass.: MIT Press.

_____. and D. TAKAHASHI. 1998. Scrambling and Last Resort. *Linguistic Inquiry*, **29**: 347-366.

Brody, M. 1993. θ-Theory and Arguments. *Linguistic Inquiry*, **24**: 1-23.

Castillo, J., J. Drury and K. Grohmann. 1999. The Status of Merge over Move Preference. In: S. Aoshima, J. Drury and T. Neuvonen (eds.) *University of Maryland Working Papers in Linguistics*, **8**: 66-104.

CHOMSKY, N. 1981. *Lectures on Government and Binding*. Dordrecht: Foris.

_____. 1982. *Some Concepts and Consequences of the Theory of Government and Binding*. Cambridge, Mass.: MIT Press.

_____. 1986. *Knowledge of Language: Its Nature, Origin and Use.* New York: Praeger.

_____. 1993. A Minimalist Program for Linguistic Theory. In: K. HALE and S. J. KEYSER (eds.) *The View from Building Twenty*. Cambridge, Mass.: MIT Press: 1-52.

_____. 1995a. Bare Phrase Structure. In: G. Webelhuth (ed.) *Government and Binding Theory and the Minimalist Program*. Oxford: Blackwell: 383-439.

_____. (1995b) Categories and Transformations. In: *The Minimalist Program*, 219-394. Cambridge, Mass.: MIT Press.

_____. 2000. Minimalist Inquiries: the Framework. In: D. MICHAELS, R. Martin and J. URIAGEREKA (eds.) *Step by Step: Essays on Minimalist Syntax in Honor of Howard Lasnik*. Cambridge, Mass.: MIT Press: 89-155.

_____. 2001a. Derivation by Phase. In: M. KENSTOWICZ (ed.). *Ken Hale: A Life in Language*. Cambridge, Mass.: MIT Press: 1-52.

_____. 2001a. *Beyond Explanatory Adequacy*. *MIT Occasional Papers in Linguistics*, **20**. MIT, Cambridge, Mass.

FERREIRA. M. 2000. *Argumentos Nulos em Português Brasileiro*. MA thesis, Campinas: University of Campinas.

FODOR, A. J. 1970. Three Reasons for Not Deriving 'Kill' from 'Cause to Die'. *Linguistics Inquiry*, 1: 429-438.

GEUDER, W. 2000. *Oriented Adverbs: Issues in the Lexical Semantics of Event Adverbs*. Doctoral dissertation, Universität Tübingen, Konstanz.

GONZÁLEZ, N. 1988. *Object Raising in Spanish*. New York: Garland.

GROHMANN, K. 2000. *Prolific Peripheries: A Radical View from the Left*. Doctoral dissertation, University of Maryland, College Park.

HALE, K. and S. J. KEYSER. 1993. On Argument Structure and the Lexical Expression of Syntactic Relations. In: *The View from Building Twenty*. Cambridge, Mass.: MIT Press: 53-109.

_____. 1998. Bound Feature, Merge and Transitivity Alternations. In: L. PYLKKÄNEN, A. van HOUT and H. HARLEY (eds.) *Papers from the Uppen/ MIT Roundtable on the Lexicon. MIT Working Papers in Linguistics*, **35**: 49-72. MIT, Cambridge, Mass.

_____. 2002. *Prolegomenon of a Theory of Argument Structure*. Cambridge, Mass.: MIT Press.

HORNSTEIN, N. 1995. *Logical Form: From GB to Minimalism*. Oxford: Blackwell.

_____. 1998. Movement and Chains. *Syntax*, **1**: 99-127.
_____. 1999. Movement and Control. *Linguistic Inquiry,* **30**: 69-96.
_____. 2001. *Move! A Minimalist Theory for Construal*. Oxford: Blackwell.
_____. 2002. A Grammatical Argument for Neo-Davidsonian Semantics. In: G. PREYER and G. PETER (eds.) *Logical Form and Language*. Oxford: Clarendon Press.
_____. and M. MOTOMURA. 2002. Psych Verbs, Theta Roles and Reconstruction. In: *Proceedings of 2002 LSK International Summer Conference*. Vol II. Linguistics Society of Korea: 39-58.
_____. and I. SAN MARTIN. 2000. Obviation as Anti-Control. Paper presented at GLOW 2000, Universidad de Deusto & Universidad del Pais Vasco.
JACKENDOFF, R. 1983. *Semantics and Cognition*. Cambridge, Mass.: MIT Press.
_____. 1990. *Semantic Structure*. Cambridge, Mass.: MIT Press.
_____. 1997. *The Architecture of the Language Faculty*. Cambridge, MA.: MIT Press.
JOHNSON, K. 1991. Object Positions. Natural Language and Linguistic Theory. 9: 577-636.
KIGUCHI, H. (2002) *Syntax Unchained*. Doctoral dissertation, University of Maryland, College Park.
KOIZUMI, M. 1993. Object Agreement Phrase and the Split VP Hypothesis. In: J. D. Bobaljik and C. Philips (eds.) *Papers on Case and Agreement I. MIT Working Papers in Linguistics*, **18**. MIT, Cambridge, Mass.: 99-148.
_____. 1994. Secondary Predicates. *Journal of East Asian Linguistics*, **3**: 25-79.
KURODA, S-Y. 1999. Notes on So-Called Head-Internal Relative Clauses in Japanese. In: M. Muraki and E. Iwamoto (eds.) *Linguistics: In Search of the Human Mind: A Festschrift for Kazuko Inoue*. Tokyo: Kaitakusha: 414-29.
LARSON, R. K. 1988. On Double Object Constructions. *Linguistic Inquiry*, **19**: 335-91.
LASNIK, H. 1995. Last Resort. In: S HARAGUCHI and M. FUNAKI (eds.). *Minimalism and Linguistic Theory*. Tokyo: Hitizi Syobo: 1-32.
_____. 1999a. A Note on Pseudogapping. In: *Minimalist Analysis*. Oxford: Blackwell: 151-174.
_____. 1999b. Chains of Arguments. In: S. D. EPSTEIN and N. HORNSTEIN (eds.) *Working Minimalism*. Cambridge, MA.: MIT Press: 189-215.
_____. 2003. *Minimalist Investigations in Linguistic Theory*. London: Routledge.
_____. and URIAGEREKA, J. 1988. *A Course in GB Syntax*. Cambridge, MA.: MIT Press.

LÓPEZ, L. 2001. On the (Non)complementarity of θ-theory and Checking Theory. *Linguistics Inquiry*, **32**: 694-716.

MANZINI, M. R. and A. ROUSSOU. 2000. A Minimalist Theory of A-Movement and Control. *Lingua*, **110**: 409:447.

MARANTZ, A. 1995. The Minimalist Program. In: G. WEBELHUTH. (ed.): 349-381.

MATSUYA, A. 2000. *Theta Movement in Japanese Syntax*. Doctoral dissertation, University of Maryland, College Park.

PESETSKY, D. 1992. *Zero Syntax*. Vol 2. Ms., MIT, Cambridge, Mass.

POSTAL, P. M. 1974. *On Raising: One Rule of English Grammar and its Theoretical Implications.* Cambridge, Mass.: MIT Press.

PIRES, A. 2001. *The Syntax of Gerunds and Infinitives: Subject, Case and Control*. Doctoral dissertation, University of Maryland, College Park.

PYLKKÄNEN, L. 2002. Applicative and Depictive Secondary Predication. Paper presented at *LingLunch*, MIT.

RIZZI, L. 1982. *Issues in Italian Syntax*. Dordrecht: Foris.

ROBERTS, I. 1986. *The Representation of Dethematized Subjects*. Dordrecht: Foris.

RODRIGUES, C. 2000. *Deriving Referential Null Subjects From Movement*. Generals paper, University of Maryland, College Park.

_____. 2002. Loss of verbal Morphology and Referential Subjects in Brazilian Portuguese. In: D. LIGHTFOOT (ed.) *Syntactic Effects of Morphological Change*. Oxford: Oxford University Press: 160-178.

ROMERO, J. 1997. *Construcciones de Doble Object y Gramática Universal*. Doctoral dissertation, Universidad Autónoma de Madrid, Madrid.

SAITO, M and H. HOSHI. 2000. Japanese Light Verb Construction. In: D. MICHAELS, R. MARTIN , and J. Uriagereka (eds.): 261-295.

_____. and K. MURASUGI. 1993. Subject Predication within IP and DP. Ms., University of Connecticut and Kinjo Gakuin University.

SCHEIN, B. 1995. Small Clause and Predication. In: A. CARDINALETTI and M. T. GUASTI (eds.) *Syntax and Semantics: Small Clauses*. San Diego, CA: Academic Press: 49-76.

STOWELL, T. 1983. Subjects Across Categories. *The Linguistic Review*, **2**: 285-312.

WATANABE, A. 1999. Multiple Theta Marking: A Preliminary Study. In: E. IWAMOTO and M. MURAKI (eds.) *Linguistics: In Search of the Mind: A Festschrift for Kazuko Inoue*. Tokyo: Kaitakusha: 708-36.

WILLIAMS, E. 1980. Predication. *Linguistic Inquiry,* **11**: 203-38.

_____. 1994. *Thematic Structure in Syntax*. Cambridge, Mass: MIT Press.