

# On the common formal properties of scrambling and clitic doubling\*

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## 1. Aims and Background

A commonly held view in the literature on Scrambling and Clitic Doubling is that both constructions are sensitive to Specificity.<sup>1</sup> For this reason Sportiche (1992) proposes to unify the two, an approach which has become quite standard in the relevant literature ever since.<sup>2</sup> However, the claim that clitic doubling is the counterpart of Germanic scrambling has never been substantiated. In this paper we present extensive evidence from Greek that Clitic Doubling has common formal properties with Germanic Scrambling/Object Shift. Our evidence consists mainly of binding facts observed when doubling takes place, which seem, at first sight, to be completely unexpected. On closer inspection, however, it turns out that these facts are strongly reminiscent of the effects showing up in Germanic scrambling. We propose that these properties can be derived under a theory of clitic constructions along the lines of Sportiche (1992) implemented into the framework of Chomsky (1995). Finally, we suggest that the crosslinguistic distribution of Scrambling as opposed to Clitic Doubling should be linked to a parameter relating to properties of Agr: Move/Merge XP vs. Move/Merge X<sup>o</sup> to Agr. We show that this parameter unifies the behavior of subjects and objects within a language and across languages.

The paper is organised as follows. In section 2 we present evidence from binding, interpretational and prosodic effects that doubling and scrambling display very similar properties. In section 3 we present Sportiche's account and point out some problems for it. In section 4 we present our proposal.

## 2. Scrambling and Doubling

### 2.1. Binding Evidence

It is well known that Scrambling is a phenomenon which shows A and A'-movement properties (cf. the various contributions to Corver & Riemsdijk 1994). For the purposes of this paper we assume a movement approach towards Scrambling along the lines of Mahajan (1990) and Deprez (1994) among others according to which this construction should be decomposed into two types of movement, movement to an A-position potentially followed by further movement which has A'-properties. Some of the tests that have been used as diagnostics for determining the A-nature of these chains include (i) the repair or creation of Weak Crossover (WCO) effects, (ii) the obviation of Principle C effects and (iii) compatibility with floating quantifiers (cf. Deprez 1994, Fanselow 1990, Mahajan 1990, Webelhuth 1989, Saito 1992 a.o.)). As will be shown in detail, clitic chains are similar to scrambling chains in that they also manifest these properties.<sup>3</sup>

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<sup>1</sup> See Abraham 1994, 1995, Adger 1993, Diesing 1992, de Hoop 1992, Meinunger 1996, Runner 1993, Delfitto & Corver 1995 among others.

<sup>2</sup> See Mahajan 1991 and Anagnostopoulou 1994 among others.

<sup>3</sup> To our knowledge, these facts have not been discussed in the literature. For this reason, we have to limit ourselves to the Greek data and we will just assume that similar facts also hold for Spanish and Romanian. In order to make sure that the doubled NP is not right dislocated, we construct examples where the NP precedes adverbial elements or small clause predicates.

### 2.1.1 Bound Variable Tests

The example (1b) as opposed to (1a) illustrates the fact that scrambling yields anti-WCO effects. The pronoun in the indirect object can be bound by the scrambled direct object:

- (1) a. \*Peter hat seinem<sub>i</sub> Nachbarn [jeden Gast]<sub>j</sub> vorgestellt<sup>4</sup> *German*  
 Peter has his neighbour every guest introduced  
 b. Peter hat [jeden Gast]<sub>j</sub> gestern seinem<sub>i</sub> Nachbarn t<sub>i</sub> vorgestellt  
 Peter has every Guest yesterday his neighbour introduced

Exactly the same effect shows up with clitic doubling in Greek. (2a) is a WCO violation: the pronoun in indirect object position cannot be bound by the quantified direct object.<sup>5</sup> In (2b) doubling of the direct object leads to an obviation of the WCO effect; the bound variable construal of the pronoun is possible:

- (2) a. \*o Petros epestrepse [tu idioktiti tu]<sub>j</sub>  
 the-Peter-NOM returned-3S the-owner-GEN his  
 [to kathe aftokinito]<sub>j</sub> xtes to vradi  
 the every car-ACC yesterday the night  
 'Peter returned his owner the every car last night'  
 b. o Petros to<sub>i</sub> epestrepse [tu idioktiti tu]<sub>j</sub>  
 the-Peter-NOM cl-ACC returned the-owner-GEN his  
 [to kathe aftokinito]<sub>j</sub> xtes to vradi  
 the every car yesterday the night  
 lit. 'Peter returned it his owner the every car last night'

A similar point can be made on the basis of Japanese scrambling data and Greek Doubling facts: in both (3a&4a) the pronoun in subject position cannot be bound by the quantified object. In (3b&4b) scrambling and doubling of the quantified object leads to an obviation of the WCO effect.<sup>6</sup>

- (3) a. ?\*[[Soitu<sub>i</sub> -no hahaoya]-ga [dare<sub>i</sub>-o aisiteru]] no  
 the guy<sub>i</sub>-gen mother]-nom [who<sub>i</sub>-acc love Q  
 'His mother loves who'  
 b. ? Dare<sub>i</sub>-o [[soitu<sub>i</sub> -no hahaoya]-ga [t<sub>i</sub> aisiteru]] no  
 who-acc [[the guy<sub>i</sub>-gen mother]-nom love]] Q  
 'Who his mother loves t'  
 (4) a. ?\*o skilos tis<sub>i</sub> akoluthise [tin kathe gineka]<sub>j</sub> pandu *Greek*  
 [the dog her]-NOM followed [the every woman]-ACC everywhere  
 'Her dog followed the every woman everywhere'  
 b. o skilos tis<sub>i</sub> tin akoluthise [tin kathe gineka]<sub>j</sub> pandu  
 [the dog her]-NOM cl-ACC followed [the every woman]-ACC everywhere  
 'Her dog her followed the every woman everywhere'

The reverse effect is illustrated in (5). (5b) vs. (5a) shows that a pronoun cannot be a bound variable once scrambling takes place (cf. Bayer & Kornfilt 1994):

- (5) a. Wir wollten [jedem Professor]<sub>j</sub> seine<sub>i</sub> Sekretärin vorstellen *German*  
 we wanted every Professor-DAT his secretary introduce  
 b. \*..seine<sub>i</sub> Sekretärin [jedem Professor]<sub>j</sub> vorstellen  
 his secretary every Professor-DAT introduce

<sup>4</sup> H-M. Gaertner pointed out to us that (1a) becomes more acceptable under a specific intonation pattern. We abstract away from this fact.

<sup>5</sup> Note however that the contrast in (2) is not very sharp due to the marginal status of the dative construction in Greek.

<sup>6</sup> Note that the contrast between (4a) and (4b) is very clear.

Doubling patterns with scrambling also in this respect; the pronoun contained in the indirect object cannot be bound by the quantified direct object once doubling takes place.

- (6) a. sistisa [kathe gineka]<sub>i</sub> [ston melondiko andra tis]<sub>j</sub> *Greek*  
 introduced-1S [every woman]-ACC to-the future husband her  
 'I introduced every woman to her husband'
- b. \*tu<sub>i</sub> sistisa [kathe gineka]<sub>i</sub> [tu melondiku andra tis]<sub>j</sub>  
 cl-DAT introduced-1S [every woman]-ACC the-future- husband-DAT hers  
 'I introduced him her husband every woman'

Hence, examples (2b & 6b) show that doubling creates new binding possibilities by forcing the NP to be interpreted higher. Note that doubled NPs can receive a distributive interpretation even when the distributor is in a higher clause:<sup>7</sup>

- (7) a. [Kathe gineka]<sub>i</sub> ipe oti to<sub>i</sub> theori [to pedi tis]<sub>j</sub> omorfo  
 every woman said that cl-ACC considers the child cl-GEN beautiful  
 'Every woman said that she considers her child beautiful'  
 = for every woman a potentially different child
- b. [Kathe gineka]<sub>i</sub> pistevi oti tha ton<sub>j</sub> vri [ton andra tis]<sub>j</sub> noris  
 every woman believes that FUT cl-ACC find-3S the husband cl-GEN early  
 'Every woman believes that she will find her husband early'  
 = for every woman a potentially different husband

### 2.1.2 Principle C effects<sup>8</sup>

The same point can be made on the basis of Principle C effects which can be overridden once scrambling takes place, as the following examples from German and Hindi show (Hindi data from Mahajan 1994):<sup>9</sup>

- (8) a. \*Hans hat **ihr**; [**Marias**; Buch] zurückgegeben *German*  
 Hans has to her Mary's book given back
- b. ?Hans hat [**Marias**; Buch] **ihr**; zurückgegeben  
 Hans has Mary's book to her given back

<sup>7</sup> Note that the following is also acceptable:

- i. [Kathe gineka] ton<sub>i</sub> akoluthise [ton skilo tis]<sub>j</sub> pandu  
 every woman cl-ACC followed the dog cl-GEN everywhere  
 'Every woman followed her dog everywhere'

In (i) doubling does not block variable binding. Thus, we have the following paradox. On the one hand, doubling of a QP object permits obviation of the WCO effect when the pronoun is contained in the subject (4b). On the other hand a QP subject may bind into a doubled direct object as in (i). It is as if subject and object c-command each other when DO-doubling takes place. The issue requires further research.

<sup>8</sup> Thanks to Uli Sauerland for many suggestions concerning the presentation of some of the arguments and for bringing Fox's article to our attention.

<sup>9</sup> Note, however, that some researchers have argued that Scrambling qualifies as A' -movement on the basis of evidence showing that scrambling exhibits the Condition C reconstruction effects which occur with A'-movement and not with A-movement (cf. the discussion in Saito 1992: 90-91).

- (9) a. \*mE-ne use<sub>i</sub> raam<sub>i</sub> ki kitaab dii  
 I-SUB him-IO Rami GEN book-F give-PERF-F  
 'I gave to him Ram's book'  
 b. mE-ne [raam<sub>i</sub> ki kitaab]<sub>i</sub> usei t<sub>j</sub> dii  
 I-SUB RAM GEN book-F him-IO give-PERF-F  
 lit. 'I gave Ram's book to him'

Interestingly, exactly the same effect shows up with clitic doubling in Greek. (10a) shows that the usual condition C effects arise when the IO-clitic `tis' c-commands the R-expression `tis Marias' contained inside the DO. The condition C effect disappears once the DO is doubled, as (10b) shows:

- (10) a. \*O Janis tis<sub>i</sub> epestrepse [to vivlio tis Marias]<sub>i</sub> simiomeno *Greek*  
 The-John cl-DAT gave back [the book of Mary]-ACC with notes  
 'John gave her back Mary's book full of notes'  
 b. ?O Janis tis<sub>i</sub> to<sub>j</sub> epestrepse [to vivlio tis Marias]<sub>i</sub> simiomeno  
 the-John cl-DAT- cl-ACC gave back [the book of Mary ]-ACC with notes  
 'John gave her it back Mary's book full of notes'

Note that when a clitic cluster c-commands a non-doubled PP the usual condition C effects do arise (cf. 11). This indicates that the reason for the well formedness of (10b) cannot be that the dative clitic does not c-command any more `Mary' because it is too deeply embedded whenever an accusative clitic is present:

- (11) a. \*O Janis tu<sub>i</sub> edose to vivlio mazi me tin fotografia tu Petru.  
 the-John-NOM cl-DAT gave-3S the book-ACC with the picture the-Peter-DAT  
 'John gave him the book together with Peter's picture'  
 b. \*O Janis tu<sub>i</sub> to edose mazi me tin fotografia tu Petru  
 the-John-NOM cl-DAT cl-ACC gave-3S with the picture the-Peter-DAT  
 'John gave it to him together with Peter's picture'  
 c. \*O Janis tu<sub>i</sub> to edose to vivlio  
 the-John-NOM cl-DAT cl-ACC gave-3S the book  
 mazi me tin fotografia tu Petru  
 with the picture the-Peter-DAT  
 lit. 'John gave him it the book together with Peter's picture'

Note, furthermore, that when the dative clitic appears in a higher clause, doubling in the lower clause does not obviate Condition C:

- (12) \*O Janis tis<sub>i</sub> ipe oti tha to diavasi [to vivlio tis Marias]  
 the-John cl-DAT told that FUT cl-ACC read-3S the-book-ACC the-Mary-DAT  
 me prosahi  
 with care  
 'John told her that he will read carefully Mary's book'

Moreover, it seems that while doubling of an accusative obviates Principle C effects doubling of a dative does not:

- (13) a. \*O Janis tin<sub>j</sub> sistise [tis filis tis Marias]<sub>i</sub> persi  
 the-John-NOM cl-ACC introduced-3S the-friend the Mary-GEN last year  
 tetja epoxi  
 such time  
 'John introduced her to Mary's friend around this time last year'

- b. \*O Janis tis<sub>i</sub> tin<sub>j</sub> sistise [tis filis tis Mariaş]<sub>i</sub>  
 the-John-NOM cl-DAT cl-ACC introduced the-friend the Mary-GEN  
 last year such time  
 persi tetja epoxi  
 'John introduced her to Mary's friend around this time last year'

This suggests that a direct object NP is interpreted higher than a dative under clitic doubling, but the reverse does not hold.<sup>10</sup>

In turn, this leads to the prediction that (6b) should improve once the DO-QP is doubled, an intuition that we do share although the facts are somewhat murky:

- (6b) \*tu sistisa kathe gineka tu antra tis  
 (14) ?tu tin sistisa kathe gineka tu antra tis  
 cl-DAT cl-ACC introduced-1S every woman-ACC the-husband-DAT hers  
 'I introduced every woman to her husband'

Finally, note that in (10b) the doubled NP is not right dislocated: it precedes the secondary predicate *simiomeno* which receives the main stress of the sentence.<sup>11 12</sup>

### 2.1.3 Floating quantifiers

As known, scrambling/object shift licenses floating quantifiers as the examples (15a&b) indicate: (cf. Deprez 1994)

- (15) a. Hann las **baekunar** ekki **allar** *Icelandic*  
 'He read books not all  
 b. Hans hat **die Bücher** seinem Bruder **alle** zurückgegeben *German*  
 Hans has the books his brother all given back

As is well known, cliticization also licenses floating quantifiers as (16a) vs. (16b) shows:

- (16) a. I Maria **ta** epestrepse **ola** ston idioktiti tus *Greek*  
 the-Mary cl-ACC gave back all to-the owner theirs  
 'Mary returned them all to their owner'

<sup>10</sup> This is compatible with the view in the literature on doubling that IO-doubling is a pure object agreement phenomenon while DO-doubling scopes out the NP to a relatively high position (Uriagereka 1995 a.o).

<sup>11</sup> According to Abraham (1994), Cinque (1993) and Zubizarreta (1994) the element that receives the main stress of a sentence is the element which is most deeply embedded in this sentence. Thus, the doubled NP which precedes the secondary predicate *simiomeno* cannot be right dislocated. Note, that in (i) coreference is marginally possible between the clitic and the NP. In (i), however, the NP is clearly right dislocated, as it follows the element *persi* which receives the main stress. Thus, clitic doubling and right dislocation have different binding properties.

- (i) ?O Janis tis tin sistise PERSI [tis filis tis Mariaş]<sub>i</sub>  
 the-John-NOM cl-DAT cl-ACC introduced last year the-friend the Mary-GEN  
 'John introduced her to Mary's friend round this time last year'

<sup>12</sup> The principle C effects discussed here if correctly interpreted show that the doubled-NP undergoes covert XP movement and not just feature movement. On the contrary, Fox (1996) argues on the basis of principle C effects that pied piping at LF is possible only when needed for convergence as in the case of QR needed for ACD resolution. More research on the topic is needed.

- b. \*I Maria epestrepse **ola** ston idioktiti tus  
 the-Mary gave back all to-the owner theirs

## 2.2. Interpretational Evidence

A second piece of evidence in favor of the formal similarity of doubling and scrambling/object shift comes from the observation that in both constructions, a connection between the syntax and the interpretation of NPs is established. Both are 'optional' operations which are sensitive to semantic and discourse properties of NPs.

First of all, Scrambling/Object-shift is sensitive to the referential nature of NPs (cf. Johnson 1991, Diesing & Jelinek 1993, Abraham 1995, Vikner 1995), and it is subject to several restrictions pertaining to their definiteness. In some languages, the class of elements that may undergo scrambling/object shift is limited. In Icelandic, for instance, object shift of definite NPs is grammatical (17a) while object shift of bare plurals is ungrammatical (cf. 17b):

- (17) a. Eg las bokina ekki *Icelandic*  
 I read book-the not  
 b. \*Hann las bækur ekki  
 he read books not

Similar restrictions hold for doubling. In Greek, doubling of definite NPs is well formed (18a) while doubling of indefinites is ungrammatical (18b):

- (18) a. to diavasa to vivlio me prosohi *Greek*  
 cl-ACC read-IS the-book-ACC carefully  
 'I read it the book carefully'  
 b. \*to diavasa kapjo vivlio me prosohi  
 cl-ACC read-IS some book-ACC carefully  
 'I read it some book carefully'

Furthermore, Scrambling/Object-shift is associated with strong/specific interpretation of NPs (cf. Adger 1993, Abraham 1995, Delfitto & Corver 1995, Diesing 1992, de Hoop 1992, Meinunger 1996, Runner 1993 among others). This is shown in the paradigm in (19) from Dutch where scrambling triggers referential, partitive and generic readings on weak NPs (cf. de Hoop 1992):

- (19) a. dat de politie een kraker gisteren opgepakt heeft *referential*  
 that the police a squatter yesterday arrested has  
 b. dat de politie twee krakers gisteren opgepakt heeft *partitive*  
 that the police two of the squatters yesterday arrested has  
 c. dat de politie krakers altijd oppakt *generic*  
 that the police squatters always arrests

Once again doubling shows similar effects, as is well known. It is associated with specificity in Romanian (cf. Dobrovie-Sorin 1990) and with partitiveness in Porteoño Spanish (cf. Suñer 1988), as (20a) & (20b) show:

- (20) a. O caut pe o sekretera *Romanian*  
 her I-look for 'pe' a secretary  
 'I look for a certain secretary'  
 b. El medico los examino a muchos/varios de los pacientes *Spanish*  
 the doctor them examined 'a' many/several of the patients

Finally, doubling of definite NPs makes them strictly anaphoric to previously established discourse referents (i.e. the NPs cannot undergo "accommodation", cf. Anagnostopoulou 1994 following Heim 1982). In (21a) the undoubled NP *ton sigrafea* may refer either to the implicit author of the book about Arthur Miller (accommodation reading) that John read, or to Arthur Miller himself (anaphoric reading). The former option is not possible once the NP *ton sigrafea* is doubled as in (21b).

- (21) a. O Janis diavase [ena vivlio jia ton Arthur Miller], enthusiastike ke  
 John read a book about Arthur Miller, he got very enthusiastic and  
 thelise na gnorisi ton sigrafea apo konda  
 he wanted to get to know the author  
*where j = i or j = the author of the book about A. Miller*
- b. O Janis diavase [ena vivlio jia ton Arthur Miller], enthusiastike ke  
 John read a book about Arthur Miller he got very enthusiastic and  
 thelise na ton, gnorisi ton sigrafea apo konda  
 wanted to get to know the author  
*where j=i*

Once again, the same is true of Scrambling as (22) shows (cf. Delfitto & Corver 1995):<sup>13</sup>

- (22) a. Ik heb gisteren een film over Fellini gezien en ik heb een uur later  
 de regisseur ontmoet (ambiguous)  
 'Yesterday I saw a movie about Fellini and an hour later I met the director'
- b. Ik heb een film over Fellini gezien en ik heb de regisseur een uur later t;  
 ontmoet (unambiguous)

### 2.3 Intonational Evidence

A third type of evidence in favor of the similarity between scrambling and doubling comes from the observation that the scrambled and doubled NPs are de-stressed. The examples making this point for scrambling are given in (23), (24) and (25). De Hoop (1992) observes that object scrambling yields the same semantic effect as the contrastive predicates with stressed verbs in English (cf. 23a&b vs. 23c &d):

- (23) a. dat de politie een kraker gisteren opgepakt heeft *Dutch*  
 that the police a squatter yesterday arrested has
- b. The police **arrested** a squatter yesterday.
- c. #omdat ik een kat altijd heb *Dutch*  
 because I a cat always have
- d. #because I always **have** a cat

Once again, doubling behaves like scrambling as the contrast between (25a) vs. (25b) parallel to (24a) vs. (24b) shows. Backward pronominalization in English is licensed only when the verb carries the main

<sup>13</sup> Marcel den Dikken points out that (22a) can be interpreted with the "director of the movie about Fellini" reading with an intonation contour in which stress falls on "later" and "regisseur", and with the "Fellini" reading with stress on "ontmoet" (or perhaps rather, non-stress on "regisseur"); but for (22b) speakers can get similar ambiguity under similar intonational control -- with stress on "regisseur" and (especially) "later", the "director of the movie about Fellini" reading is perfectly felicitous.

stress (cf. 24b), not when the NP carries the main stress as in (24a) (cf. Williams 1994 for a recent discussion)).

- (24) a. \*His<sub>i</sub> mother loves JOHN<sub>i</sub>  
 b. His<sub>i</sub> mother **loves** John<sub>i</sub>

In (25b) doubling of the direct object makes coreference possible.

- (25) a. \*O skilos tu<sub>i</sub> akoluthi to Jani<sub>i</sub> pandu *Greek*  
 the dog his follows the-John-ACC everywhere  
 'His dog follows John everywhere'  
 b. o skilos tu<sub>i</sub> **ton** akoluthi to Jani<sub>i</sub> pandu  
 the dog his cl-ACC follows the-John everywhere  
 'His dog him follows John everywhere'

Thus, doubling is a way to achieve destressing of the object, similarly to scrambling in Germanic and anaphoric destressing in English.

#### 2.4. Experiencer Object/Double object constructions

Finally, scrambling and doubling display striking similarities in Experiencer Object contexts and Double Object constructions.

2.4.1 A well known observation in the literature is that there is systematic scrambling of object experiencers to a position higher than subject themes in German and Dutch Inverse Linking psychological predicates (cf. den Besten 1985, Haider 1985). This is illustrated in (26a&b) from German and Dutch respectively, where we have scrambling of a dative experiencer, and in (26c&d), where we have scrambling of an accusative experiencer:<sup>14</sup>

- (26) a. ...daß meinem Bruder deine Geschichten gefielen *German*  
 that my brother your stories appeal to  
 b. ...dat mijn broer jouw verhalen bevielen *Dutch*  
 c. ...daß meinen Vater deine Geschichten interessieren *German*  
 that my father your stories interest  
 d. ...dat mijn vader jouw verhalen interesseren *Dutch*

Interestingly enough, in Greek experiencer object constructions, there is systematic clitic-doubling of the experiencer object, dative or accusative as (27a) and (27b) show (cf. Anagnostopoulou 1995):

- (27) a. to vivlio \*(tu) aresi tu Petru  
 the book cl-DAT appeals the-Peter-DAT  
 'The book him appeals to Peter'  
 b. to vivlio ??(ton) endiaferi ton Petro  
 the book cl-ACC interest the-Peter-ACC  
 'The book him interests Peter'

The fact that these constructions display WCO effects (cf. 28a & 28c), that is, the pronoun in the experiencer cannot be bound by the subject, shows that the doubled experiencer is interpreted higher than the Nominative.<sup>15</sup>

<sup>14</sup> See Zaener, Maling & Thrainsson (1985) for arguments that German does not have quirky subjects.

<sup>15</sup> See Anagnostopoulou & Everaert (1996) for arguments that experiencers in inverse-linking psych predicates are not quirky subjects.

- (28) a. \*?[kathe gineka]<sub>i</sub> tu aresi tu andra ti<sub>s</sub>  
 [every woman]-NOM cl-DAT appeals the-husband-DAT hers  
 'Every woman him appeals to her husband'  
 b. [kathe gineka]<sub>i</sub> aresi ston andra ti<sub>s</sub>  
 [every woman]-NOM appeals to the-husband hers  
 'Every woman appeals to her husband'  
 c. \*?[kathe vivlio]<sub>i</sub> ton apogotevi ton sigrafea tu<sub>i</sub>  
 [every book]-NOM cl-ACC disappoints the author-ACC his  
 'Every book him disappoints his author'

2.4.2 Furthermore, in double accusative *double object constructions* in German the *Theme* argument cannot undergo scrambling, as (29b) shows (cf. Neeleman 1994):

- (29) a. Daß der Lehrer die Schüler diese Sprache lehrt German  
 that the teacher the pupils this language teaches  
 b. \*?Daß der Lehrer diese Sprache die Schüler lehrt

Exactly the same restriction characterizes Greek double accusative *double object constructions* as (30b) shows. The *Theme* argument cannot undergo clitic doubling:

- (30) a. didaksa ta pedia ti gramatiki ton arheon elinikon Greek  
 taught-1S the children-ACC the-grammar-ACC the- Ancient Greek-GEN  
 'I taught the children the grammar of Ancient Greek'  
 b. \*ti didaksa ta pedia ti gramatiki  
 Cl-ACC-Sg taught-1S the-children-ACC the-grammar-ACC  
 ton arheon elinikon  
 the-Ancient Greek-GEN

In conclusion, in this section we saw that there are numerous arguments supporting the view that Doubling has much in common with Scrambling.

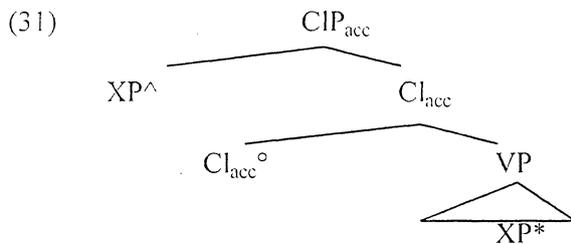
### 3. The Structure of Clitic Doubling Constructions

#### 3.1. Sportiche's Approach...

Sportiche (1992) proposes that Clitic Constructions are minimally different from Scrambling/Object Shift phenomena. According to this proposal, clitics are functional heads licensing a particular property on a designated argument with which they agree on phi-features. Clitic constructions are assigned a structural analysis which is identical to all types of movement configurations.<sup>16</sup>

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<sup>16</sup> It has been convincingly argued for by Roberts (1992) and Sportiche (1992) among others that clitic-movement processes should be decomposed into two further substeps: the first step has the properties of XP movement (in particular NP movement) and the second step is Head Movement. The arguments in favor of this analysis are largely based on the blocking effects of intervening subjects on clitic placement, participle agreement facts and the similarity between long NP movement and clitic climbing in restructuring contexts.



In figure (31), the XP\* related to the clitic moves to the XP^ position at some point (overtly or at LF). In this way, the agreement between Cl and XP\* is derived as a spec/head relationship, and the locality between the clitic and the corresponding XP\* follows from the necessary movement relationship between the XP\* and the XP^<sup>17</sup>. Sportiche attributes the XP\*-to-XP^ movement step to the so called *clitic criterion* which is a subcase of the criterion in (32) routed in Rizzi's (1991) Wh-criterion:

(32) Generalised Licensing Criterion

At LF

- a. A [+F] head must be in a spec/head relationship with a [+F] XP
- b. A [+F] XP must be in a spec/head relationship with a [+F] head

In (32) [+/- F] stands for a set of properties such as Wh, Neg, Focus, etc.. In the case of clitic constructions [F] is taken to be Specificity. The clitic parameters are given in (33):

(33) Clitic Constructions Parameters

- a. Movement of XP\* to XP^ occurs overtly or covertly
- b. Head is overt or covert
- c. XP\* is overt or covert

(33) makes it possible to unify three superficially different constructions under one general schema:

- (i) *Undoubled clitic constructions* as in French, Italian, Dutch arise when a covert XP\* moves overtly or covertly to XP^ with H overt.
- (ii) *Clitic doubling constructions* as in Greek, Spanish, Romanian arise when an overt XP\* moves covertly with H overt.
- (iii) *Scrambling constructions* as in Dutch and German arise when an overt XP\* moves overtly with H covert.

To account for the crosslinguistic distribution of scrambling and doubling, Sportiche (1992) postulates a filter which is given in (34):

(34) Doubly Filled Voice Filter (Sportiche 1992:28)

\*[HP XP [H..]], where H is a functional head licensing some property P and both XP and H overtly encode P, P = Specificity

(34) prohibits a clitic to co-occur with an overt XP in a spec-head relation, thus deriving the parameters given in (33).

### 3.2 ...and its Shortcomings

Structure (31) has one major advantage: it treats clitic doubling constructions as XP movement constructions, thus providing an immediate explanation for the properties doubling and scrambling have in common.

<sup>17</sup>The analysis based on (31) takes care only of the XP movement properties of clitic constructions. The X<sup>o</sup> step, which is highly local, is not assumed by Sportiche to be the result of X<sup>o</sup> movement, but rather is linked to the feature nature of the clitic. In other words, the verb takes along the clitic in its way to Infl.

However, Sportiche's proposal that *Specificity* is the property unifying the two constructions does not cover many instances of Scrambling/Doubling. The most obvious such cases are instances of *dative* doubling and scrambling, which are not related to *Specificity* as is well known, *experiencer* doubling and scrambling and *accusative* doubling and scrambling related to anaphoric destressing (cf. the above examples). For the dative constructions Sportiche assumes that the  $CL_{dat}V$  has the status of an agreement projection which is fundamentally different from its  $CL_{acc}V$  counterpart. However, even under this modification, there is no straightforward way in which the experiencer object constructions and the accusative destressing cases can be captured.

Moreover, even though the filter in (34) correctly describes the distribution of scrambling and doubling, there are some problems with it. First of all, the factor determining this particular distribution, namely the presence of doubling in Romance and scrambling in Germanic, seems arbitrary. It would be desirable to link the availability of an overt  $X^{\circ}$  element (clitic) in Romance/Greek and the move XP option in Germanic, to some more fundamental property of the languages in question.

We will outline a parametric account for clitic doubling and scrambling exploiting an important difference between Romance/Greek and Germanic, namely the pro-drop nature of the former and the non pro-drop nature of the latter. We will establish a direct link between the crosslinguistic distribution of clitic doubling, as opposed to scrambling, and the availability of pro-drop. To this purpose, we will build on two independent proposals in the literature concerning the nature of clitic and scrambling: (i) the view of doubling as an object agreement phenomenon and (ii) the view of scrambling as movement to AgrO. In this way, the *Specificity*-related instances of scrambling/doubling are treated as just a subcase of a more general phenomenon. The conclusions of our overall proposal are very similar to the conclusions in Fanselow (1995, 1996) even though our premises are quite different.

#### 4. The Proposal

##### 4.1. Object Movement

We would like to suggest that Sportiche's filter is reducible to one single parameter regulating the licensing of arguments in the IP domain: move XP vs. move/merge  $X^{\circ}$  to AgrO. Recall that Sportiche's filter makes crucial reference to the presence of an *overt* head as opposed to an *overt* XP to derive the difference between clitic doubling and scrambling. This proposal, provided that we make use of AgrO instead of a clitic Voice, can be reformulated as in the general schema in (35):

- (35) a) Move XP to Spec,AgrOP: Scrambling languages  
 b) Move  $X^{\circ}$  to AgrO: Doubling languages

As mentioned, (35) builds on two independent proposals in the literature, namely that A-scrambling is movement to AgrO (van den Wyngaerd 1989, Mahajan 1990, Adger 1993, Runner 1993, Jonas & Bobaljik 1993, Collins & Thrainsson 1993, Deprez 1994, Meinunger 1996 among others)<sup>18</sup> and that the clitic in doubling constructions is an object agreement marker (cf. Suñer 1988, Mahajan 1990, Adger 1993, Meinunger 1996 among others and unlike Jaeggli 1982, Borer 1984, Hurtado 1984). Crucially, under our proposal the clitic head is analysed as a nominal agreement morpheme on the verb.<sup>19</sup> This is an implementation of Suñer's (1988) proposal into a checking framework.<sup>20</sup> It is also crucial for us that

<sup>18</sup> Most of these authors have assumed that A-scrambling is movement to AgrO for Case reasons, an analysis to which we do not subscribe (cf. below).

<sup>19</sup> Under our analysis the clitic and the full XP form a non-trivial chain which is necessary for the Case checking of the NP, thus deriving the XP movement properties of these constructions.

<sup>20</sup> Alternatively, one might suggest that clitics merge in AgrO unlike object agreement markers which are generated as part of the verb.

the doubled NPs do not move overtly. Evidence for this comes from the observation that the doubled NP a) follows the postverbal subject argued to be VP-internal (36a vs. b), b) follows both the participle and the subject (37a vs. b) and c) follows the aspectual adverb, the participle and the postverbal subject, as (38) shows:

- (36) a. ton sinandise idi i Maria ton Petro sto parko  
 cl-ACC met-3S already the-Mary-NOM the-Peter-ACC in the park  
 'Mary met Peter already in the park'  
 b. \*ton sinandise ton Petro idi i Maria sto parko
- (37) a. ton ihe sinandisi i Maria ton Petro sto parko  
 cl-ACC had met the-Mary the-Peter-ACC in the park  
 'Mary had met Peter in the park'  
 b. \*ton ihe ton Petro sinandisi i Maria sto parko
- (38) tu ehi idi milisi i Maria tu Petru ja to provlima  
 Cl-DAT has already talked the-Mary-NOM the-Peter-DAT about the problem  
 'Mary had already talked to Peter about the problem'

#### 4. 2. Argument Movement

Chomsky (1993: 7) claimed that the functional category Agr is a collection of features common to the systems of subject and object agreement. If this claim is on the right track, we expect a parallelism within a language and across languages concerning the type of subject movement and the type of object movement.

Alexiadou & Anagnostopoulou (1996, henceforth A&A) argued in detail that this is actually the case. More specifically, A&A assumed, following Chomsky (1995), that the Extended Projection Principle (EPP) is reformulated as the requirement that strong Categorical D features  $I^{\circ}$  be checked. This checking can take place in two ways: either i) by Merging an XP (here the only option being an expletive) or ii) by Moving an XP (in the case of subject). Under this reasoning, SVO and Expletive-VS(O) strings in English/Icelandic are both related to EPP. Alexiadou & Anagnostopoulou presented evidence from distributional, interpretational facts that in Greek type languages: a) preverbal subjects are clitic-left dislocated, b) inverted orders involve VP internal subjects and lack an expletive, unlike their counterparts in the Germanic languages. Since SVO orders in the languages under discussion involve Clitic Left Dislocation, the authors concluded that Null Subject Languages (NSLs) lack Move XP to check the EPP feature in  $I^{\circ}$ . Moreover, given that inverted orders in NSLs do not involve an expletive, NSLs also lack Merge XP to check the EPP feature in  $I^{\circ}$ .

A&A proposed that NSLs check the EPP feature via V-movement to AgrS $^{\circ}$ . A&A capitalized on the basic intuition in the GB literature concerning NSLs, namely that these languages have (pro)-nominal agreement (cf. Taraldsen 1978, Rizzi 1982, Chomsky 1981, Safir 1985 a.o.). Specifically, A&A assumed that verbal agreement morphology includes a nominal element ([+N, +interpretable phi-features, potentially +Case]) which permits EPP-checking. Thus, languages like Greek move an X $^{\circ}$  to AgrS and not an XP in order to check the EPP-feature.

(35), revised as Move/Merge XP vs. Move/Merge X $^{\circ}$  to Agr, unifies the behavior of subjects and objects within a language and across languages. In other words, scrambling and doubling constitute another manifestation of the Move XP vs. Move X $^{\circ}$  AGR parameter, in this case regulating object licensing. The behavior of objects in Romance/Greek and Germanic mimic the behavior of subjects. In the spirit of Schütze (1993), we propose that scrambling and doubling is checking of a categorial feature in AgrO. Unlike EPP-checking, which is overt obligatorily, categorial feature checking for objects is 'optional' and relates to a number of factors (interpretational, intonational or related to the lexical semantics of the predicate, as in the case of experiencer object predicates and double object constructions). The asymmetry between subjects and objects in this respect is gradual, as indicated in the schema in (39):

- (39) Subjects > Indirect Objects > Direct Objects  
Obligatory > virtually obligatory > optional

Thus, EPP checking for subjects is obligatory. Categorical feature checking for direct objects is optional, but categorical feature checking for prepositionless dative objects is virtually obligatory. Dative clitic doubling is in most cases obligatory in Greek and Spanish, and Müller (1993) has convincingly argued that Dative-scrambling is obligatory in German.<sup>21</sup>

Note that our proposal crucially relies on the existence of Agr. Otherwise it is not possible to unify the behavior of subjects and objects by relating them to properties of the agreement system. Chomsky proposes that DP-raising without the functional category Agr is possible and he suggests a way in which this can be done. A strong D-feature can be added on T or v and this triggers movement creating an additional specifier (Chomsky: 1995: 352, 354). However, given the facts that we have examined in this paper we believe that under a layered specifier approach there is no straightforward way:

- a) To connect subject movement to object movement within a language because T and v are not of the same nature.
- b) To express the parametric difference between subjects and objects in Germanic and subjects and objects in Romance. Since T and v are not related it is not clear why in Germanic there is uniformly XP movement (for subjects and objects) and in Romance uniformly X<sup>o</sup> movement.

Under a layered specifier approach there is a way to partially achieve similar results; if D is a strong feature added on T and v triggering XP movement in Germanic, and the agreement or clitic is a head merged on T/v eliminating the strong D feature in Romance/Greek. However, under such an approach D is simply a notational variant for Agr.

## 5. Conclusion

In this paper we argued in favor of the common formal properties of doubling and scrambling. We proposed that these relate to a parametrization of AGR which offers the means to unify the behavior of subjects and objects within a language and to express parametric differences in the behavior of subjects and objects across languages. Under our proposal doubling languages move a head to Agr<sup>o</sup> while scrambling languages move an XP to Agr and this derives the common properties of doubling and scrambling. In other words, the view that scrambling of objects in Germanic involves movement to Agr captures the correlation between scrambling and doubling straightforwardly, as the clitic is clearly an agreement marker. An analysis of scrambling as adjunction to VP or as free base generation of arguments does not accommodate the common facts, as it cannot carry over to clitic doubling constructions. A question that we do not address in this paper is the connection between morphological case and freedom of scrambling/doubling. Greek and German have overt morphological case markings and they both have extensive scrambling/doubling. Other Germanic and Null Subject Languages (Dutch, Spanish) have less

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<sup>21</sup> Obviously, more research on this topic is required. It is fairly clear that dative doubling is subject to conditions regulating dative shift in English. It also seems that dative doubling and scrambling relate to an Agr projection while dative shift in English and Dutch targets a lower position. The generalisation that appears to emerge is that the licensing of indirect objects in an Agr projection is related to the presence of morphological case in Greek and German. We believe that in constructions lacking overt dative markings (English, Dutch, German and Greek double accusative constructions) dative shift has the form of a passive-like operation which takes place VP-internally (cf. Larson 1988). The theme is licensed as an adjunct and for this reason, it cannot scramble or double to the functional domain (cf. 24 & 25 above).

case morphology and fewer scrambling/doubling possibilities. That might be an interesting direction to take for further research (cf. Fanselow 1996).

Note that this paper only discusses *overt* operations suggesting that a lot of the differences among languages reduce to the way in which properties of Agr determine licensing of arguments in the *overt* syntax. This implies that agreement projections are relevant for the PF interface. The interpretational or information-structure effects that are some times connected to these phenomena are not primitives driving these operations but rather by-products. These effects can be derived if we combinè theories of the interfaces such as, for instance, Diesing's (1992) Mapping Hypothesis or Abraham's (1994), Cinque's (1993) and Zubizarreta's (1994) theories of Stress with Chomsky's *attract* theory of Movement. A spelled out proposal concerning the precise way in which this can be done awaits further research.

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