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Case Mis-matching as Kase Stranding

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Abstract

Depending on whether and how argumental Free Relatives (FRs) resolve instances of case conflict between the requirements of the External (i.e., the matrix) and the Internal (i.e., the relative) Predicate, they can be classified into three main categories: (i) *Strictly Matching FRs* (e.g., Polish), where the FR pronoun has to comply in morphological case with both predicates (Citko 2000), (ii) *I(nternal)-Matching FRs* (e.g. German), where the FR pronoun has to comply in morphological case with the Internal Predicate, but not necessarily with the External one (Grosu 1994), and (iii) *E(xternal)-Matching FR* (e.g., Greek), where the FR pronoun has to comply in morphological case with the External Predicate, but not necessarily with the Internal one ((Stavrou & Philippaki 1987; Horrocks & Stavrou 1987; Chila-Markopoulou 1991; Philippaki & Spyropoulos 1997; Alexiadou & Varlokosta 2007; Vogel 2001; Agouraki 2005; Daskalaki 2008; Spyropoulos 2007). In this paper, I use the Greek pattern as my starting point, and I develop a formal account of the observed cross-linguistic variation, which builds on the KP hypothesis (Lamontagne & Travis 1987).

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1 Introduction

Depending on whether and how argumental Free Relatives (FRs) resolve instances of case conflict, they can be classified into three main categories:¹ (i) *Strictly Matching FRs* (as in Polish in (1)), where the FR pronoun has to comply in morphological case with both the External (i.e., the matrix) and the Internal (i.e., the relative) predicate (Citko 2000), (ii) *I(nternal)-Matching FRs* (as in German in (2)), where the FR pronoun has to comply in morphological case with the Internal Predicate, but not necessarily with the External one (Grosu 1994), and (iii) *E(xternal)-Matching FR* (as in Greek in (3)), where the FR pronoun has to comply in morphological case with the External Predicate, but not necessarily with the Internal one (Stavrou and Philippaki 1987, Horrocks and Stavrou 1987, Chila 1991, Philippaki and Spyropoulos 1997, Alexiadou and Varlokosta 2007, Vogel 2001, Spyropoulos 2007, Daskalaki 2008).

- (1) a. EXTERNAL PREDICATE-_{CASE A} [[FR PRONOUN-_{CASE A}] INTERNAL PREDICATE-_{CASE A}]
Jan lubi *co(kolwiek)* Maria lubi.
Jan like-3rdSg what(ever)-Acc Maria like-3rdSg
'Jan likes whatever Maria likes.'
[E-Predicate: Acc = I-Predicate: Acc]
- b. EXTERNAL PREDICATE-_{CASE A} [[FR PRONOUN-_{CASE *A/*B}] INTERNAL PREDICATE-_{CASE B}]
Jan nienawidzi **czego(kolwiek)/*co(kolwiek)* Maria lubi.
Jan hate-3rdSg what(ever)-*Gen/*Acc Maria like-3rdSg
'Jan hates whatever Maria likes.'
[E-Predicate: Gen ≠ I-Predicate: Acc] (Citko 2000: 10)
- (2) EXTERNAL PREDICATE-_{CASE A} [[FR PRONOUN-_{CASE *A/√B}] INTERNAL PREDICATE-_{CASE B}]
Uns besucht **wer/√wem* Maria vertraut.
us visit-3rdSg who-*Nom/√Dat Maria trust-3rdSg
'Whoever Maria trusts visits us.'
[E-Predicate: Nom ≠ I-Predicate: Dat] (Vogel 2001: 903)
- (3) EXTERNAL PREDICATE-_{CASE A} [[FR PRONOUN-_{CASE √A/*B}] INTERNAL PREDICATE-_{CASE B}]
Efxarístisa *√ópjus/ *óppi* *me* *voíθisan*.
thanked-1stSg who-√Acc/*Nom cl-1stSgAcc helped-3rdPl
'I thanked whoever helped me.'
[E-Predicate: Acc ≠ I-Predicate: Nom]

Using the Greek pattern as my starting point, I will develop an account of case (mis)matches which builds on the hypothesis that nominals are maximally KPs (Lamontagne and Travis 1987).

2 The Greek Pattern

Greek FRs are introduced by *ópjos* 'who(ever)' and *óti* 'what(ever)', two pronouns which consist of the interrogative pronominals *pjos* 'who' and *ti* 'what' and the determiner-like morpheme *o-*. Morphologically, *óti* shows no nominal inflection, whereas *ópjos* follows the Greek nominal paradigm in being inflected for gender, number, and case (Table 1).

¹For helpful comments on this and related work, I would like to thank Ian Roberts, Sabine Iatridou, Alexander Grosu, George Tsoulas, Norvin Richards, Theresa Biberauer, Marios Mavrogiorgos, as well as the audiences at the 9th International Conference on Greek Linguistics (University of Chicago), and at the Penn Linguistics Colloquium 34 (UPenn). Of course, remaining errors are my own.

²This tripartite classification of FRs with respect to case mis-matches is taken from Daskalaki (2008). For a more fine-grained classification the reader is referred to Vogel (2001).

Singular			Plural			
	Masc	Fem	Neut	Masc	Fem	Neut
Nom	<i>ópjos</i>	<i>ópja</i>	<i>ópjo</i>	<i>óppi</i>	<i>ópjes</i>	<i>ópja</i>
Acc	<i>ópjon</i>	<i>ópja(n)</i>	<i>ópjo</i>	<i>óppus</i>	<i>ópjes</i>	<i>ópja</i>
Gen	<i>óppu/(opjaní)</i>	<i>óppas/(opjanís)</i>	<i>óppu</i>	<i>óppjon/(opjanón)</i>	<i>óppjon/(opjanón)</i>	<i>óppjon</i>

Table 1: The Morphological Paradigm of the FR Pronoun *ópjos-a-o* ‘who(ever)’.

Syntactically, both *ópjos* and *óti* display the distribution of D-type pronouns. That is, they are incompatible with determiners (4), and they are compatible with NP complements (5). They are, therefore, best treated as *wh*-determiners with overt or elided NPs (6).

- (4) a. Efcharístisa (*tus) óppus me voíθisan.
 thanked-1stSg (*the-3rdPl M Acc) who-3rdPl M Acc cl-1stSg Acc helped-3rdPl
 ‘I thanked (*the) whoever helped me.’
 b. Ðjálekse (*to) óti su arési.
 choose-2ndSg Imp (*the-3rdSg N) what cl-2ndSg Gen like-3rdSg
 ‘Choose (*the) whatever you like.’
- (5) a. Efcharístisa óppus maθités me voíθisan.
 thanked-1stSg who-3rdPl M Acc students cl-1stSg Acc helped-3rdPl
 ‘I thanked whoever helped me.’
 b. Ðjálekse óti chróma su arési.
 choose-2ndSg Imp what colour cl-2ndSg Gen like-3rdSg
 ‘Choose whatever colour you like.’
- (6)
- ```

 DP
 / \
 D (NP)
 óppjos/óti

```

With these preliminary observations in mind, let us now proceed to establish the Greek case mis-matching pattern. To this effect, we will examine the behavior of the inflected FR pronoun *ópjos* in both case-matching contexts, i.e., in contexts where the External and the Internal predicate have identical case requirements, and in case mismatching contexts, i.e., in contexts where the competing predicates differ as to their case requirements.

## 2.1 Case Matching Contexts

In case matching contexts, the FR phrase may realize the morphological case required by both predicates. As a result, matching is trivially met and FR clause formation is straightforward. The three-way case system of *ópjos* (see Table 1) allows us to show this with accusative (7a), nominative (7b), and genitive (7c), respectively.

- (7) a. Kálesa óppus íða.  
 invited-1<sup>st</sup>Sg who-Acc saw-1<sup>st</sup>Sg  
 ‘I invited whoever I saw.’  
 [E-Predicate: Acc = I-Predicate: Acc]
- b. θa se voíθisi óppjos se ayapá  
 FutM cl-2<sup>nd</sup>Sg Acc help-3<sup>rd</sup>Sg who-Nom cl-2<sup>nd</sup>Sg Acc love-3<sup>rd</sup>Sg  
 ‘Whoever loves you will help you.’  
 [E-Predicate: Nom = I-Predicate: Nom]
- c. ?Tilefónisa óppu íχα óósi leftá.  
 phoned-1<sup>st</sup>Sg who-Gen had-1<sup>st</sup>Sg given money  
 ‘I phoned whoever I had given money to.’  
 [E-Predicate: Gen = I-Predicate: Gen]

## 2.2 Case Mismatching Contexts

Less straightforward is FR clause formation in case mismatching contexts, where the competing predicates have distinct case requirements. This is because the case morphology of the FR pronoun may be compatible with either the External or the Internal Predicate, but, instances of case syncretism aside as in (8), not with both.

- (8) Káni óti tis arési.  
do-3<sup>rd</sup> Sg what-Acc/Nom cl-3<sup>rd</sup> Sg F Gen like-3<sup>rd</sup> Sg  
'She does whatever she likes.'  
[E-Predicate: Acc ≠ I-Predicate: Nom]

Two basic patterns can be distinguished. When the FR pronoun complies with the case requirements of the I-Predicate, the output is ungrammatical. The judgments are robust and, unlike what has been shown to hold for languages of the I-Matching type (e.g., for German, and Ancient Greek (Grosu 1994)), they are not in any way affected by the "morphological markedness" of the competing cases. For instance, (9d) is as ungrammatical as (9c), even though in a "case markedness hierarchy" of the form "non-oblique cases (nominative, accusative) > oblique cases (genitive)" the internally required genitive is more marked than the externally required nominative.

- (9) a. \*Efcharístisa ópji me voíθisan.  
thanked-1<sup>st</sup>Sg whoever-Nom cl-1<sup>st</sup>Sg-Acc helped-3<sup>rd</sup>Pl  
'I thanked whoever helped me.'  
[E-Predicate: Acc ≠ I-Predicate: Nom]  
b. \*Irθan ópjus káleses.  
came-3<sup>rd</sup>Pl who-Acc invited-2<sup>nd</sup> Sg  
'Whoever you invited came.'  
[E-Predicate: Nom ≠ I-Predicate: Acc]  
c. \*Eðosa leftá ópjos me voíθise.  
gave-1<sup>st</sup>Sg money who-Nom cl-1<sup>st</sup>Sg-Acc helped-3<sup>rd</sup>Sg  
'I gave money to whoever helped me.'  
[E-Predicate: Gen ≠ I-Predicate: Nom]  
d. \*Me efcharístisan ópjon íxa ðósi leftá.  
cl-1<sup>st</sup>Sg, Acc thanked-3<sup>rd</sup>Pl who-Gen Pl had-1<sup>st</sup>Sg given money  
'Whoever I had given money to thanked me.'  
[E-Predicate: Nom ≠ I-Predicate: Gen]  
e. \*Tnórisa ópju éðosan tin ipotrofía.  
met-1<sup>st</sup>Sg who-Gen gave-3<sup>rd</sup>Pl the scholarship-Acc  
'I met whoever they gave the scholarship to.'  
[E-Predicate: Acc ≠ I-Predicate: Gen]

When the FR pronoun complies with the case requirements of the E-Predicate, though, grammaticality is restored as in (10). As to the internally required case, this is either deleted (if accusative/nominative as in (10a-c), or resumed by means of a clitic (if genitive as in (10d-e)).<sup>2</sup>

- (10) a. Efcharístisa ópjus me voíθisan.  
thanked-1<sup>st</sup>Sg who-Acc cl-1<sup>st</sup>Sg-Acc helped-3<sup>rd</sup>Pl  
'I thanked whoever helped me.'  
[E-Predicate: Acc ≠ I-Predicate: Nom]  
b. Irθan ópji káleses.  
came-3<sup>rd</sup>Pl whoever-Nom invited-2<sup>nd</sup>Sg  
'Whoever you invited came.'

<sup>2</sup>That the internally required genitive has to be resumed in case mis-matching contexts is further supported by examples involving relativization of a wide range of genitive DPs such as beneficiaries, malefactors, source arguments, and arguments of several monotransitive verbs (Daskalaki 2008).

- [E-Predicate: Nom ≠ I-Predicate: Acc]  
 c. *Éðosa leftá ópju me voíθise.*  
 gave-1<sup>st</sup>Sg money who-Gen cl-1<sup>st</sup>Sg Acc helped-3<sup>rd</sup>Sg  
 ‘I gave money to whoever helped me.’  
 [E-Predicate: Gen ≠ I-Predicate: Nom]  
 d. *Me efχarístisan ópji \*(tus) íχα ðósi leftá.*  
 cl-1<sup>st</sup>Sg Acc thanked-3<sup>rd</sup>Pl who-Nom \*(cl-3<sup>rd</sup> Pl Gen) had-1<sup>st</sup>Sg given money  
 ‘Whoever I had given money to, thanked me.’  
 [E-Predicate: Nom ≠ I-Predicate: Gen]  
 e. *Γnórisa ópjon \*(tu) éðosan tin ipotrofía.*  
 met-1st Sg who-Acc \*(cl-3<sup>rd</sup> Sg Gen) gave-3<sup>rd</sup> Pl the scholarship-Acc  
 ‘I met whoever they gave the scholarship to.’  
 [E-Predicate: Acc ≠ I-Predicate: Gen]

In view of the above data, it is safe to conclude that Greek allows FRs in case mis-matching contexts, provided that the following two conditions hold: (i) the FR pronoun realizes the case required by the E-Predicate, and (ii) the internally required case, if genitive, is resumed by means of a clitic.<sup>3</sup> Before turning to the question of theoretical implementation, let me briefly present Move and Project, which will be my assumed framework of FR clause formation (Larson 1998, Iatridou et al. 2001, Pancheva 2000, Bury 2003, Donati 2006, Bhatt 2002), and examine the extent to which it may accommodate the Greek pattern.<sup>4</sup>

### 3 Case (Mis)Matches within Move and Project

Move and Project maintains that in FRs, it is the Goal of movement (i.e., the FR phrase) rather than the Target (i.e., the C head) that projects. Specifically, the idea is that the FR pronoun (*ópjos*, in Greek)—which is arguably a D-type pronoun (Section 2)—Moves to the CP domain, and Projects its category to the newly formed constituent (11). As a result, the account captures in a straightforward way the hybrid semi-clausal, semi-nominal categorial status of FRs in Greek, and elsewhere (for Greek, see Alexiadou and Varlokosta 1997, Daskalaki 2008, and references therein). More precisely, by claiming that the FR pronoun Moves, it captures their A’ movement properties (gap, locality, Weak Cross Over, parasitic gaps, reconstruction). At the same time, by claiming that the FR phrase Projects, it captures its nominal properties (nominal distribution, inflection, interpretation).

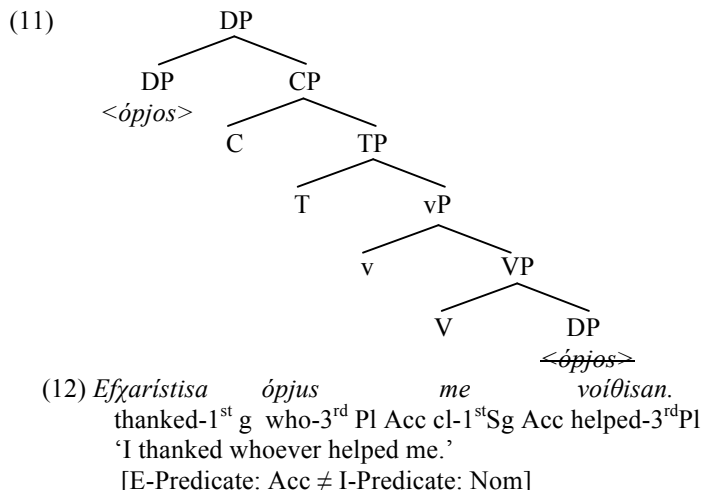
When it comes to the accommodation of the case mis-matching pattern, though, which we described in Section 2, and which constitutes the empirical focus of this paper, the account is faced by a number of challenges. In connection with this, let us consider the derivation of a case mis-matching example such as (12), repeated from (10a) above.

<sup>3</sup>At a first approximation, it seems tempting to assimilate the Greek pattern to what is traditionally known as Case Attraction. However, there is at least one reason suggesting that the two phenomena should be kept apart: Case Attraction operates within the limits imposed by case markedness hierarchies (Grosu 1994). For instance, in the Ancient Greek example (i), Case Attraction is inapplicable because the external nominative is less marked than the internal genitive. E-Matching, on the other hand, applies independently of the relative markedness of the cases concerned. It is compulsory not only in (10c), where the case required by the E-Predicate (genitive) is more marked than the case required by the I-Predicate (nominative), but also in (10d), where the reverse situation holds.

- (i) *egó: dé kai o:n krató: menoumen.*  
 I though and who-Gen I command remain-1<sup>st</sup> Pl  
 ‘But I and those whom I command will remain.’  
 [E-Predicate: Nom ≠ I-Predicate: Gen]

<sup>4</sup>My reasons for assuming Move and Project rather than earlier accounts of FRs, such as *Head Accounts* (Bresnan and Grimshaw 1978), *Comp Accounts*, (Groos and van Riemsdijk 1981), and *Raising Accounts* (Kayne 1994), are given in Daskalaki 2008. For a review of the existing accounts of FR clause formation, see also Grosu (2003), and van Riemsdijk (2000).

On the assumption that (i) nominative is the reflex of Agree between a DP and a non-defective T, and accusative case is the reflex of Agree between a DP and little *v* (Chomsky 2001), and that (ii) phonological material is inserted in the morphological component to realize bundles of syntactic features (Halle and Marantz 1993), the derivation proceeds as follows: At a first step, the FR phrase (which bears valued phi features and an unvalued case



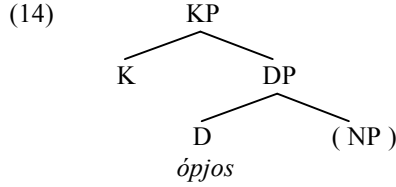
feature) Merges in the external argument position of the I-Predicate *voíθó* ‘to help’ ([Spec,vP]) and enters into an Agree relation with T. Agree results in the case valuation of the FR phrase (Nom) and in the phi features valuation of the I-Predicate (3<sup>rd</sup> Pl Masc). Further to the insertion of C, the FR phrase Moves and Projects its category (D), case (Nom) and phi features (3<sup>rd</sup>Pl Masc) to the newly formed constituent. Finally, the newly formed DP Merges in the internal argument position of E-Predicate *efcharístó* ‘to thank’ (i.e., in the complement position of V) and enters into an Agree relation with its little *v* projection. Agree apparently results in the case re-valuation of the projected DP (which now receives an Accusative value) and in the phi feature valuation of the E-Predicate (3<sup>rd</sup> Pl Masc).

The derivation, as sketched above, faces two main problems, both of which are related to the step where the projected FR phrase Merges with the E-predicate. The first problem, which I will be referring to as the problem of “Multiple Agree,” occurs not only in case mismatching configurations (Section 2.2), but also in case matching ones (Section 2.1). If the FR phrase has already entered into an Agree relation with the I-predicate, how is it possible for its projection to enter into a novel Agree relation? According to the Activity Condition this second Agree relation is an illicit derivational step, since once an element has valued its uninterpretable features, it fails to enter into further Agree relations (Chomsky 2001:15). The second problem, which I will be referring to as the problem of “Case Re-valuation,” is inherent to case mismatching configurations. If the FR phrase has already had its case feature valued fixed upon Agree with the I-Predicate (Nom), how is it possible to receive a novel value (Acc), upon Agree with the E-Predicate?

#### 4 Towards an Analysis of Case (Mis)Matches

My answer to the above questions builds on the KP Hypothesis (13), put forward on independent grounds in Lamontagne and Travis 1987. It follows from (13) that the schema which we suggested for the nominal FR phrase *ópjios* ‘whichever’ (6) may receive the more elaborated form depicted in (14). In addition to (13), which will be the main hypothesis of my proposal, I will be further making two auxiliary assumptions, stated in (15) and (16), respectively.

(13) *Nominal Phrases are maximally KPs.*



(15) *Move may target either the KP, or its DP substructure.* When the first option materializes, the FR pronoun Moves and Projects as a KP (a). When the second option materializes, the FR pronoun Moves and Projects as a DP, stranding in situ its internally valued Kase layer (b).

a.  $[[_{KP} \langle [KP \ [DP \ pronoun]] \rangle] [_{CP} \dots \langle [KP \ [DP \ pronoun]] \rangle]$

b.  $[[_{DP} \langle [DP \ pronoun] \rangle] [_{CP} \dots [KP \langle [DP \ pronoun] \rangle]]$

(16) *Where a new nominal argument is Merged, a K must be inserted.* It follows that the FR phrase and the FR construction as a whole, being two distinct arguments, will be introduced by two distinct Kase layers:

a. THE I(NTERNAL) KASE LAYER which will be valued by the Internal Predicate

b. THE E(XTERNAL) KASE LAYER which will be valued by the External Predicate

The system that emerges makes it possible to propose that the Greek case (mis)matching pattern results from (i) Moving the DP substructure of the FR phrase out of its internally valued Kase layer resulting in what is known as a Kase Stranding configuration (17a), (ii) Merging of a second Kase layer after the DP has Moved and Projected (17b), and (iii) Deleting/Resuming the internally valued Kase layer (17c).<sup>5</sup>

- (17) a.  $\langle [DP] \rangle \dots I-K \langle [DP] \rangle$   
 b.  $E-K \langle [DP] \rangle \dots I-K \langle [DP] \rangle$   
 c.  $E-K \langle [DP] \rangle \dots \cancel{I-K} \langle [DP] \rangle$

With these assumptions in mind, let us reconsider the derivation of (12). At a first step, the FR phrase, which in the suggested system is a KP, Merges in the [Spec,vP] of the I-Predicate *voithó* ‘to help’ and enters into an Agree relation with T. Agree results in the case valuation of the FR phrase (Nom) and in the phi features valuation of T (3<sup>rd</sup> Pl M) (18). Further to the insertion of C, Move targets the DP substructure of the FR phrase, stranding in situ the internally valued Kase layer. The FR phrase Moves and Projects as a DP (19). Subsequently, the projected DP Merges with the External Kase layer (20):

(18)  $[T \ [vP \ [I-KP-Nom]]]$

(19)  $[DP \langle [DP] \rangle] [CP \ T \ [vP \ [KP \ -Nom \ \langle [DP] \rangle]]]$

(20)  $[E-KP \ [DP \ \langle [DP] \rangle] [CP \ T \ [vP \ [I-KP \ -Nom \ \langle [DP] \rangle]]]]]$

The newly formed KP Merges in the complement position of the E-Predicate *efxaristó* ‘to thank’ and enters into an Agree relation with little *v*. Agree results in the case valuation of the External Kase layer (Acc) and in the phi feature valuation of the E-Predicate (3<sup>rd</sup> Pl).

(21)  $[v \ [VP \ [E-KP-Acc \ [DP \ \langle [DP] \rangle] [CP \ T \ [vP \ [I-KP \ -Nom \ \langle [DP] \rangle]]]]]]]$

Finally, the Internal Kase deletes under “non-distinctness” with the External one (22).

<sup>5</sup>The proposal is similar in spirit with Nevins (2005) who appeals to Kase Stranding in order to account for hyperraising phenomena. A notational variant is found in Bejar and Massam 1999, which talks about stranding of a case feature (‘case subscript’, in their terms), rather than of Kase layer. However, whereas they deal with constructions where a single DP receives more than one case value (see also Merchant 2006, and Richards 2007, for similar data and discussion), in FRs we deal with two DPs: the FR phrase (i.e., the argument of the I-Predicate) and the FR as a whole (i.e., the argument of the E-Predicate). This difference will become of relevance in Section 3, where our aim will be to prevent our system from over-generating.



- (22) [<sub>v</sub> [VP [E-KP-Acc [DP <DP>] [CP T [<sub>v</sub> P [I-KP-Nom <DP>]]]]]]

It becomes clear from the above derivation that the suggested account provides a solution to the two theoretical problems that motivated our discussion. First of all, it dispenses with the need to integrate a multiple Agree/Case valuation relation. This is because the E-Kase layer, which enters into an Agree relation with the E-Predicate, bears an unvalued case feature. Second, it derives the surface effect of case alternations. This is because the case feature of the E-Kase layer is eventually valued by the E-Predicate, which may or may not agree in its case requirements with the I-Predicate.

At the same time, though, our account raises a couple of technical questions that need to be addressed. The first question concerns the source of the External Kase Layer. In principle, it could either be available in the Numeration or projected in the course of the derivation as the outcome of Agree. Given that the derivational projection of Kase appears to violate the Inclusiveness Condition (Chomsky 1995), I will be assuming that it is available in the Numeration. The second question concerns the Deletion/Resumption of the Internal Kase Layer. That cases differ as to their deletion potential has been pointed out for languages other than Greek (e.g., in Pesetsky 1998) and is most commonly reduced to the contrast between “oblique” and “non-oblique” cases. Specifically, the intuition is that oblique cases need to be recovered, either by means of a sufficiently local antecedent or by means of resumption. Non-oblique cases, on the other hand, are recoverably deletable on their own. Here, I will follow this intuition and I will further implement it with the notion of case de-composition. More precisely, following Alexiadou and Müller (2008), I will be assuming that nominative, accusative, and genitive in Greek, rather than being primitive features, can be decomposed as in (23). This assumption opens up the possibility to suggest that (i) the internal Kase layer deletes when its case features are a proper subset of the case features of the external Kase layer, and that (ii) resumption is the spell-out of the I-Kase layer that fails to be recoverably deleted. The suggestion correctly predicts the deletion patterns under (24a-e). Admittedly, less straightforward is the derivation of (24f), where accusative deletes even though [+Gov] cannot be recovered by the featural make up of the external nominative.

- (23) Nom [-Governed, -Oblique]  
 Acc [+Governed, -Oblique]  
 Gen [+Governed, + Oblique]
- (24) a. <ópjios [-Gov, -Obl]> <ópjios [- Gov, -Obl]>  
 b. <ópjion [+Gov, -Obl]> <ópjion [+Gov, -Obl]>  
 c. <ópjju [+Gov, +Obl]> <ópjju [+Gov, +Obl]>  
 d. <ópjion [+Gov, -Obl]> <ópjios [- Gov, -Obl]>  
 e. <ópjion [+Gov, -Obl]> < tu [+ Gov, +Obl]>  
 f. <ópjios [-Gov, -Obl]> <ópjion [+Gov, -Obl]>

Summing up, in this section, I provided a formal account of the Greek case (mis)-matching pattern that combines the theory of Move and Project with the KP Hypothesis. In what follows, I will examine the implications of this proposal, both at a language-internal (Section 5), and at a cross-linguistic level (Section 6).

## 5 Language Internal Implications

If our account is on the right track, and Kase Stranding is an option made available by the Greek grammar, then we need to explain what determines its distribution across A' movement constructions. In other words, we need to explain why it is a viable option in FRs, but not in standard A' movement constructions such as interrogatives.

It seems plausible to suggest that the illicitness of Kase Peeling in interrogatives is related to the unavailability of a second Kase layer in the lexicon. In the absence of a second Kase layer, the subextracted DP fails to be realized in the morphological component. This is because the Greek nominal paradigm has no case-less Vocabulary Items and “Insertion does not take place if the Vocabulary Item contains features not present in the morpheme” (Halle 1997:128). In FRs, on the

other hand, an External K always Merges with the fronted FR phrase, hence its convergence in the morphological component. As to the availability of a second Kase layer in the lexicon, this follows from our assumption that the number of Ks is contingent on the number of DPs (see 16). In interrogative chains we have a single DP (i.e., the interrogative phrase). Hence, the unavailability of a second Kase layer. In FR chains, on the other hand, we have two: (i) the FR phrase (the argument of the I-Predicate), and (ii) the projected FR phrase (the argument of the E-Predicate). Hence, the availability of two Kase layers.

## 6 Cross-Linguistic Implications

A further question concerns the observed cross-linguistic variation. Recall from Section 1 that, depending on whether and how FRs resolve instances of case conflict, they fall into three main categories: Strictly Matching, I-Matching, and E-Matching.<sup>6</sup> The question that arises is whether and how our analysis, which is based on E-Matching FRs, can account for the more familiar FRs of the Strictly Matching and the I-Matching type. I tentatively suggest that what is parametrized cross-linguistically is the licitness of Kase Stranding.

The E-Matching Pattern, I suggested in Section 3, results from: (i) Moving the DP substructure of the FR pronoun out of its internally valued Kase layer (in (26a)), (ii) Merging the moved and projected DP with an External Kase layer (in (26b)), and (iii) Deleting/Resuming the internally valued Kase layer (in (26c)). The I-Matching Pattern, I will suggest, results from: (i) Moving the internally valued KP (in (27a)), (ii) Merging the moved and projected KP with an External Kase layer (in (27b)), (iii) Deleting the externally valued Kase layer (in (27c)).

- (26) a. <[DP]>.... I-K <[DP]>  
 b. E-K <[DP]>.... I-K <[DP]>  
 c. E-K <[DP]>.... ~~I-K~~ <[DP]>  
 (27) a. <I-K[DP]> ..... ~~<I-K[DP]>~~  
 b. E-K <I-K[DP]> ..... ~~<I-K[DP]>~~  
 c. ~~E-K~~ <I-K[DP]> ..... ~~<I-K[DP]>~~

Finally, the Strictly Matching Pattern does not provide us with any empirical argument in favor of either of the two derivations. In principle, it could be taken to follow either (26) or (27), up to the stage of deletion. In other words, whereas in E-Matching and I-Matching languages deletion seems to be licensed if the Subset Principle is met, in Strictly Matching languages, deletion is licensed if “strict identity” is met.

## 7 Conclusions and Loose Ends

To conclude, in this paper I accounted for the Greek case mis-matching pattern, by combining Move and Project with the KP Hypothesis. I further proposed that the cross-linguistic variation can be reduced to the licitness of Kase Stranding and to the conditions underlying deletion operations. Further research is required to show (i) whether the suggested parametrization can be supported by contexts other than FRs, and (ii) whether it can be related to an independent property of the languages in question. With regard to (ii), I remain agnostic. With regard to (i), though, the answer appears to be positive. That Kase Stranding is productive in Greek is supported by the availability of complementizer RRs, displaying the exact same case mismatching patterns. To exemplify, both the FR in (28a) and the RR in (28b) illustrate the possibility of deleting the internally valued K (accusative). In our system, this amounts to saying that in both constructions, the internally valued Kase layer has been stranded and deleted (I am assuming Bianchi’s 1999

<sup>6</sup>Out of the three language types, the E-Matching type seems to be the least represented. To my knowledge, only Icelandic has been reported to display a similar pattern to Greek (Vogel 2001). I-Matching languages further include Hungarian (Kenesei 1994), Finnish (Bresnan and Grimshaw 1978), Estonian, Lithuanian (Daskalaki 2008), and Ancient Greek (Grosu 1994). Finally, Strictly Matching languages further include Serbo-Croatian, and Slovene (Pancheva 2000).

Raising Analysis of Restrictive Relatives (RRs), where the raising head is preceded by a null D). Accordingly, both the FRs in (29a) and the RR in (29b) show the possibility of resuming the internally required K (genitive). In our system, this amounts to saying that in both constructions, the internal Kase layer has been stranded and resumed. Note that the treatment of resumption as the result of Move rather than of Merge is compatible with its sensitivity to strong islands (Alexopoulou 2006).

- (28) a. \*Irθan ópjus káleses.  
 came-3<sup>rd</sup>Pl who-Acc invited-2<sup>nd</sup>Sg  
 ‘Whoever you invited came.’  
 b. Irθan i maθités pu káleses.  
 came-3<sup>rd</sup>Pl the students-Nom that invited-2<sup>nd</sup>Sg  
 ‘The students that you invited came.’  
 [E-Predicate: Nom ≠ I-Predicate: Acc]
- (29) a. Me efχarístise ópjos \*(tu) éðosa leftá.  
 me thanked-3<sup>rd</sup>Sg who-Nom \*(cl-3<sup>rd</sup>SgMGen) gave-1<sup>st</sup>Sg money  
 ‘Whoever I had given money to, thanked me.’  
 b. Me efχarístise o maθitís pu \*(tu) éðosa leftá.  
 me thanked-3<sup>rd</sup>Sg the student-Nom that \*(cl-3<sup>rd</sup>SgMGen) gave-1<sup>st</sup>Sg money  
 ‘Whoever I had given money to, thanked me.’  
 [E-Predicate: Nom ≠ I-Predicate: Gen]

That Kase Stranding is not a (productive) option in I-Matching languages is consistent with the marginal availability (or, unavailability) of complementizer-RRs in I-Matching languages. Keenan and Comrie’s (1977) database and language specific grammars inform us that the languages I have classified as I-Matching primarily use RRs of the pronominal type. To exemplify with German, both the FR in (30a) and the RR in (30b) show that the internally valued Kase layer, rather than being deleted or resumed, is realized by the relative pronoun. In our system, this amounts to saying that the internally valued Kase layer is Pied-Piped.<sup>7</sup>

- (30) a. *Uns besucht wem Maria vertraut.*  
 us visit-3<sup>rd</sup>Sg who-Dat Maria trusts  
 ‘Whoever Maria trusts visits us.’ (Vogel 2001a: 903 [3c])  
 b. *Heute abend besucht uns ein Mann, dem Maria vertraut*  
 tonight visit-3<sup>rd</sup>Sg us a guy-Nom who-Dat Maria trusts  
 ‘Tonight is visiting us a guy that Maria trusts.’  
 [E-Predicate: Nom ≠ I-Predicate: Dat]

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<sup>7</sup>This cannot be the whole picture as there are languages that license resumption in RRs but not in FRs (e.g., Serbo-Croatian). An interfering parameter might be the (in)compatibility of resumptives with non D-Linked antecedents such as FR pronouns. In other words, the suggestion is that independent factors might prevent them from being bound by non-D-Linked antecedents, and consequently from recovering the internally required case.

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