

ON CASE THEORY AND CONTROL IN PORTUGUESE AND MODERN GREEK

C. Jan Wouter Zwart

Institute for General Linguistics
University of Groningen

0. Introduction.

In **Lectures on Government and Binding** (Chomsky 1981), the distribution of PRO and lexical NP is accounted for by the **PRO Theorem** (1) and the **Case Filter** (2), respectively. An independent theory of control is held responsible for the interpretation of PRO.

- (1) **PRO Theorem:** PRO is ungoverned
- (2) **Case Filter:** NP with phonetic content must have Case

According to Chomsky, PRO must be ungoverned because it is both an anaphor and a pronominal at the same time. Accordingly, it must be both bound and free in its Governing Category, which is only possible if PRO does not have a Governing Category. Hence PRO must be ungoverned. Case is assigned under government, so in all positions where PRO appears the Case Filter rules out lexical NPs.

However, as has been pointed out by Williams (1980) and Koster (1984), PRO is never anaphoric and pronominal at the same time. Therefore it may have a Governing Category and be governed (see also Bennis & Hoekstra 1989, Franks & Hornstein 1989, Pesetsky 1989). To be more exact, PRO clearly shows properties of anaphors in constructions of obligatory control.¹ Consequently, in the works cited the distribution and interpretation of PRO is no longer accounted for by the PRO Theorem and by an independent theory of control, but by principles of local dependency relations in general and of the Binding Theory in particular.²

How do these developments affect the Case Filter and the way it accounts for the distribution of lexical NPs in control complements? Clearly, if PRO may be governed in obligatory control constructions, e.g. by the matrix verb, it may also be assigned objective Case, as in Exceptional Case Marking constructions.

It is important to note that the Case Filter is **ad hoc**, invented to exclude lexical subjects in control complements. This should make us suspicious, even if it can be shown that the Case Filter works surprisingly well in this area.

That is what I will do in this paper. I will argue on the basis of facts from Modern Greek and Portuguese that the following generalization still holds:

- (3) If Case is assigned to the subject of a complement clause, then this subject is not PRO (is not controlled).

But well studied Case agreement facts from Russian, Icelandic, and other languages do not allow the converse of (3) to hold:

¹And perhaps also in constructions of nonobligatory control (Koster 1984, Bennis & Hoekstra 1989, Vanden Wyngaerd (in preparation)).

²In work in this vein, the scope of the theory of control is limited to the issue of choice of antecedent.

- (4) If the subject of a complement clause is controlled, then this subject has no Case.

Ideally, (3) should hold in both directions. I will claim that it does. I will propose a different analysis of the Case agreement facts, assuming that in these constructions the predicate adjective agrees with AGR, not with PRO. The analysis implies that we take AGR to be the anaphoric element in control structures, not PRO (see Borer 1989).

This does not mean that the Case Filter is validated. The effects of the Case Filter follow from the claim that if AGR is anaphoric it does not identify a subject in its domain (contrary to Borer 1989).

1. The ad hoc character of the Case Filter.

The Case Filter divides empty categories and lexical categories in such a way that only the latter are subject to it. This is strange since we would not expect a major syntactic principle to distinguish between overt and empty categories. Bouchard (1984) would like to explicitly exclude this, taking as a general methodological principle that "no statement in the grammar should refer specifically only to empty categories or only to lexical NPs" (1984:205).

Furthermore, the dividing line the Case Filter draws is not sharp. Some empty categories have Case and arguably are subject to the Case Filter as well. Thus, wh-trace must have Case for it to count as a variable. Small pro appears in the same Case positions as lexical NPs, and NP-trace is part of a chain which is also subject to the Case Filter. We may assume that if a trace is part of a chain the head of which is Case marked, the trace is Case marked as well, by way of property sharing as discussed in Koster (1987).³

So it seems that the Case Filter does not distinguish overt NPs from empty NPs, but all other NPs from the empty subject of control complements, PRO. This is in fact what the Case Filter was invented for by Jean-Roger Vergnaud in the late 1970's (see Vergnaud 1979, Rouveret & Vergnaud 1980).⁴

If the Case Filter is really that **ad hoc**, it should be easy to demonstrate that it is false. But the fact of the matter is that it works surprisingly well. This means one of two things. Either

³But see Chomsky (1988).

⁴The Case Filter is generally considered to be a central principle of the grammar, explaining among other things the obligatory character of NP-movements and **of**-insertion, determining visibility of NPs at the interpretative levels of PF and LF, and restricting the number of grammatical orderings of constituents (in connection with a Case adjacency principle, see Stowell 1981). However, it seems to me that the explanatory force of the Case Filter is overrated to a large extent. To pick out one example, in some Dutch passive constructions ((i)) NP-movement is not necessary because the VP-internal subject inherits Case from an empty category in the structural subject position (Den Besten 1981, Koster 1987). The question then arises of why this is not generally possible in passive constructions. It would seem that this question cannot be answered by Case Theory alone.

(i) dat e_i [_{VP} hem [het boek]_i gegeven werd]
that him the book given was
"that the book was given to him"

For more extensive discussion, see Zwart (1988).

the Case Filter is real, or it expresses a spurious generalization. I will claim that the latter is the case.

There are two ways to find out whether the explanation the Case Filter gives for the fact that lexical NPs are impossible in the subject position of control complements is correct. First it may be demonstrated that PRO enters into Case agreement processes. If PRO enforces Case agreement on a predicate adjective in a control complement, there is no reason to assume that it does not also have Case itself. Second, we may look at languages in which INFL in control complement may be a Case assigner. In these languages, such as Portuguese and Modern Greek, the Case Filter account predicts lexical subjects in control complements. I will go over these arguments one by one, starting with Case agreement phenomena.

2. Case Agreement in Russian.

Case agreement phenomena in control complements have been studied by Thráinsson (1979) and Andrews (1982, 1988) for Icelandic, and by Neidle (1982) and Franks and Hornstein (1989) for Russian. I will limit myself to the facts from Russian. As Franks and Hornstein (1989) show, the predicate adjectives **odin** 'alone' and **sam** 'on one's own' may be either dative or nominative in control complements. They are dative in non-obligatory control constructions, as in (5), and nominative in obligatory control constructions (6).

(5) dlja nas utomitel'no PRO delat' èto samim
for us exhausting to-do this on-our-own-DAT

(6) Nadja ljubit PRO gotovit' sama
Nadja-NOM loves to-cook herself-NOM

Franks and Hornstein (1989) explain this in the following way. Case agreement is a PF phenomenon. Empty categories are only visible at PF if they are referential, that is if they have an index. In obligatory control constructions, PRO is governed. If PRO is governed, PRO is an anaphor and receives an index. Hence we expect Case agreement. If PRO is not governed, as in nonobligatory control constructions, PRO receives its index only at LF and there will be no Case agreement at PF.⁵

If this is correct, then not only is PRO governed in obligatory control constructions but it is Case marked in these constructions as well. Still, no lexical NPs may be subjects in control complements in Russian.

In conclusion, the Case agreement facts from Russian indicate that PRO may be Case marked in contexts where lexical NPs cannot appear. This cannot be explained by the Case Filter.

3. Control Complements in Modern Greek and Portuguese.

Consider the English control construction (7).

(7) John tries [[PRO to win]]

Suppose that the matrix V cannot reach PRO for assignment of Case and that there is no silent element in COMP capable of Case

⁵Ordinary adjectives appear in instrumental Case in this situation, but **odin** and **sam** are special, pronoun-like elements and receive dative Case in situ.

assignment. Then PRO will remain Caseless, because INFL is nontensed, hence not a Case assigner. Therefore, PRO cannot be replaced by a lexical NP.

If this -standard- explanation is correct, we can predict for languages like Portuguese and Modern Greek, in which an embedded INFL can be a Case assigner, that lexical subjects will be possible in control complements. Let me discuss these languages one by one.

3.1 Modern Greek.

First, Modern Greek (Philippaki-Warburton 1987). This language has no infinitival clauses. In control-like constructions, the embedded clause is a finite subjunctive clause introduced by **na**. Obviously, INFL is capable of nominative Case assignment in subjunctive clauses.

(8) na érthi o giatros
SUBJ come-3SG the-NOM doctor-NOM
"The doctor should come."

If we embed (8) in a control construction, the sentence is grammatical.

(9) prospathó na érthi o giatros
try-1SG SUBJ come-3SG the-NOM doctor-NOM
"I try for the doctor to come."

(10) ton episa na érthi o giatros
him-ACC persuaded-1SG
"I persuaded him that the doctor should come."

These facts seem to support the Case Filter explanation for the impossibility of having lexical subjects in control complements. There is a way of assigning Case inside the embedded clause, and so lexical subjects are possible. However, as is clear from the examples, if Case can be assigned, the control property is lost.

The subject in the embedded clause may also be empty, as Modern Greek is a null subject language, but then this empty category still is not controlled (example from Philippaki-Warburton 1987).

(11) prospathisa me oli mu ti ðinami [e na rthis]
tried-1SG with all my the-ACC strength-ACC SUBJ come-2SG
"I tried with all my power for you to come."

So what we have here is not an alternation between big PRO and lexical NP, but between small pro and lexical NP.⁶

What happens if the embedded empty subject has the same person-number features as the matrix subject?

(12) o janis prospathise [e na fiji]
the-NOM John-NOM tried-3SG SUBJ go-3SG
"John tried to go."

Here the preferred and perhaps the only possible reading involves

⁶In support of this, Joseph (1989) notes that the Ancient Greek word for 'try', **peiraomai**, was lost when the infinitival clauses disappeared (about 1500), and that its function was taken over by **prospatheo** 'feel passionate love for', which was not a control verb.

coreference of the subject of the embedded clause and the subject of the matrix clause. But Philippaki-Warbuton (1987) states that this is "probably semantically and not syntactically determined".

This means that the empty category in control constructions in Modern Greek is not syntactically controlled. This is supported by the fact that it cannot have arbitrary interpretation.

- (13) *ðen ine fanero [ti [e na kani]]*
 not is clear what SUBJ do-3SG
 # "It is not clear what to do."
 "It is not clear what he should do."

The empty category in (13) apparently has a reference of its own, and therefore so does the empty category in (12). For obvious semantic reasons however, coreference is preferred in (12).

We predict, then, that in an appropriate context (12) will be grammatical with non-coreference, for example in (14).

- (14) *óson aforá ti maría, o janis prospathise na fiji*
 as concerns the-ACC Mary-ACC
 "As far as Mary is concerned, John tried for her to go."

I have no data on this, but it seems plausible.⁷

3.2 Portuguese.

Second, Portuguese. This language has an infinitive with person endings, the so-called personal or inflected infinitive. It may assign nominative Case to the subject of a non-tensed clause (Rouveret 1980, Raposo 1987).

- (15) *O João lamenta [eles ter-em gastado esse dinheiro*
 John regrets they-NOM to-have-3PL spent this money

para nada]
 nada nothing

Can this inflected infinitive assign Case in control complements? Consider the following sentences.

- (16) **Os pais ousaram [eles ser-em muito severos]*
 the parents dared they-NOM to-be-3PL very severe
- (17) *Eu exigi aos alunos [eles fazer-em um trabalho]*
 I demanded to-the pupils they-NOM to-do-3PL a work
- (18) *Será difícil [eles aprovar-em a proposta]*
 it-will-be difficult they-NOM to-approve-3PL the proposal

(16) is a case of subject control, (17) one of object control, and (18) is a case of nonobligatory control. As is clear, only in subject control constructions a lexical subject leads to ungrammaticality. (16) should be like (19), with an uninflected infinitive.

- (19) *Os pais ousaram [e ser muito severos]*

Why is (16) ungrammatical? According to Raposo (1987) this must be explained by the distributional properties of inflected

⁷According to Calabrese (1989), the Italian dialect of Salentino, which lacks infinitival clauses, has no control either.

infinitives in Portuguese. He claims that a nontensed AGR (as in inflected infinitives) can only assign Case to the subject of its clause if it is itself Case marked. He further assumes that AGR cannot be Case marked unless there is movement from INFL to COMP. This I->C movement can only take place if COMP contains an abstract TENSE operator. This TENSE operator ensures that the CP is a proposition with an independent time frame.

In this way, Raposo is able to account for the following set of facts.

- (20) a. *Eu penso [os deputados ter-em trabalhado pouco]
 b. Eu penso [ter-em os deputados trabalhado pouco]
 "I think that the deputies have worked little."
- (21) a. Eu lamento [os deputados ter-em trabalhado pouco]
 b. Eu lamento [ter-em os deputados trabalhado pouco]
 "I regret that the deputies have worked little."
- (22) a. *Eu desejeva [os deputados ter-em trabalhado mais]
 b. *Eu desejeva [ter-em os deputados trabalhado mais]
 "I wished that the deputies had worked more."

The epistemic **pensar** in (20) takes a CP with a TENSE operator in C, hence I->C may take place. If it does not take place, AGR is not assigned Case, and neither is **os deputados**. Factives like **lamentar** take either an IP (21a) or a CP (21b). They may take an IP because they may also take an NP.

- (23) Eu lamento [o [eles ter-em recebido pouco dinheiro]]
 "I regret the they to-have received little money."

If they take an IP AGR is governed by the matrix verb. If they take a CP I->C must take place again. Volitionals like **desejar** in (22) do not take a TENSEd CP. Hence movement from I to C is impossible, and AGR cannot be assigned Case. There is no evidence for **desejar** taking an IP, since it cannot take an NP:

- (24) a. *O Manel desejava o (facto de) eles receber-em pouco dinheiro
 "Manel wished the (fact of) they receiving little money."
 b. O Manel deseja que eles recebam pouco dinheiro
 "Manel wishes that they receive little money."

Hence the embedded AGR can never be governed by the matrix verb.

We can say now that control verbs are like volitionals in that they do not select a TENSEd CP (cf. Cremers 1983). Therefore, **serem** in (16) cannot raise to COMP, hence it cannot be Case marked. See (25).

- (25) *Os pais ousaram [serem eles muito severos]

Only a verb form that need not be Case marked, like **ser** in (19), can yield a grammatical outcome. But this form cannot license a lexical NP.

There are a few problems with this approach, however.

First, it remains unclear why (17) is grammatical. ((18) is supposed to have an IP as subject clause.) The inflected infinitive is not in COMP, unless the subject is in [Spec,CP]. However, it is not probable that the verb form is in COMP, since I->C in Portuguese is a Pollock-type of movement: only auxiliaries and modals do it (see Pollock 1989, Raposo 1987). One would

hardly expect a verb like **fazer** to move to COMP. Perhaps (17) has an IP as its complement clause, but again this is not probable, because **exigir** is not a factive predicate. Obviously, **exigir** may take a full clause:

- (26) Eu exigi aos alunos [que eles fizessem um trabalho]
SUBJ

Second, **ousar** does not take a full clause:

- (27) *O António ousou [que criticou o trabalho do Luís]
"Tony dared that he criticized Luis' work."

In this respect, **ousar** differs from volitionals:

- (28) O Manel deseja [que eles recebam pouco dinheiro]
"Manel wishes that they receive little money."

It is not obvious that **ousar** doesn't take IP rather than CP, or at least it may take a reduced clause in the sense of Koster (1987), with an absolutely empty COMP that does not block government. In short, for a Raposo-like explanation to work we must ensure that in control complements in Portuguese there is something in COMP other than TENSE, which excludes movement to COMP as well as direct government of AGR by the matrix V.

These two points seem to indicate that Raposo's analysis may need additional stipulations as to the content of COMP in the various cases. However, I will assume that his analysis is basically correct, and that there is some principled reason why in (16) there can be no inflected infinitive, hence no lexical subject.

Turning now to the interpretation of sentences (17) and (18), where the inflected infinitive assigns nominative Case to the subject, it is clear that **eles** in (18) has a reference independent from any argument in the matrix clause. **Eles** in (18) may be replaced by a fully referential expression:

- (29) Será difícil as raparigas aprovar-em a proposta
"It will be difficult the girls to approve the proposal"

As for (17), the Portuguese Grammar of H.M. Mira Mateus et al. (1983) claims that **eles** is interpreted 'preferably as coreferential with the matrix subject'. I take this to mean that there is a marginal but not impossible non-coreferential reading. If so, (17) patterns with the Modern Greek case: there is no actual control.

3.3 Generalizations.

The findings from Modern Greek and Portuguese seem to lend support to the Case Filter, in the sense that Case assignment and Control never coincide. The observations lead to the following generalization:

- (3) If Case is assigned to the subject of a complement clause, then this subject is not PRO (is not controlled).

However, the converse of (3), (4), does not seem to be valid, in view of the Case agreement facts from Russian and other languages such as Icelandic.

- (4) If the subject of a complement clause is controlled, then this subject has no Case.

(4) simply says that PRO, at least obligatory PRO, cannot have Case. As we have seen in section 2., it is especially in constructions of obligatory control (in Russian) that it can be demonstrated that PRO has Case (Franks and Hornstein 1989).

It seems to me that if (4) is not valid, (3) cannot be valid either. So either (3) and (4) are both valid, in which case we have to provide a new account of the Case agreement facts, or (3) and (4) are both false, in which case there is no connection between lack of Case assignment and control.

I will explore the first option here.⁸

The reason I tend to stick to generalization (3), is that the alternative, according to which PRO may have Case, must provide additional explanations as to why Case-marked PRO can never be replaced by a lexical NP in a structure of obligatory control.⁹ This might be done by developing some theory of control, but that is not advisable for two reasons.

First, the additional theoretical assumptions would be **ad hoc**. Second, the scope of the theory of control, important but largely in the dark in Chomsky (1981), has been effectively restricted by Koster (1984) and Bennis and Hoekstra (1989) to the issue of controller choice, whereas the issue of interclausal dependence has been reduced to Binding Theory, which is a welcome result. Thus, it is in all respects preferable to answer the question of

⁸There are equally good reasons to explore the second option, as I have in fact done in Zwart (1988). For example, Raposo (1989) discusses the so-called Prepositional Infinitival Construction (PIC) in European Portuguese, which he analyzes as a subject control construction.

- (i) Eu vi [os meninos a ler(-em) esse livro]
I saw the children to read(-3PL) this book

Raposo argues that the PIC contains a Small Clause headed by the preposition **a** and consisting of a subject (**os meninos** in (i)) and a complement clause to the prepositional head. This complement clause has an empty subject controlled by the subject of the Small Clause as a whole. Consequently, Prepositional Infinitival Constructions are constructions of subject control:

- (ii) [_{PP} NP_i **a** [_{XP} PRO_i V-AGR]]

In constructions this type, the infinitive may be inflected. Nevertheless, the subject of the complement clause cannot be a lexical NP:

- (iii) *Eu vi os meninos a [eles ler-em esse livro]
I saw the children to they-NOM read-3PL this book

This seems to argue against generalization (3) in the text, as there is no reason why the obligatory PRO would not be assigned Case by the personal infinitive. Of course, this argument rests solely on Raposo's (1989) analysis.

⁹This property of obligatory control structures seems to be universal, and sentences like (i) are extremely bad. However, Borer (1989) notes that in Korean Long Distance Anaphors may be subjects in control complements, as in (ii). This merits further study.

- (i) John tries [himself to win]
(ii) John_i-ka [cagi_i ttena-lye-ko] nolyek ha-ess-ta
John-NOM SELF leave-will-COMP try do-PAST
"John tried to leave."

why obligatory PRO cannot be replaced by lexical NP in terms of the Binding Theory, instead of by a revived theory of control.

Therefore, a different account of the Case agreement facts is called for.

4. Anaphoric AGR and Case agreement.

In recent years there have been fruitful attempts to obtain an equal treatment of all null subjects, in tensed and nontensed clauses as well as in null subject languages and in non-null subject languages (Bennis and Hoekstra 1989, Borer 1989, and Huang 1989, among others).

Borer (1989) takes a different course from e.g. Bennis and Hoekstra (1989) and Vanden Wyngaerd (in prep.) in that she does not consider PRO, but AGR to be the anaphoric element involved in the relation between matrix clause and complement clause. This may prove very fruitful for our purpose.

According to Borer (1989), all null subjects must be identified. In standard null subject languages AGR is sufficiently rich to identify a null subject. But in control complements, AGR is significantly 'poor'. In that case, AGR can only identify a null subject if AGR is itself bound by an antecedent NP in the matrix clause.¹⁰

Thus, obligatory control structures are characterized by anaphoricity of AGR. Anaphoric AGR is not related to the null subject by means of Case assignment, merely by referential identification (Borer 1989:73).¹¹

It is not immediately clear why anaphoric AGR would not assign Case to the null subject, but let us assume that this is correct. It is commonly assumed that AGR, being nominal, can carry Case features (see a.o. Raposo 1987). Perhaps only independent, non-anaphoric elements can assign Case. If this makes any sense, the incompatibility of Case assignment and control would be accounted for.

Notice that even if anaphoric AGR may not assign Case to the embedded subject, it may still carry Case features by itself.¹² Therefore it may also enter into Case agreement phenomena with

¹⁰There is no space here to go into empirical evidence for or against viewing PRO or AGR as the anaphoric element in the control relation. I would like to note, however, that in the revised Binding Theory of Reinhart & Reuland (1989) there is little place for an anaphoric PRO. In their paper, Reuland & Reinhart show that there are three types of anaphors: the SELF-type, which must be bound by a co-argument (e.g. anaphoric **himself**), the SE-type, which is subject oriented (e.g. Dutch **zich**), and the logophoric type, which is bound outside the local domain and significantly allows a strict reading (e.g. Dutch **'mzelf** and long distance anaphoric **himself**). PRO does not have the properties of any of these anaphors. Thus, PRO is not bound by a co-argument, it is not subject-oriented, and it does not allow a strict reading.

¹¹This is a restatement of generalization (3). Later on (1989:103), Borer is forced to allow for Case assignment by anaphoric AGR to the embedded subject in view of the facts from Korean (see note 9).

¹²It is not clear where AGR gets its Case. Raposo (1987) discusses the possibility of Case assignment by Tense or by a governing Case assigner in the matrix Clause (V, P, or INFL). What remains in the dark, however, is why the Case associated with AGR seems to be invariably nominative. We may assume that anaphoric AGR must be head governed, as it must be anaphorically bound and Case marked. The specific Case features of AGR may be an independent matter.

e.g. predicate adjectives. As there is always a relation of Spec Head Agreement between the sentence subject and AGR, it is generally unclear whether the predicate adjective agrees with the sentence subject or with AGR. Both AGR and the subject NP may c-command the predicate adjective.¹³

This makes it possible to treat Case agreement phenomena in control complements independently of the Case of PRO. Thus, in Russian, AGR will be anaphoric in the obligatory control structure (6).

(6) Nadja ljubit PRO gotovit' sama
 Nadja-NOM loves to-cook herself-NOM

Hence AGR may not assign Case to PRO, while retaining Case features itself. Therefore, the predicate adjective **sama** may agree with AGR.

This cannot be the complete story, however. Franks and Hornstein (1989) clearly demonstrate that Case agreement is related to transparency of the embedded clause. In cases of nonobligatory control the embedded clause is opaque, so that there can be no interclausal dependency (1989:9). Compare in this respect the obligatory control construction (30) with the nonobligatory control construction (31).

(30) Ljuda priexala PRO pokupat' maslo sama
 Ljuda-NOM came to-buy butter herself-NOM

(31) Ljuda priexala ctoby PRO pokupat' maslo samoj
 Ljuda-NOM came COMP to-by butter herself-DAT

If COMP is present, the secondary predicate must appear in the dative. As Franks and Hornstein (1989) argue, this dative Case is assigned in situ if Case agreement fails to apply.

We find the same facts in Latin (Goggin 1983):

(32) Dulce est [PRO otiosum/*otiosus esse]
 sweet it-is leasurely-ACC/NOM to-be

(33) Nemo potest [PRO beatus/*beatum esse]
 nobody-NOM can happy-NOM/ACC to be

In nonobligatory control constructions, the predicate adjective must be in the default Case, accusative. In obligatory control constructions, Case agreement takes place.¹⁴

If AGR is anaphoric, it must be governed. Government is also a necessary condition for Case assignment. The facts follow if we assume that Case agreement can only take place if the element the predicate adjective agrees with is head governed.

Anaphoric AGR is head governed and Case-marked in obligatory control constructions, and precisely in these constructions do we find Case agreement. If there is an opacity factor blocking head government, as in (31), no Case agreement can take place, and the predicate adjective shows default morphology.

¹³'C-command' may be c-command in its narrow sense or m-command. This depends on the position of the predicate adjective (see Roberts 1988).

¹⁴It even seems to be the case that the predicate adjective must agree with the controller:

(i) Licuit Themistocli_i [PRO_i otioso/*otiosum esse]
 was-permitted Th.-DAT leasurely-DAT/ACC to-be

That head government is a necessary condition for Case agreement is also argued for by Franks and Hornstein (1989). They demonstrate that in Russian object control constructions, no Case agreement can take place.

- (34) my poprosili Ivana pojti odnomu/*odnogo
we asked Ivan-ACC to-go alone-DAT/ACC

This is predicted under a Binary Branching hypothesis (Kayne 1984), which forces a Small Clause analysis of **Ivana pojti odnomu**, with **Ivana** blocking lexical government of the embedded clause by the matrix verb (Franks and Hornstein 1989:22).

We conclude therefore that anaphoric AGR may enter into a Case agreement relation with the predicate adjective if it is bound, head governed and Case-marked. Opacity factors, in COMP or otherwise, block these three processes, so that neither obligatory control nor Case agreement can take place.

5. Consequences.

5.1 Parameters in complementation.

As functional projections are the ideal locus for parametrization (Chomsky 1988), the various features of CP, AgrP, TP, and perhaps other clausal functional projections should be able to account for the varieties of interclausal dependence. Distinguishing between anaphoric and nonanaphoric AGR therefore seems to be a step in the right direction. In connection with certain specifications as to the content of COMP, pertaining to opacity and perhaps Case assignment, this may lead to an interaction powerful enough to explain the various phenomena (see a.o. Pesetsky 1989).

If COMP provides an opacity factor, anaphoric AGR probably cannot be satisfied. This results in nonidentification of the subject of the embedded clause, which receives arbitrary interpretation. This happens in constructions of nonobligatory control. The issue of Case assignment to the embedded subject may be partly independent, depending on Case assigning properties of elements in COMP. Lexical NPs have a reference of their own, so that any way of Case assignment may yield a referentially identified NP, independently of the anaphoric AGR mechanism. Thus, in Dutch nonobligatory control constructions lexical subjects are ungrammatical, whereas in English **for** may Case-mark a lexical subject in this context (see (35) and (36)).

- (35) Het is moeilijk om PRO/*Piet de race te winnen.
it is difficult COMP Piet the race to win

- (36) It is difficult PRO/for Bill to win the race.

The variety of Portuguese complementation constructions proves particularly challenging in this respect.

Assuming here as in other languages that obligatory control is characterized by anaphoric AGR, we must conclude that Portuguese obligatory control verbs (like **ousar** 'dare') do not select an opaque complement clause, because otherwise anaphoric AGR could never be bound by an argument of the matrix predicate. We also know that obligatory control verbs in Portuguese do not select clauses with an independent time frame (see section 3.2). Hence, the embedded COMP in control constructions can be characterized as transparent and nonTENSEd (in the sense of Raposo 1987).

The other verb class mentioned in section 3.2 that does not select a TENSEd clause is the class of volitionals (the type of **desejar** 'wish'). This class differs from the obligatory control class in that it does not always select a transparent clause. In particular, it may select a finite clause, which obligatory control verbs don't. Thus we find the following paradigm:

- (37) a. O Governo ousou PRO publicar o relatório
 "The Government dares to publish the report."
 b. *O Governo ousou que o relatório seja publicado
 "The Government dares that the report be published."
- (38) a. O Governo deseja PRO publicar o relatório
 "The Government wishes to publish the report."
 b. O Governo deseja que o relatório seja publicado
 "The Government wishes that the report be published."

The parameter involved cannot be the TENSE operator in COMP, because this would predict that **desejar** features movement from INFL to COMP, which it does not:

- (22) a. *Eu desejeva [os deputados ter-em trabalhado mais]
 b. *Eu desejeva [ter-em os deputados trabalhado mais]
 "I wished that the deputies had worked more."

Therefore, the difference between **ousar** and **desejar** must be in TP, the former selecting only a nonfinite TP and the latter selecting both a finite and a nonfinite TP.

As for the verbs selecting opaque CPs, we can largely adopt Raposo's (1987) analysis. These verbs select CPs with independent time frames, hence with a TENSE operator in COMP. This makes it impossible to bind anaphoric AGR. Nevertheless, lexical subjects may appear in the subject position if they can be identified by a Case assigning category. Such a Case assigning category can be (nonanaphoric) AGR after movement from INFL to COMP has taken place (as in the case of **pensar** and **lamentar**, see (20) and (21b)), or it may be a yet unknown element in COMP blocking binding of anaphoric AGR in the case of **exigir** and **difícil** (see (17) and (18)), comparable to deleted **for** in some analyses of English complement clauses to **want** (see a.o. Kayne 1984:38, Koster 1987: 241).

- (20) a. *Eu penso [os deputados ter-em trabalhado pouco]
 b. Eu penso [ter-em os deputados trabalhado pouco]
 "I think that the deputies have worked little."
- (21) a. Eu lamento [os deputados ter-em trabalhado pouco]
 b. Eu lamento [ter-em os deputados trabalhado pouco]
 "I regret that the deputies have worked little."
- (17) Eu exigi aos alunos [eles fazer-em um trabalho]
 I demanded to-the pupils they-NOM to-do-3PL a work
- (18) Será difícil [eles aprovar-em a proposta]
 it-will-be difficult they-NOM to-approve-3PL the proposal

Here, more work has to be done on the content of COMP in the various constructions, also in order to account for (21a), (unless we accept the IP-analysis of Raposo (1987) for this construction, see section 3.2).

This analysis has two main features. First, we take as a starting point that if anaphoric AGR is bound, it can not assign

Case to the subject in its domain (Borer 1984). Consequently, this subject must be empty. Second, I assume that if anaphoric AGR cannot be bound, there may be other ways to identify a subject, namely through a local Case assigner.

5.2 Consequences for the Case Filter: one step further.

The analysis tentatively formulated in the last section can be seen as an attempt to derive the impossibility of having lexical subjects in control complements from the control mechanism itself. Thus, control is characterized by anaphoricity of AGR, and bound AGR cannot assign Case to the embedded subject.

This last feature of the control mechanism is stipulated by Borer (1989), and we may want to derive it. As it stands, the Case Filter is still needed to **explain** why lexical NPs cannot appear in positions that AGR cannot assign Case to.

Another problem for the proposed analysis is that it is not clear why lexical NPs may not be inserted in the embedded subject position and receive Case from some other Case assigning category, for example the matrix verb. This question is justified by the observation that the embedded clause in control structures must be transparent to permit binding of AGR. One would expect that this transparency exists for Case assignment as well.

The correlation between anaphoric AGR (control) and lack of Case assignment implies that anaphoric AGR somehow shields the embedded subject off from all possible Case assigners. It is not obvious how this should be formalized.

The logic of anaphoric AGR seems to be that the attention of the embedded predicate is diverted from an embedded subject argument to an argument in the matrix clause. At its extreme consequence, this would mean that anaphoric AGR fails to identify an argument in the embedded clause, pointing to an argument in the main clause instead.

A way to put this is the following. External theta roles are assigned compositionally by the VP, first to the inflectional head (INFL or AGR), then via SPEC Head Agreement to the sentence subject (cf. Baker, Johnson, and Roberts 1989). The distinguishing property of anaphoric AGR is that it needs to referentially identify itself (as the temporary bearer of the theta role) to an argument in the matrix clause. If this referential identification succeeds, the process stops. AGR will retain the external theta role, as it is no longer necessary to find a subject NP in the embedded clause to link the external theta role to. As a consequence of this, any NP generated in the structural subject position would be ruled out by the Theta Criterion, whether there is an external Case assigner or not. If binding of AGR fails, the external theta role must be linked to another NP, for which the embedded subject NP seems the best candidate. In that case, this NP will have to be identified, so that all kinds of Case phenomena show up, as pointed out in the last section.

These are admittedly highly tentative speculations, but they do not seem to go against any principles of economy of derivation and representation (Chomsky 1988).

Note that in this way, the impossibility of having lexical subjects in control complements is not explained by the Case Filter, but by the Theta Criterion in connection with principles of economy. As the Case Filter is **ad hoc** anyhow, this should count as a welcome result.

Needless to say this, approach is only viable if all syntactic effects ascribed to the presence of PRO can be ascribed to the presence of an anaphoric AGR (see Koster and May 1982). As the preceding remarks are already way beyond the scope of this paper,

this topic certainly must await further study.¹⁵

6. Conclusion.

In this paper I set out to investigate the consequences of two hypotheses:

1. PRO and Case exclude each other;
2. PRO is pronominal, and AGR is the anaphoric element in control complements,

while taking the observation that the Case Filter is **ad hoc** as a starting point.

I tested the first hypothesis in Modern Greek and Portuguese, two languages that allow Case assignment by the embedded INFL in control complements. I concluded that whenever Case assignment is possible, control disappears.

This conclusion is at variance with the observation that PRO must have Case in contexts of Case agreement with predicate adjectives, e.g. in Icelandic and Russian. The anaphoric AGR proposal by Borer (1989) may yield a different analysis of these Case agreement facts involving agreement not with PRO but with AGR.

I adopted Borer's (1989) proposal that anaphoric AGR cannot assign Case to the embedded subject. However, even then the Case Filter cannot be dispensed with unless it is impossible or unnecessary for anaphoric AGR to pass on the external theta role it receives from VP to the embedded subject position. In that case, the effects of the Case Filter in this context would be derived from the Theta Criterion.

Bibliography

Andrews, A. (1982) 'The Representation of Case in Modern Icelandic'. In J. Bresnan, ed., **The Mental Representation of Grammatical Relations**, Cambridge Mass., 1982.

Andrews, A. (1988) 'Case Structures and Control in Modern Icelandic'. Ms. University of Canberra.

Baker, M., K. Johnson, and I. Roberts (1989) 'Passive Arguments Raised', **Linguistic Inquiry** 20, 219-251.

Bennis, H. and T. Hoekstra (1989) 'PRO and the Binding Theory'. In H. Bennis and A. van Kemenade, eds., **Linguistics in the Netherlands 1989**, Dordrecht.

den Besten, H. (1981) 'Government, Syntaktische Struktur und Kasus'. In M. Kohl and J. Lenerz, eds., **Sprache: Formen und Strukturen**, Tübingen.

Borer, H. (1989) 'Anaphoric AGR'. In O. Jaeggli and K. Safir, eds., **The Null Subject Parameter**, Dordrecht.

¹⁵Also, questions concerning control in passive and quirky Case constructions immediately arise. In these constructions, the theta role of the controlled element is presumably assigned VP internally, not via AGR. Instead, the external theta role assigned compositionally by VP is retained by AGR (**-en** in Baker, Johnson, & Roberts 1989). The ungrammaticality of lexical subjects in passive and passive-like control complements therefore cannot be reduced to the Theta Criterion.

- Bouchard, D. (1984) **On the Content of Empty Categories**. Dordrecht.
- Calabrese, A. (1989) 'The lack of infinitival clauses in Salentino: a Synchronic Analysis'. Ms., John Hopkins University, Baltimore.
- Chomsky, N. (1981) **Lectures on Government and Binding**. Dordrecht.
- Chomsky, N. (1988) 'Some Notes on Economy of Derivation and representation'. In I. Laka and A. Mahajan, eds., **MIT Working Papers in Linguistics 10**.
- Cremers, C. (1983) 'On Two Types of Infinitival Complementation'. In F. Heny and B. Richards, eds., **Linguistic Categories: Auxiliaries and Related Puzzles I**, Dordrecht.
- Franks S. and N. Hornstein (1989) 'Governed PRO'. Paper presented at MIT Workshop on Control, March.
- Goggin, J. (1983) 'Linking Chains: Control and Case-marking in Latin Infinitives', **Texas Linguistic Forum 22**, 61-86.
- Huang, C.T.J. (1989) 'Pro-Drop in Chinese: A Generalized Control Theory'. In O. Jaeggli and K. Safir, eds., **The Null Subject Parameter**, Dordrecht.
- Joseph, B.D. (1989) 'Some Diachronic Perspectives on Control Phenomena'. Paper presented at MIT workshop on Control, March.
- Kayne, R. (1984) **Connectedness and Binary Branching**. Dordrecht.
- Koster, J. (1984) 'On Binding and Control', **Linguistic Inquiry 15**, 417-459.
- Koster, J. (1987) **Domains and Dynasties. The Radical Autonomy of Syntax**. Dordrecht.
- Koster, J. and R. May (1982) 'On the Constituency of Infinitives', **Language 58**, 117-143.
- Mira Mateus, H.M. et al. (1983) **Gramatica da lingua portuguesa**. Coimbra.
- Neidle, C. (1982) 'Case Agreement in Russian'. In J. Bresnan, ed., **The Mental Representation of Grammatical Relations**, Cambridge Mass., 1982.
- Pesetsky, D. (1989) 'The Link Between Meaning and Syntax: English Infinitives'. Paper presented at Groningen Conference On Knowledge and Language, May.
- Philippaki-Warbuton, I. (1987) 'The theory of empty categories and the pro-drop parameter in Modern Greek', **Journal of Linguistics 23**, 289-318.
- Pollock J.-Y. (1989) 'Verb Movement, Universal Grammar, and the Structure of IP', **Linguistic Inquiry 20**, 365-424.
- Raposo, E. (1987) 'Case Theory and Infl-to-Comp: The Inflected Infinitive in European Portuguese', **Linguistic Inquiry 18**, 85-109.

- Raposo, E. (1989) 'Prepositional Infinitival Constructions in European Portuguese'. In O. Jaeggli and K. Safir, eds., **The Null Subject Parameter**, Dordrecht.
- Reinhart, T. and E. Reuland (1989) 'Anaphoric Territories', ms. University of Tel Aviv and University of Groningen.
- Roberts, I. (1988) 'Predicative APs'. **Linguistic Inquiry** 19, 703-710.
- Rouveret, A. (1980) ' Sur la notion de proposition finie: gouvernement et inversion', **Langages** 60, 75-107.
- Rouveret, A. and J.-R. Vergnaud (1980) 'Specifying Reference to the Subject', **Linguistic Inquiry** 11, 97-102.
- Stowell, T. **Origins of Phrase Structure**. PhD dissertation, MIT.
- Thráinsson (1979) **On Complementation in Icelandic**, New York.
- Vanden Wyngaerd, G. (in preparation) **On Control and Binding**. PhD Dissertation, UFSAL Brussels.
- Vergnaud, J.-R. (1979) 'Quelques éléments pour une théorie formelle des Cas'. In J.-R. Vergnaud, **Dépendances et niveaux de représentation en syntaxe**, Amsterdam, 1985.
- Williams, E. (1980) 'Predication', **Linguistic Inquiry** 11, 203-238.
- Zwart, C.J.W. (1988) 'The First Case. The Nominative as a Default Case and Consequences of Control Theory', ms. University of Groningen.